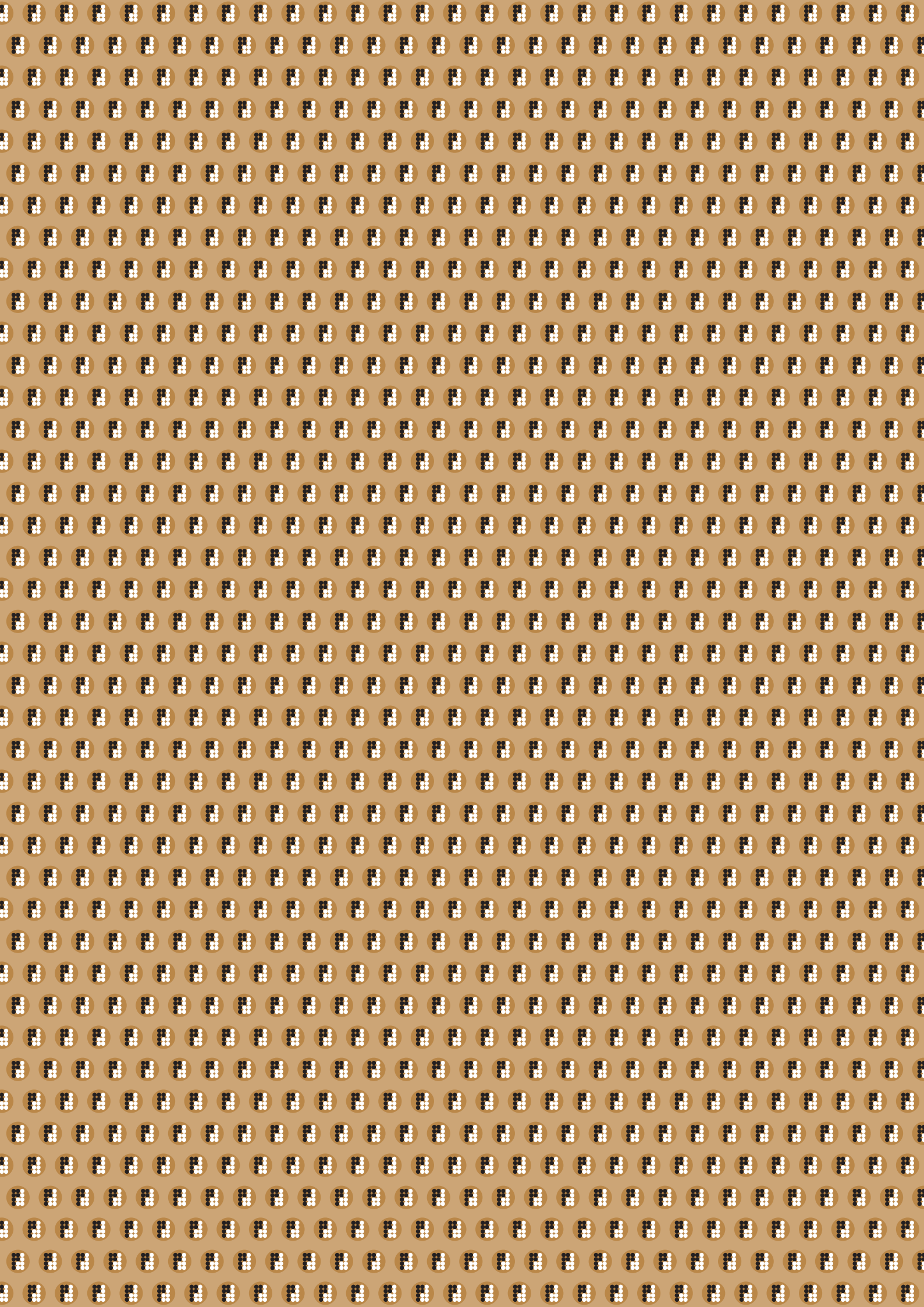
CATALOG 14.4

# preci-dip

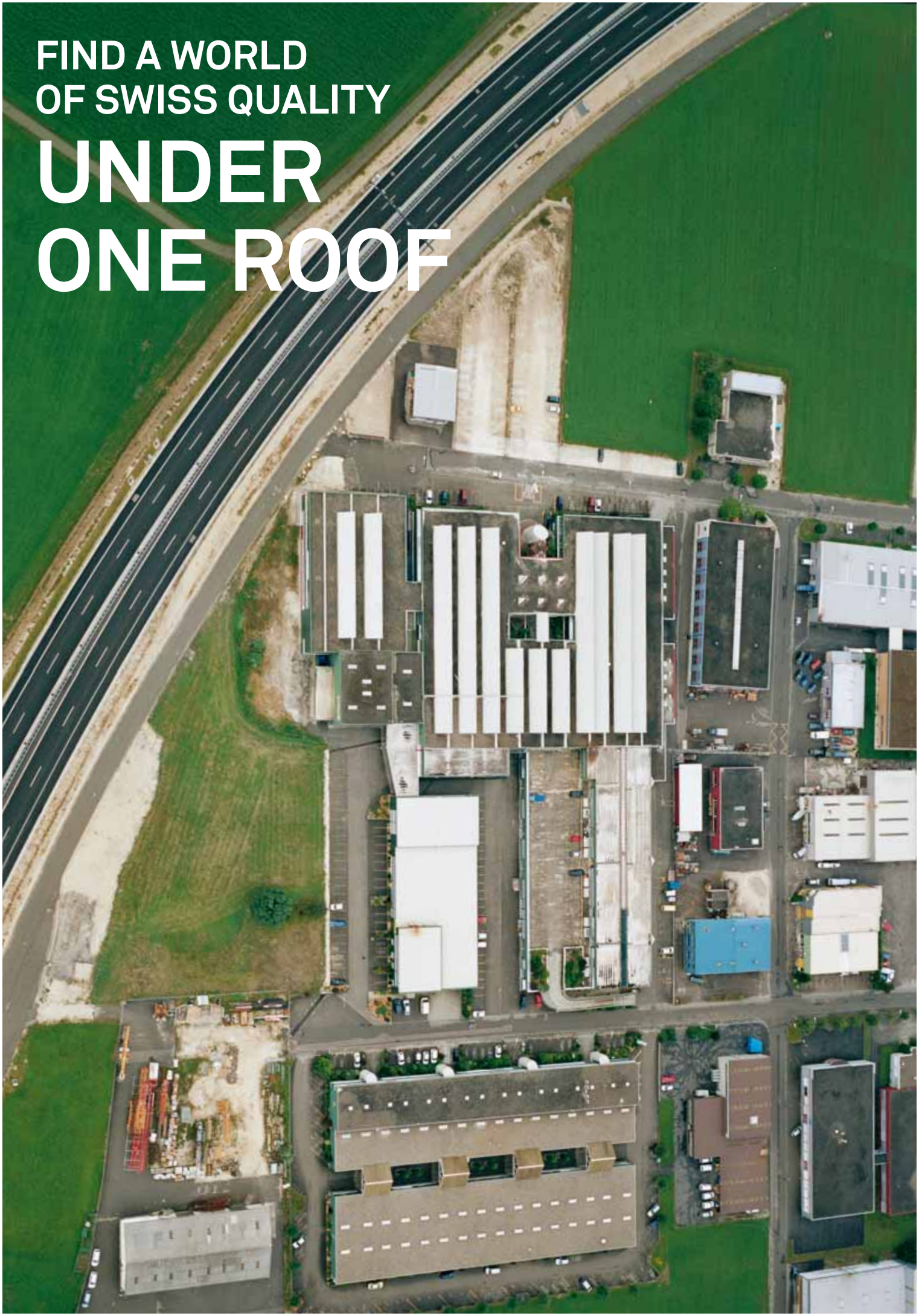
swiss world connects



# PRECI-DIP

# SWISS QUALITY CONNECTION TECHNOLOGY

## INTERCONNECT COMPONENTS
## FROM STANDARD PRODUCTS TO CUSTOM DESIGN


FIND A WORLD
OF SWISS QUALITY
UNDER
ONE ROOF





# FULL CONTROL OF THE ENTIRE MANUFACTURING PROCESS. FROM RAW MATERIAL TO FINISHED PRODUCT, FROM PRODUCT DEVELOPMENT TO SALES. HOME TO SUCH UNIQUE QUALITY IS DELEMONT, SWITZERLAND. SINCE 1976.



PRECI-DIP packs unequaled expertise into cutting-edge interconnect components. Advanced designs, top materials, incomparable Swiss precision. Developed by men and women driven by passion and know-how.

Key data for one of the world's leading producers of screw-machined contacts: 25,000 $m^2$, more than 20,000 different products, R&D supported by state-of-the-art CAD systems and 3D projections. Compliance with the Standards ISO 9001, EN 9100, ISO 14001, ISO/TS 16949 and MIL Standard 790 verified in our own test laboratory.

ISO 14001 Environmental Management Systems. Ahead of its time, PRECI-DIP exceeds the world's most stringent environmental standards (Switzerland, California). State-of-the-art filter systems help preserve the atmosphere, a closed water circuit protects the ground water and saves valuable resources. These are but some of the accomplishments the Company can be proud of. Environmental responsibility is a core value embraced by all PRECI-DIP employees.

Precision tools and contact assembly machines are developed, designed and produced by PRECI-DIP experts. Principle of vertical single-site command structure put into practice – from raw material to finished product. Each step under control.

300 high-speed turning machines for producing precision contacts made of various copper alloys. Capacity: more than 150 million pieces/week.

PRECI-DIP is also a leader in spring-loaded contacts – a top-quality industrial production.

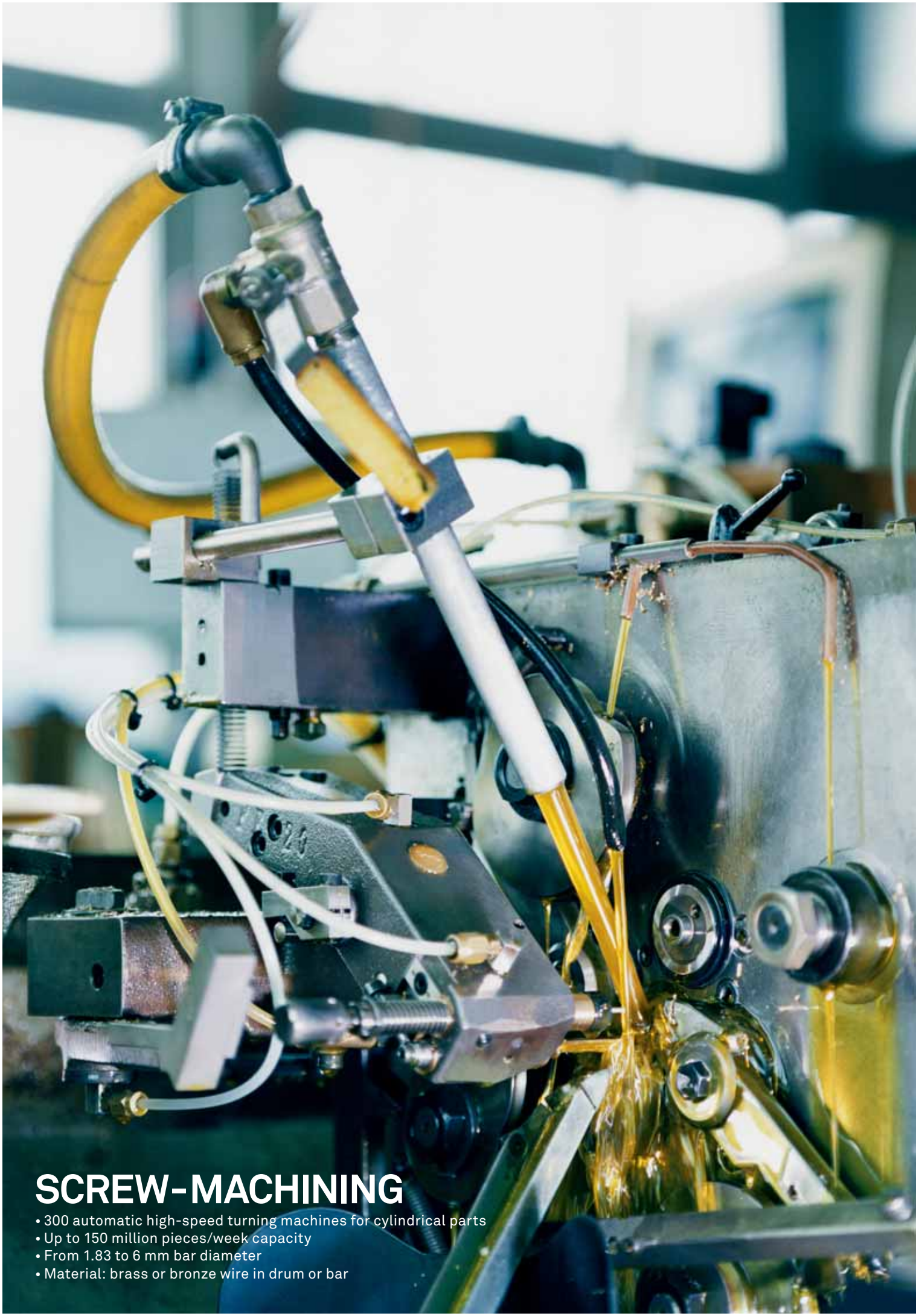
Custom-made insulators for special requirements – 150 contact assembly machines for high-speed clip insertion in the contact body.

Custom-designed products developed in close partnership with the client – a welcome challenge for the PRECI-DIP Team.

SAP-supported production controls for short lead times.

Expertise, qualifications and commitment for high output, flexibility and customer orientation. Under one and the same roof. Supported by a worldwide logistic network.

PRECI-DIP: Come and visit us. On the Internet. Or in person. Experience for yourself what it means to rely on Swiss quality.

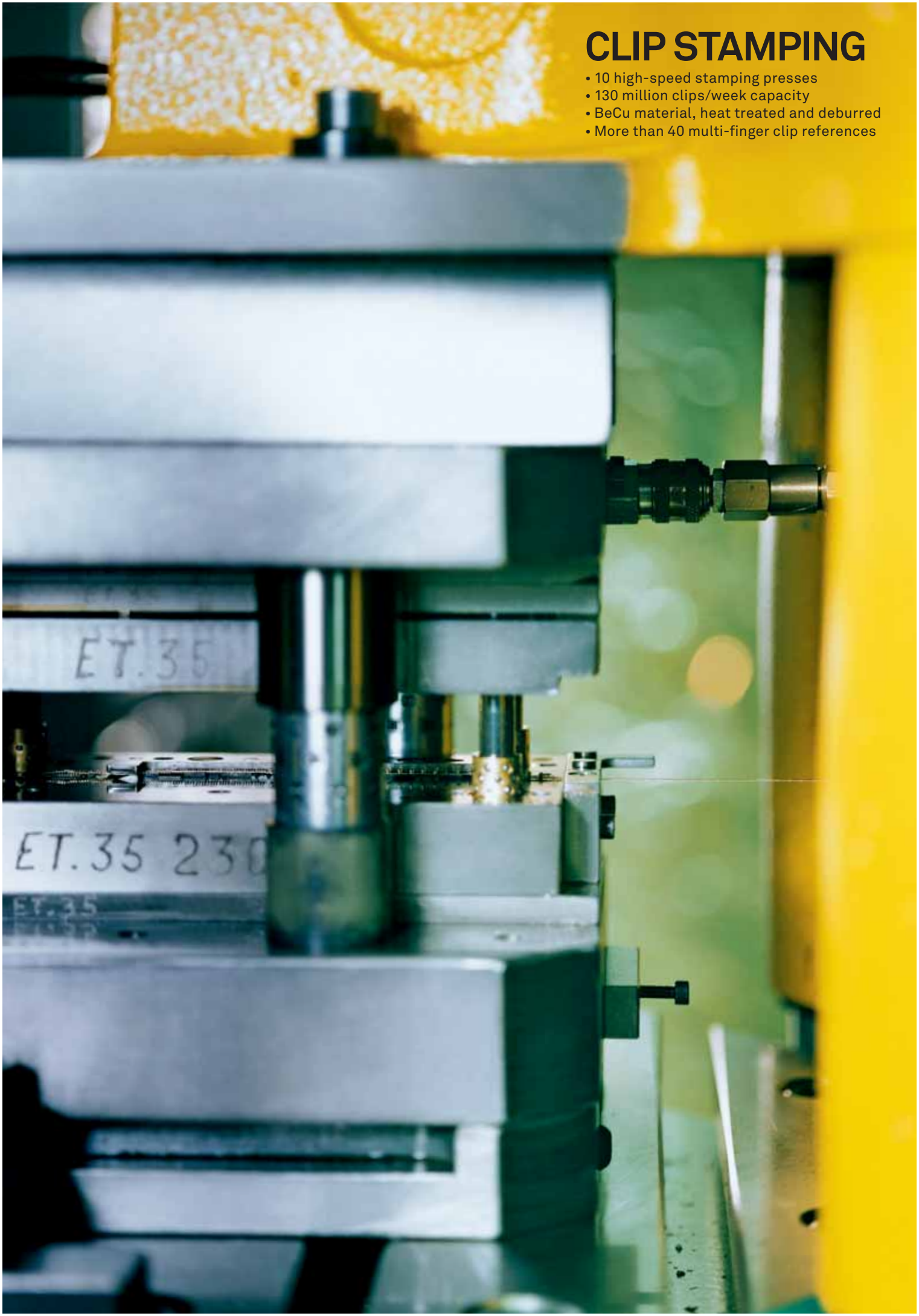


# SCREW-MACHINING

- 300 automatic high-speed turning machines for cylindrical parts
- Up to 150 million pieces/week capacity
- From 1.83 to 6 mm bar diameter
- Material: brass or bronze wire in drum or bar

# CLIP STAMPING

- 10 high-speed stamping presses
- 130 million clips/week capacity
- BeCu material, heat treated and deburred
- More than 40 multi-finger clip references







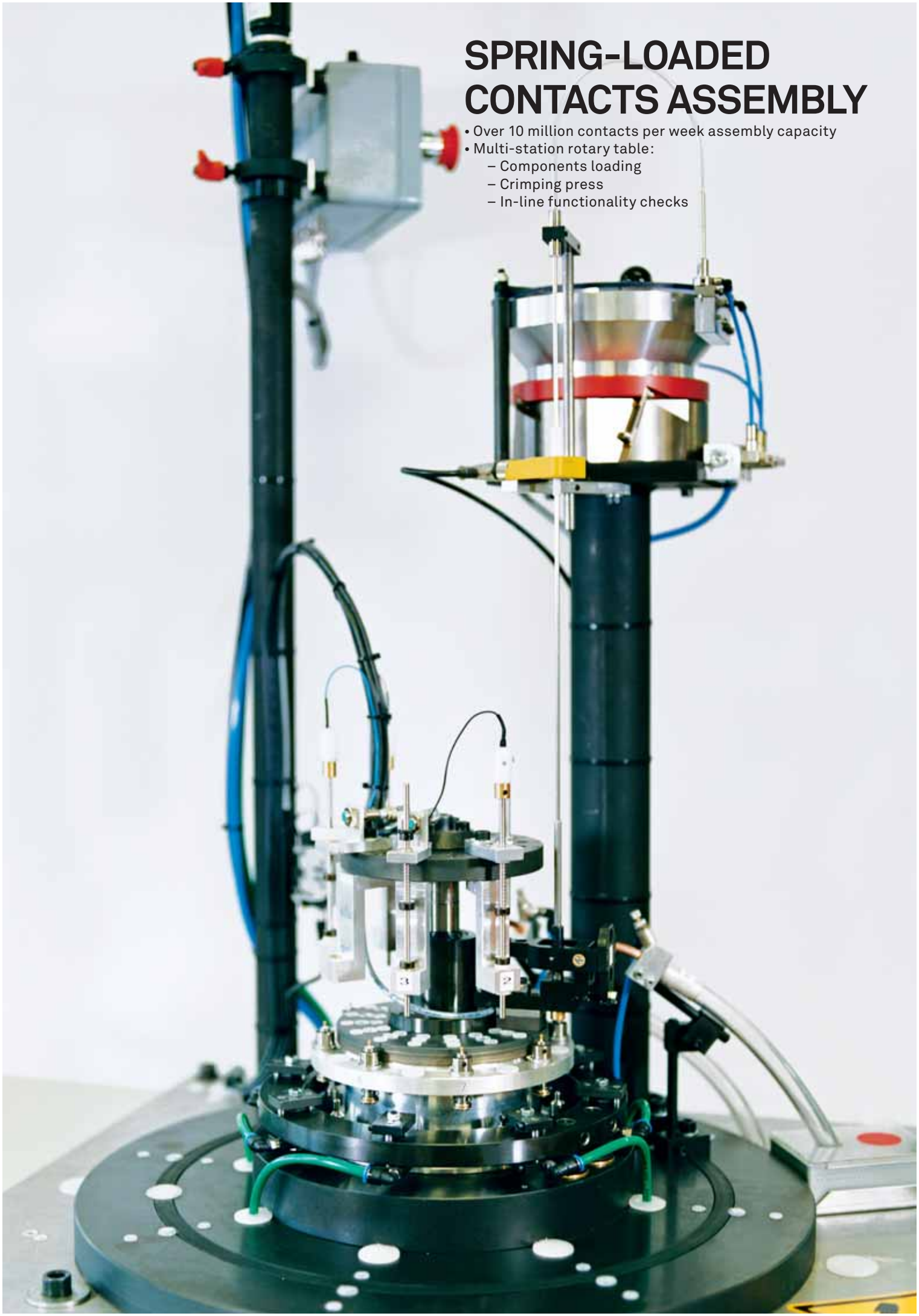
# CONTACTS ASSEMBLY

- 150 contact assembly machines for the insertion of the clip in the contact body
- 150 million contacts per week assembly capacity



# CONNECTOR ASSEMBLY

- Final assembly of the contact in the insulator
- 150 assembly machines and equipment
- Assembly PCB connectors, IC and PGA sockets
- Capacity 80 million assembled contacts per week

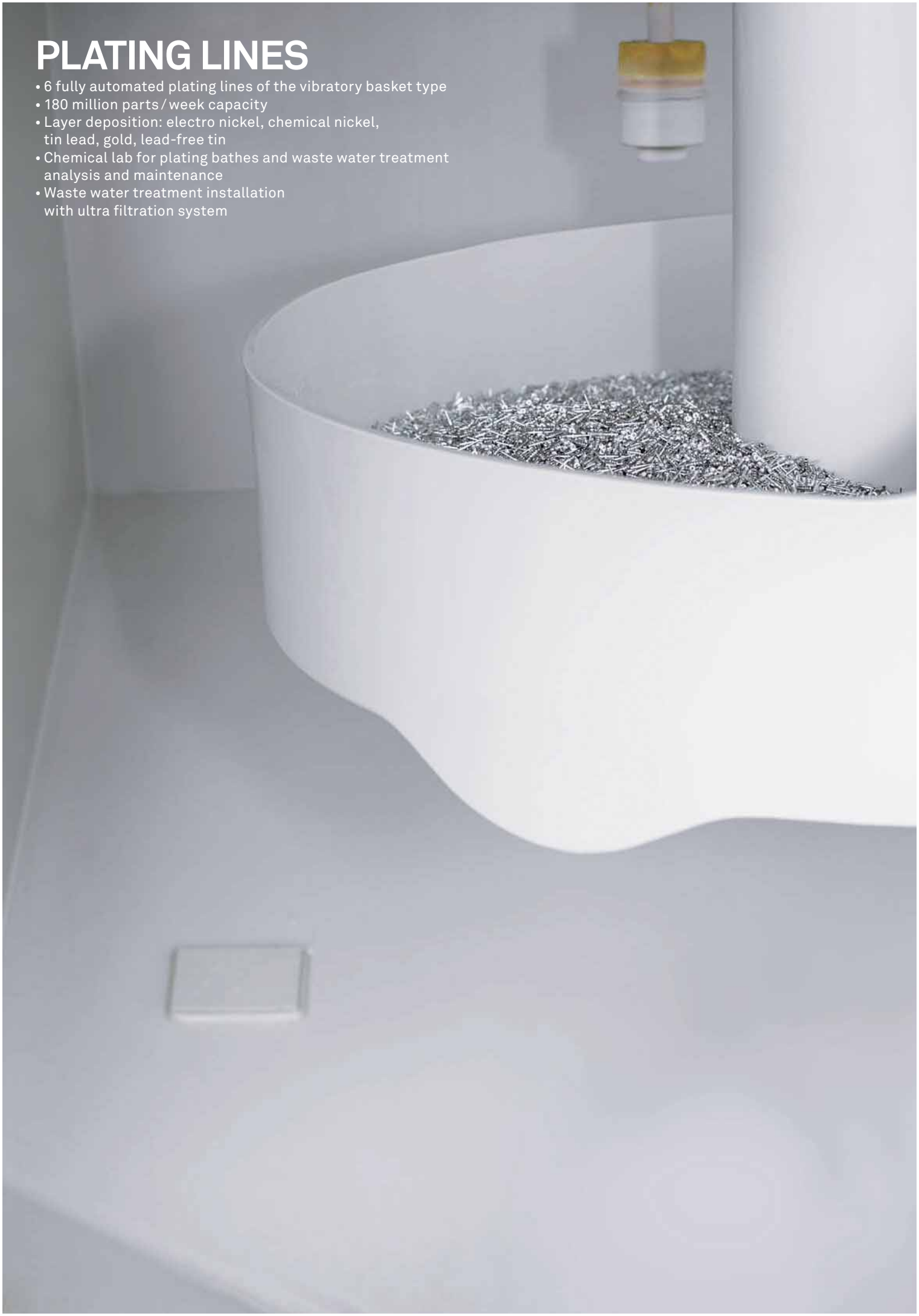


# SPRING-LOADED CONTACTS ASSEMBLY

- Over 10 million contacts per week assembly capacity
- Multi-station rotary table:
  - Components loading
  - Crimping press
  - In-line functionality checks

# PLATING LINES

- 6 fully automated plating lines of the vibratory basket type
- 180 million parts / week capacity
- Layer deposition: electro nickel, chemical nickel, tin lead, gold, lead-free tin
- Chemical lab for plating bathes and waste water treatment analysis and maintenance
- Waste water treatment installation with ultra filtration system






# SPRING COILING

- Ultramodern miniature spring coiling machines
- Material: music wire or stainless steel
- In-built, closed loop measuring system with self-adjustment of spring length

# INJECTION MOULDING

- 25 machines including latest fully programmable control
- Over 2 million parts per week
- Material : thermoplastic PBT, PCT, PA, LCP
- Epoxy plate machining for prototypes and small series





# SECONDARY OPERATIONS

- 85 machines to complement machining of elaborated turned parts
- Typical operations: bleeding hole, solder cup, press-fit, slanted face, polarizing flat, wire wrap
- Multi-station rotary table machines

# RAW MATERIAL STOCK

- Brass, bronze and beryllium copper
- Injection moulding plastics
- 36 tons raw material consumption per week
- 1,200 km of brass wire per week

# COLOR CODING OF CONTACTS

- 8 color coding machines
- BIN code or similar identification rings
- Deposition of thermo-sensitive paint ink

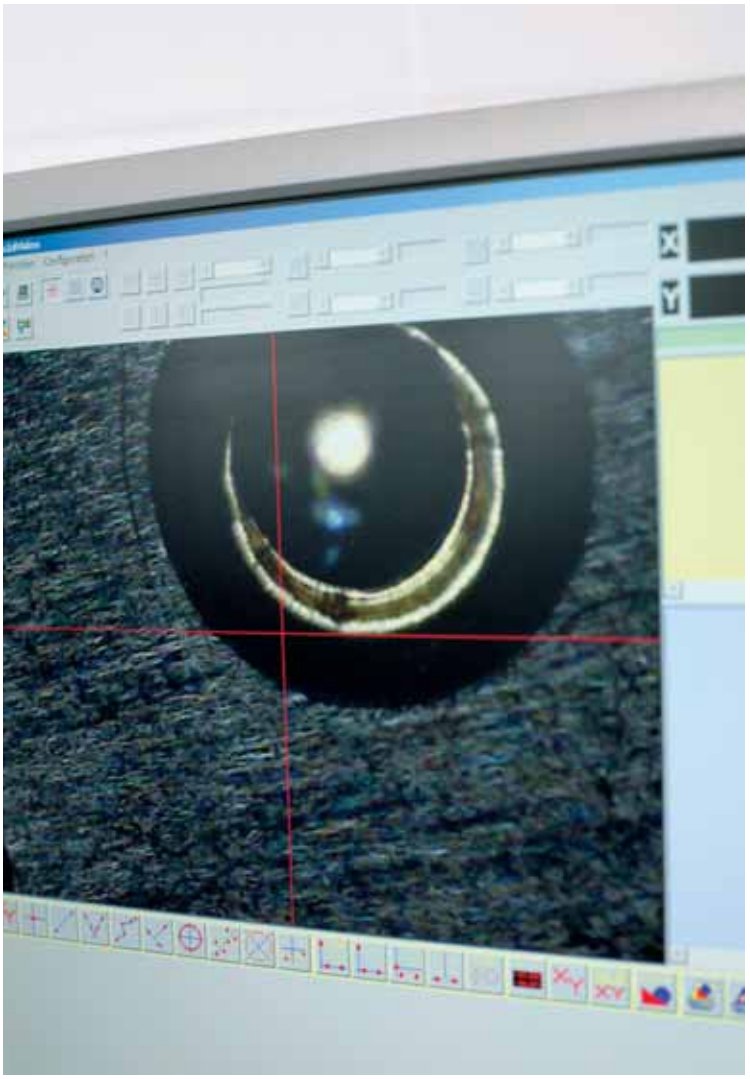


# MECHANICAL WORKSHOP

- Development and realization of automatic assembling equipment
- Construction of mould tools
- Maintenance team for production equipment

# INSPECTION AND TEST LAB

- Laboratory for dimensional, mechanical, electrical and environmental testing
- First article inspection and new product qualification



# SALES AND MARKETING DEPARTMENT

- Highly experienced sales force (Key Account Managers – Sales Assistants)
- Languages spoken: French, English, German, Spanish, Italian, Japanese, Finnish, Chinese, Korean



## PROFIT FROM OUR WORLDWIDE RECOGNITION

# ADVANTAGE CLIENT

Awards from prestigious institutions and customers. Major certifications. Worldwide recognition. For ongoing innovation, perfect teamwork, environmental responsibility as well as entrepreneurial excellence and sustained growth. In short, for swiss quality.





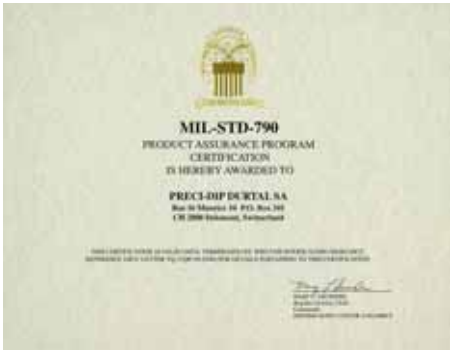



















Excellence and sustained growth – the reason why PRECI-DIP received the Entrepreneur of the Year Award for Western Switzerland.

## DEMAND THE BEST SOLUTIONS FOR YOUR IDEAS

# OUR CUSTOM DESIGN

A competitive edge, the ability to innovate, and high productivity are some of the core values at PRECI-DIP. When it comes to Custom Design, there's an additional value: Teamwork.

Time and again, turning customer ideas and imagination into reality is a very special challenge. This is one of PRECI-DIP's core strengths.

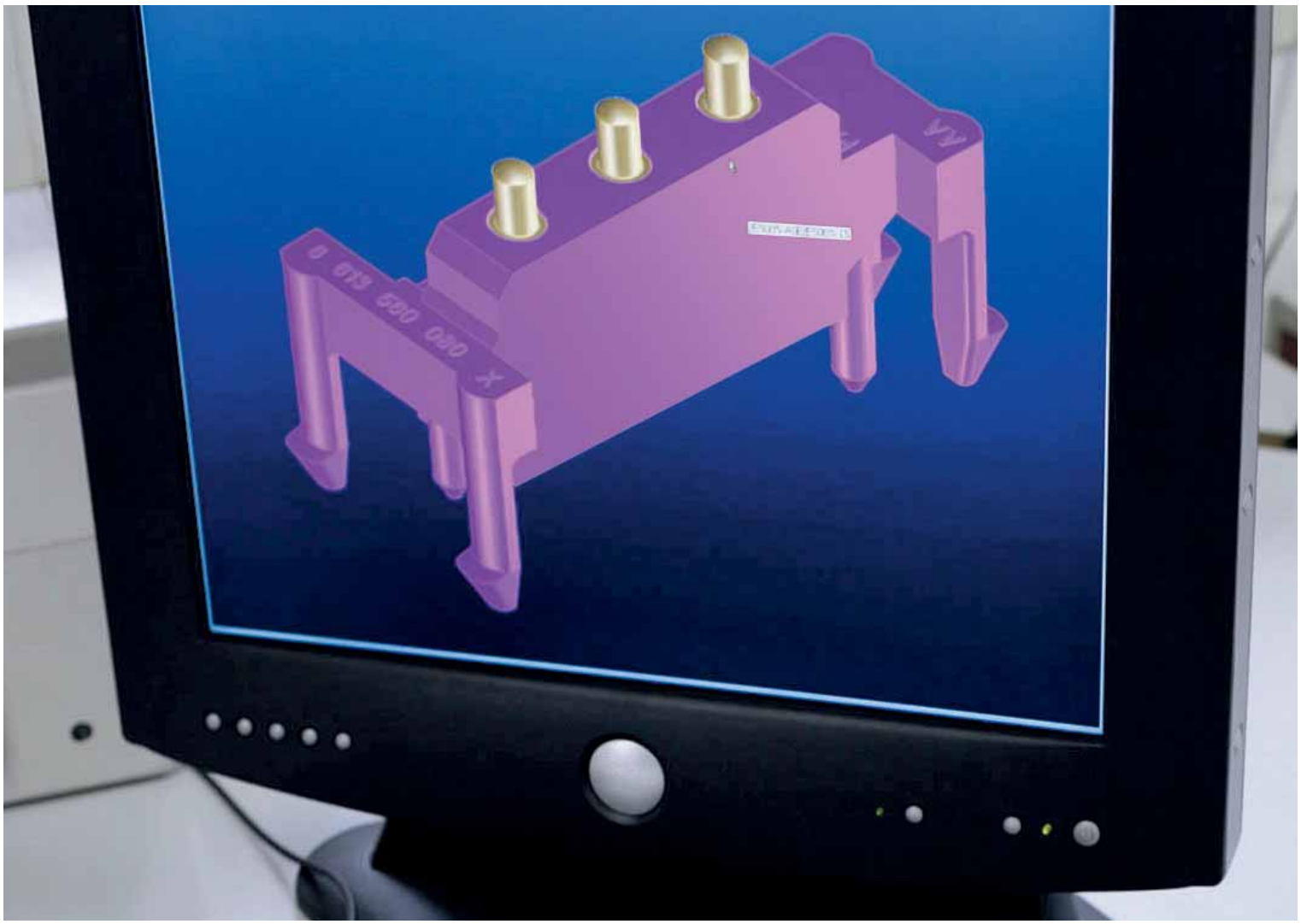
Everything under one roof: the incomparable advantage of PRECI-DIP becomes even more obvious when it comes to Custom Design. Ready access to material resources is as critical as the expertise of our engineers and the art of developing and designing our own production equipment.

Our experience with countless standard products and more than 20,000 references underlie the incessant development of new top-quality products designed with cost-effectiveness and efficiency in mind. PRECI-DIP has integrated Product Development and Product Engineering into one Design Office to create the necessary synergies for best results and top product quality.

Companies in all industrial sectors value their collaboration with PRECI-DIP for complete product and component solutions – today and tomorrow.

Your PRECI-DIP Team welcomes your Custom Design challenge!

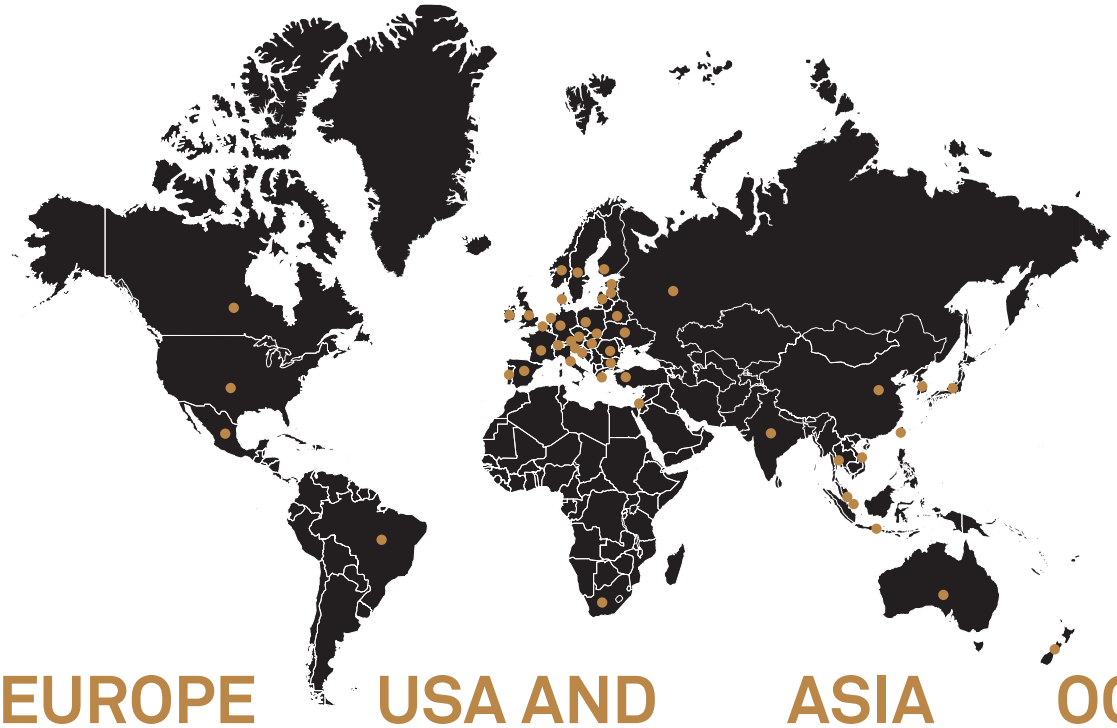




## CHOOSE THE BEST CONNECTION

# AROUND THE WORLD

More than 100 Distributors around the world distribute PRECI-DIP products across the five continents



## EUROPE

4 x AUSTRIA
4 x BELGIUM
2 x BULGARIA
2 x BYELORUSSIA
1 x CROATIA
4 x CZECH REPUBLIC
4 x DENMARK
4 x ESTONIA
4 x FINLAND
6 x FRANCE
5 x GERMANY
2 x GREECE
4 x HUNGARY
1 x IRELAND
2 x ISRAEL
4 x ITALY
1 x LATVIA
3 x LITHUANIA
4 x NETHERLANDS
4 x NORWAY
4 x POLAND
3 x PORTUGAL
2 x ROMANIA
4 x RUSSIA
2 x SERBIA
4 x SLOVAKIA
4 x SPAIN
3 x SWEDEN
4 x SWITZERLAND
2 x TURKEY
5 x UNITED KINGDOM
2 x UKRAINE

## USA AND CANADA

17 x USA AND CANADA

4 x MIL DISTRIBUTORS

## ASIA

13 x CHINA
2 x INDIA
2 x INDONESIA
3 x JAPAN
1 x SOUTH KOREA
2 x MALAYSIA
2 x SINGAPORE
1 x TAIWAN
2 x THAILAND
1 x VIETNAM

## OCEANIA

1 x AUSTRALIA
1 x NEW ZEALAND

## AFRICA

1 x SOUTH AFRICA

ENJOY THE BENEFITS

# HEADED FOR SUCCESS

- COMPLETE RANGE OF HIGHLY RELIABLE INTERCONNECT COMPONENTS
- DIVERSE FIELDS OF APPLICATION
- IN-HOUSE MANUFACTURING – FROM RAW MATERIAL TO FINISHED PRODUCT
- EFFECTIVE MANAGEMENT SYSTEM
- HIGHLY SKILLED AND MOTIVATED WORKFORCE
- STRONG CUSTOMER SUPPORT
- CUSTOM DESIGN
- COMPETITIVE PRICING, FLEXIBILITY AND SWISS QUALITY
- WORLDWIDE PRESENCE
- PRESTIGIOUS CLIENT BASE

# PRECI-DIP
# INTERCONNECT COMPONENTS

- SPRING-LOADED CONNECTORS
- PCB CONNECTORS
- DIL SOCKETS
- PGA / BGA / PLCC SOCKETS
- SCREW-MACHINED CONTACTS
- CUSTOM DESIGN CONNECTORS

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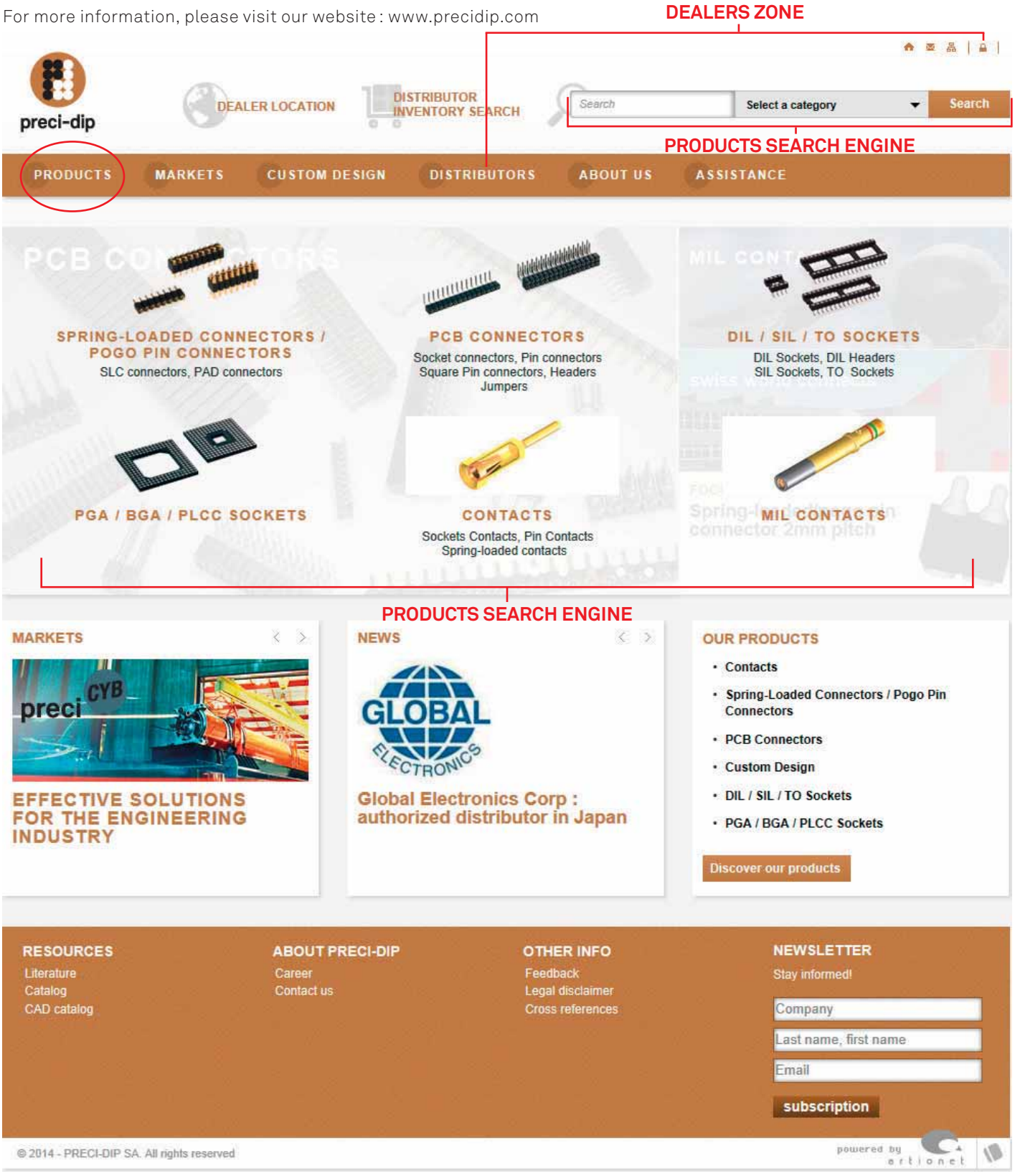
# INTERNET PRODUCT SEARCH ENGINE

Welcome to our new website. Just click the product tabs and follow the selection steps for the search result to appear.

The login function is intended for authorized dealers and allows for an easy search of inventory.

For more information, please visit our website : www.precidip.com



# PART NUMBERS AND PRODUCT IDENTIFICATION

PRECI-DIP products are all identified with a unique part number. These numbers are built with up to 5 groups of digits separated by dashes. Each of these groups has its own signification, making it possible to identify the major characteristics of the product from the part number.

Please find below a brief explanation of PRECI-DIP identification codes for connectors and sockets:

| 801 | - | **87** | - | 014 | - | 10 | - | 001101 |
|---|---|---|---|---|---|---|---|---|
| PRODUCT FAMILY | | PLATING CODE | | NUMBER OF PINS | | SPECIFIC INFORMATIONS | | |

**PRODUCT FAMILY**

| | |
|---|---|
| • 81x, 8Px | Spring-loaded connectors |
| • 1xx, 2xx | DIL sockets |
| • 3xx, 4xx, 8xx | PCB connectors |
| • 5xx | BGA, PGA and PLCC sockets |
| • 6xx, 7xx | Carriers |
| • 9xx | Circular connectors, TO sockets |

**PLATING CODE**

The standard plating codes are listed and specified in the catalog section Contacts under General technical specifications at page 178.
Tin-plated PRECI-DIP products had to be changed to become RoHS compliant and have received a new part number to allow clear identification. Tin-lead plating was replaced by pure tin plating and the old plating code 9x was replaced by 8x.

**NUMBER OF PINS**

These figures indicate always the total number of contacts of the product.

**SPECIFIC INFORMATIONS**

The last two groups of digits can have different significations depending on the product family:

| | | | | |
|---|---|---|---|---|
| • Type of terminations (PCB connectors): | 10 | Straight solder pin | | |
| | 20 | Right angle solder pin | | |
| | 30 and 40 | SMD | | |
| | 5x | Wire-wrap | | |
| | 6x | Solderless press fit | | |
| • Type of clip (DIL sockets): | 00 | no clip | 4x | 4 finger |
| | 31 | 3 finger | 6x | 6 finger |
| • Packaging versions: | 003101 for box or tube packaging | | | |
| | 003191 for Tape and Reel packaging | | | |

**EXAMPLES**

**114-87-628-41-134191: DIL socket, 28 pins, 4 finger clip, tape and reel packaging**
**803-87-014-10-003101: PCB connectors, 14 pins, with straight solder pins, box packaging**

# ROHS-COMPLIANT PLATING

**All products displayed in this catalog are compliant with the European Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS).**

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Due to technical progress, all information provided is subject to change without prior notice.

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| 999-11-230-11 | 122 |
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| 999-19-210-02 | 123 |
| 999-19-210-06 | 123 |
| 999-19-220-00 | 123 |
| 999-19-310-00 | 123 |
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Due to technical progress, all information provided is subject to change without prior notice.

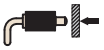
# SPRING-LOADED CONNECTORS





# QUICK SELECTOR CHART

## SPRING-LOADED CONNECTORS AND PAD CONNECTORS

| GRID | | 1.25 mm | 2 mm | | 2.54 mm | |
|---|---|---|---|---|---|---|
| | | SINGLE ROW | SINGLE ROW | DOUBLE ROW | SINGLE ROW | DOUBLE ROW |
| **SLC CONNECTORS** | | **SEE PAGE** | | | | |
| Straight solder tail |  | 32 | | | 34 | 34 |
| Right angle solder tail |  | 32 | | | | |
| Surface mount perpendicular |  | | 33 | 33 | 35, 36 | 35, 36 |
| Surface mount perpendicular with positioning pins |  | | | | 37 | 37 |
| Surface mount parallel |  | | | | 38 | |
| SIM card socket |  | | | | | 38 |
| **PAD CONNECTORS** | | | | | | |
| Surface mount perpendicular |  | | | | 39 | 39 |
| Surface mount parallel |  | | | | 39 | |



Due to technical progress, all information provided is subject to change without prior notice.

# SPRING-LOADED CONNECTORS
# PAD CONNECTORS

## GENERAL SPECIFICATIONS



The values listed below are general specs applying for PRECI-DIP spring-loaded connectors. Please see individual catalog page for additional and product specific technical data.

| | |
|---|---|
| **OPERATING TEMPERATURE RANGE** | -55 ... +125 °C (-55 °... +85 °C with music wire spring) |
| **CLIMATIC CATEGORY (IEC)** | 55/85/21 |
| **OPERATING HUMIDITY RANGE** | Annual mean 75% |
| **MAX. WORKING VOLTAGE** | 100 $V_{RMS}$/150 $V_{DC}$ (2.54 mm grid) |

PRECI-DIP connectors designated « Series Preci-Dip Connector » are recognized by UL LLC and listed under « Connectors for Use in Data, Signal, Control and Power Applications », File Nr. E174442.

## MECHANICAL CHARACTERISTICS

| | **BASIC** HOLLOW PISTON TYPE | **LOW RESISTANCE** SHAPED PISTON TYPE | **LOW RESISTANCE** CLIP IN-LINE DESIGN TYPE |
|---|---|---|---|
| **MIN. INITIAL HEIGHT** | 3 mm | 6 mm | 10 mm |
| **STROKE/HEIGHT RATIO** | Max. 0.3 | Max. 0.2 | Max. 0.15 |
| **MAX STROKE** | 2 mm | 2 mm | 1.5 mm |
| **MIN. INITIAL SPRING FORCE** | 0.2 N | 0.2 N | 0.2 N |

## ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **INSULATION RESISTANCE BETWEEN ANY TWO ADJACENT CONTACTS** | Min. 10'000 MΩ at 500 $V_{AC}$ |
| **CAPACITANCE BETWEEN ANY TWO ADJACENT CONTACTS** | Max. 1 pF |

## ENVIRONMENTAL CHARACTERISTICS

The sockets withstand the following environmental tests without mechanical and electrical defects:

- Dry heat steady state IEC 60512-11-9.11i / 60068-2-2.Bb: 125 °C, 16 h
- Damp heat cyclic IEC 60512-11-12.11m / 60068-2-30.Db: 25/55 °C, 90 – 100 %rH, 1 cycle of 24 h
- Cold steady state IEC 60512-11-10.11j / 60068-2-1.A: -55 °C, 2 h
- Thermal shock IEC 60512-11-4.11d / 60068-2-14.Na: -55/125 °C, 5 cycles 30 min
- Sinusoidal vibrations IEC 60512-6-4.6d / 60068-2-6.Fc: 10 to 500 Hz, 10 g, 1 octave/min, 10 cycles for each axis
- Shock IEC 60512-6-3.6c / 60068-2-27.Ea: 50 g, 11 ms, 3 shocks in three axis

During the above two tests, no contact interruption >50 ns does appear.

- Solderability J-STD-002A, Test A, 245 °C, 5 s, solder alloy SnAg3.8Cu0.7
- Resistance to soldering heat J-STD-020C, 260 °C, 20 s
- Moisture sensitivity J-STD-020C level 1

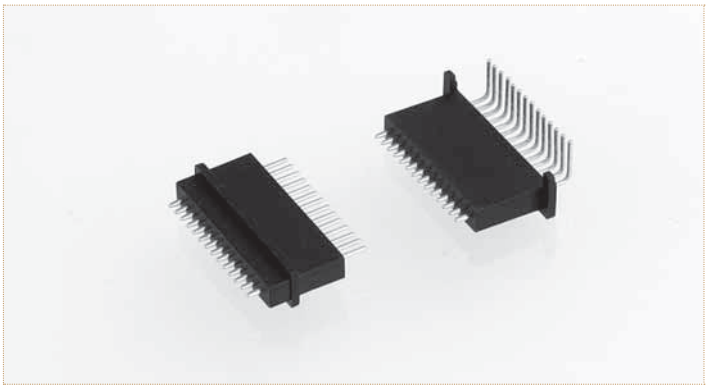
# SPRING-LOADED CONNECTORS

**1.25 mm GRID / SINGLE ROW / SOLDER TAIL**

Fine pitch connectors with spring-loaded contacts (SLC), solder tail. High-rel contacts with clip, patented in-line design.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 31)

| | | |
|---|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR | |
| FLAMMABILITY | UL 94V-0 | |
| PISTON AND BARREL | Brass CuZn36Pb3 (C36000) | |
| CONTACT CLIP | Beryllium copper (C17200) | |
| SPRING | Stainless steel X12 CrNi177, DIN 17224 | |
| MAX. STROKE | 1.4 mm | |
| FORCES | 0.2 N initial | 0.36 N at ½ stroke |
| MECHANICAL LIFE | 40'000 cycles | |
| OPERATING CURRENT | Max. 2 A | |
| CONTACT RESISTANCE | 20 mΩ (static measurement, halfway position) | |



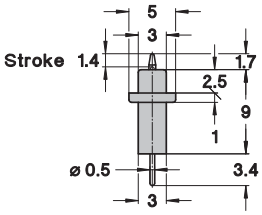
## ORDERING INFORMATION ROHS COMPLIANT PARTS

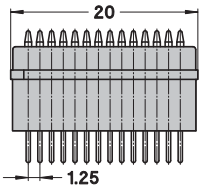
| PLATING CODE | PIN | PISTON |
|---|---|---|
| 28 | Tin | 0.3 µm min. gold |

See page 178 for plating specs.
Surface mount miniature SLC connectors available on request.
Please consult.

### 8PD-28-0014-01-812

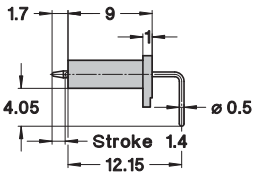
Straight SLC connector, solder tail, single row
Standard number of contacts: 14
Please consult for other pin number or partially equipped connectors

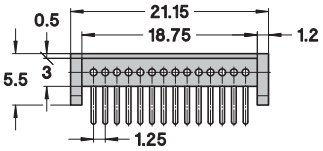



### 8PC-28-0014-01-828

Right angle SLC connector, solder tail, single row
Standard number of contacts: 14
Please consult for other pin number or partially equipped connectors






Due to technical progress, all information provided is subject to change without prior notice.

# SPRING-LOADED CONNECTORS

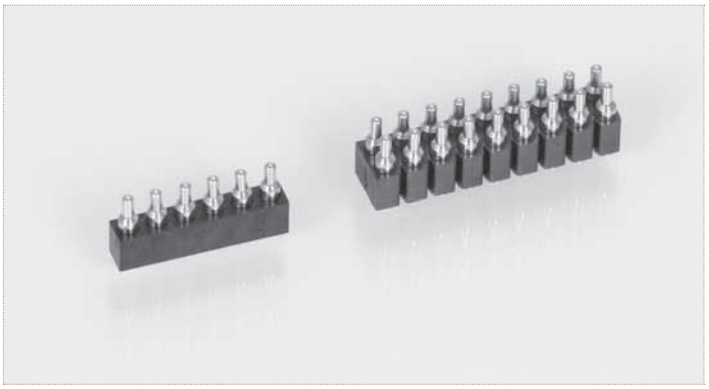
**2 mm GRID / SINGLE ROW / DOUBLE ROW /SURFACE MOUNT**



Basic modular connectors with spring-loaded contacts (SLC), surface mount. Contacts with shaped piston design for low profile.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 31)

| | | |
|---|---|---|
| INSULATOR | Black glass filled polyester LCP-GF30-FR | |
| FLAMMABILITY | UL 94V-0 | |
| PISTON AND BARREL | Brass CuZn36Pb3 (C36000) | |
| SPRING | Stainless steel X12 CrNi177, DIN 17224 | |
| MAX. STROKE | 1.1 / 1.4 mm according to total height | |
| FORCES | 0.25 N initial | 0.7 N at 0.7 mm stroke |
| MECHANICAL LIFE | 50'000 cycles | |
| OPERATING CURRENT | Max. 3.5 A / 7A peak | |
| CONTACT RESISTANCE | 10 mΩ (static measurement, halfway position) | |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) | |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PLATING CODE | BARREL | PISTON |
|---|---|---|
| S1 | 0.25 µm gold | 0.5 µm gold |

See page 178 for plating specs.

**NNN number of poles**. Replace **NNN** with the requested number of poles, e.g. 821-SS-**NNN**-30-012101 for a single row version with 16 pins becomes 821-SS-0**16**-30-012101.

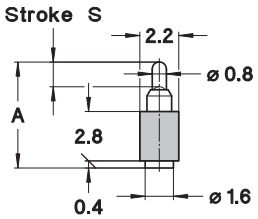
**Bulk:** 821-S1-**NNN**-30-**XXX**101

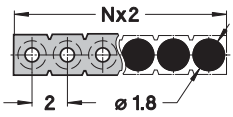
**T & R Packaging with pick & place cap*:** 821-S1-**NNN**-30-**XXX**191

Surface mount SLC connector, low profile, single row

AVAILABILITY FROM 2 to 10 contacts (standard number of contacts: 10)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



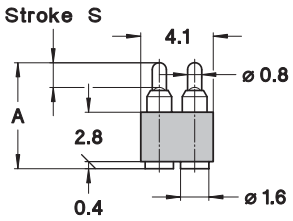

**Bulk:** 823-S1-**NNN**-30-**XXX**101

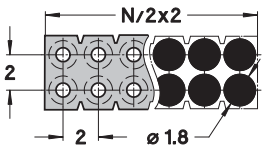
**T & R Packaging with pick & place cap*:** 823-S1-**NNN**-30-**XXX**191

Surface mount SLC connector, low profile, double row

AVAILABILITY FROM 4 to 20 contacts (standard number of contacts: 20)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.




## AVAILABLE CONNECTOR HEIGHTS

| INITIAL HEIGHT A (mm) | STROKE S (mm) | XXX CODE |
|---|---|---|
| 5 | 1.1 | 012 |
| 5.5 | 1.1 | 013 |
| 6 | 1.4 | 014 |
| 6.5 | 1.4 | 015 |

# SPRING-LOADED CONNECTORS

**2.54 mm GRID / SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

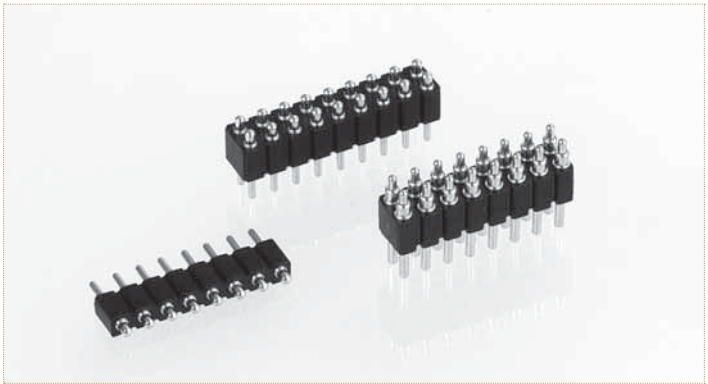
Low resistance modular connectors with spring-loaded contacts (SLC), solder tail. Contacts with improved, shaped piston design.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 31)

| | | |
|---|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR | |
| FLAMMABILITY | UL 94V-0 | |
| PISTON AND BARREL | Brass CuZn36Pb3 (C36000) | |
| SPRING | Music wire DIN 17223, gold plated | |
| MAX. STROKE | 1.4 mm | |
| FORCES | 0.25 N initial | 0.85 N at ½ stroke |
| MECHANICAL LIFE | 50'000 cycles | |
| OPERATING CURRENT | Max. 3.5 A | |
| CONTACT RESISTANCE | 10 mΩ (static measurement, halfway position) | |

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PLATING CODE | BARREL | PISTON |
|---|---|---|
| S1 | 0.25 µm gold | 0.5 µm gold |
| SS | 0.5 µm gold | 0.5 µm gold |



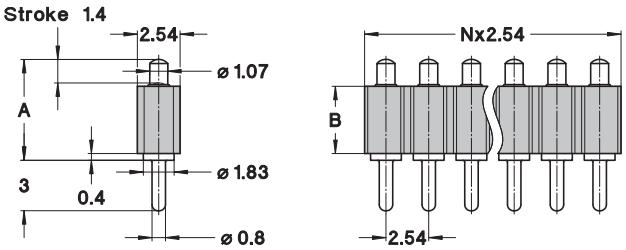
See page 178 for plating specs.

**NNN number of poles:** Replace **NNN** with the requested number of poles, e.g. 813-S1-**NNN**-10-014101 for a double row version with 16 pins becomes 813-S1-0**16**-10-014101.

### 811-S1-**NNN**-10-**XXX**101

Straight SLC connector, low profile, solder tail, single row

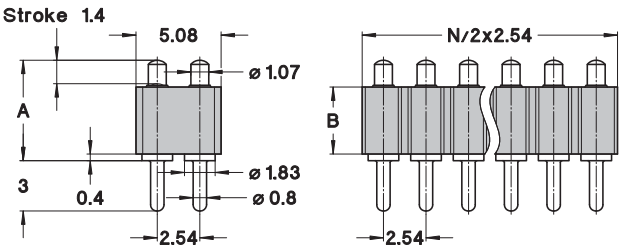
**AVAILABILITY FROM** 2 to 64 contacts (standard number of contacts: 64)




### 813-S1-**NNN**-10-**XXX**101

Straight SLC connector, low profile, solder tail, double row

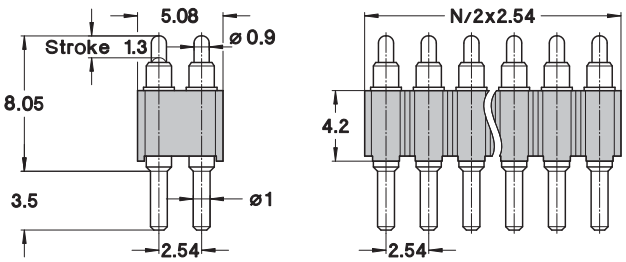
**AVAILABILITY FROM** 4 to 72 contacts (standard number of contacts: 72)




### 813-SS-**NNN**-10-474101

Straight SLC connector, solder tail, double row

**AVAILABILITY FROM** 4 to 64 contacts (standard number of contacts: 64)




## AVAILABLE CONNECTOR HEIGHTS

| INITIAL HEIGHT A (mm) | PLASTIC BODY HEIGHT B (mm) | XXX CODE |
|---|---|---|
| 6 | 4 | 014 |
| 6.5 | 4 | 015 |
| 7 | 4 | 016 |
| 7.5 | 4 | 017 |



Due to technical progress, all information provided is subject to change without prior notice.

# SPRING-LOADED CONNECTORS

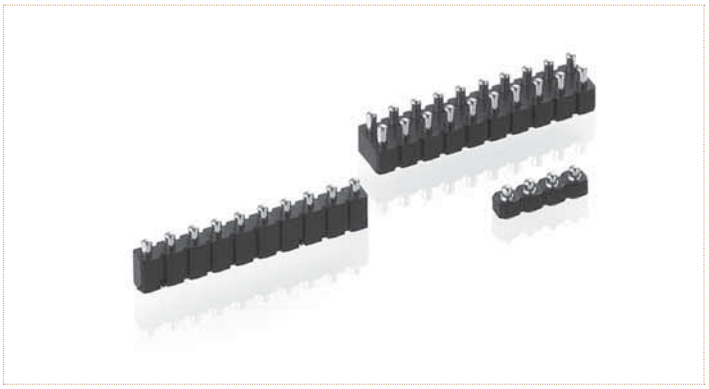
**2.54 mm GRID / SINGLE ROW / DOUBLE ROW /SURFACE MOUNT**



Basic modular connectors with spring-loaded contacts (SLC), surface mount. Contacts with hollow piston design for low profile.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 31)

| | | |
|---|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR | |
| FLAMMABILITY | UL 94V-0 | |
| PISTON AND BARREL | Brass CuZn36Pb3 (C36000) | |
| SPRING | Stainless steel X12 CrNi177, DIN 17224<br>(Music wire DIN 17223, gold plated for 811...008101) | |
| MAX. STROKE | 1.4 mm (1 mm for 811-...-008101<br>and 1.15 mm for 811/813-...-001101) | |
| FORCES | 0.25 N initial | 0.6 N at ½ stroke |
| MECHANICAL LIFE | 100'000 cycles | |
| OPERATING CURRENT | Max. 3.5 A | |
| CONTACT RESISTANCE | 15 mΩ (static measurement, halfway position) | |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) | |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PLATING CODE | BARREL | PISTON |
|---|---|---|
| SS | 0.5 µm gold | 0.5 µm gold |

See page 178 for plating specs.

**NNN number of poles**. Replace **NNN** with the requested number of poles, e.g. 811-SS-**NNN**-30-002101 for a single row version with 16 pins becomes 811-SS-0**16**-30-002101.

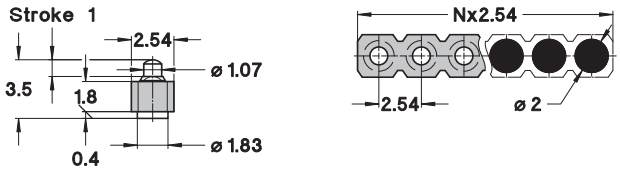
**Bulk:** 811-SS-**NNN**-30-008101

**T & R Packaging with pick & place cap*:** 811-SS-**NNN**-30-008191

Surface mount SLC connector, very low profile, single row

AVAILABILITY FROM 2 to 10 contacts (standard number of contacts: 10)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



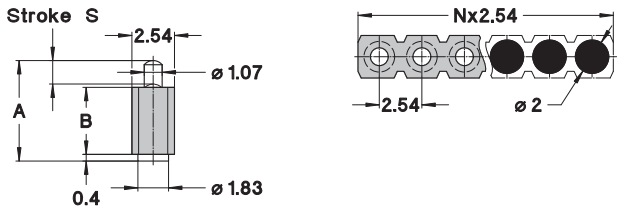

**Bulk:** 811-SS-**NNN**-30-**XXX**101

**T & R Packaging with pick & place cap*:** 811-SS-**NNN**-30-**XXX**191

Surface mount SLC connector, low profile, single row

AVAILABILITY FROM 2 to 10 contacts (standard number of contacts: 10)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



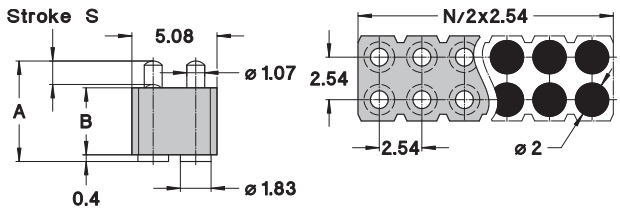

**Bulk:** 813-SS-**NNN**-30-**XXX**101

**T & R Packaging with pick & place cap*:** 813-SS-**NNN**-30-**XXX**191

Surface mount SLC connector, low profile, double row

AVAILABILITY FROM 4 to 20 contacts (standard number of contacts: 20)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.




## AVAILABLE CONNECTOR HEIGHTS

| INITIAL HEIGHT A (mm) | STROKE S (mm) | PLASTIC BODY HEIGHT B (mm) | XXX CODE |
|---|---|---|---|
| 4.5 | 1.15 | 2.95 | 001 |
| 5 | 1.4 | 2.95 | 002 |
| 5.5 | 1.4 | 2.95 | 003 |
| 6 | 1.4 | 4 | 004 |
| 6.5 | 1.4 | 4 | 005 |
| 7 | 1.4 | 4 | 006 |
| 7.5 | 1.4 | 4 | 007 |

Due to technical progress, all information provided is subject to change without prior notice.

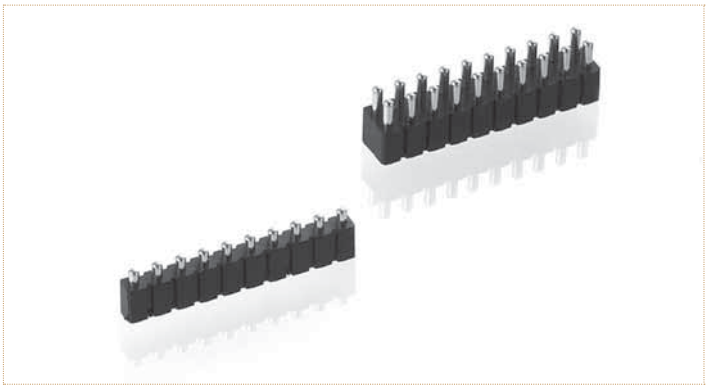
# SPRING-LOADED CONNECTORS

**2.54 mm GRID / SINGLE ROW / DOUBLE ROW / SURFACE MOUNT**

Low resistance modular connectors with spring-loaded contacts (SLC), surface mount. Contacts with improved shaped piston design.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 31)

| | | |
|---|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR | |
| FLAMMABILITY | UL 94V-0 | |
| PISTON AND BARREL | Brass CuZn36Pb3 (C36000) | |
| SPRING | Music wire DIN 17223, gold plated | |
| MAX. STROKE | 1.4 mm | |
| FORCES | 0.25 N initial | 0.85 N at ½ stroke |
| MECHANICAL LIFE | 50'000 cycles | |
| OPERATING CURRENT | Max. 3.5 A | |
| CONTACT RESISTANCE | 10 mΩ (static measurement, halfway position) | |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) | |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PLATING CODE | BARREL | PISTON |
|---|---|---|
| S1 | 0.25 µm gold | 0.5 µm gold |

See page 178 for plating specs.

**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 813-S1-**NNN**-30-014101 for a double row version with 16 pins becomes 813-S1-0**16**-30-014101.

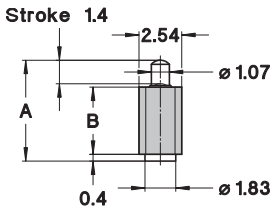
**Bulk:** 811-S1-**NNN**-30-**XXX**101

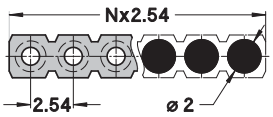
**T & R Packaging with pick & place cap*:** 811-S1-**NNN**-30-**XXX**191

Surface mount SLC connector, low profile, single row

AVAILABILITY FROM 2 to 10 contacts (standard number of contacts: 10)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



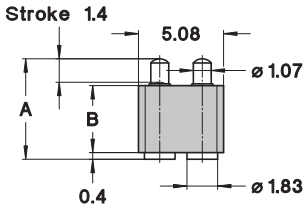

**Bulk:** 813-S1-**NNN**-30-**XXX**101

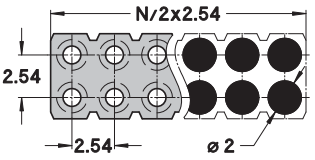
**T & R Packaging with pick & place cap*:** 813-S1-**NNN**-30-**XXX**191

Surface mount SLC connector, low profile, double row

AVAILABILITY FROM 4 to 20 contacts (standard number of contacts: 20)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.




## AVAILABLE CONNECTOR HEIGHTS

| INITIAL HEIGHT A (mm) | PLASTIC BODY HEIGHT B (mm) | XXX CODE |
|---|---|---|
| 6 | 4 | 014 |
| 6.5 | 4 | 015 |
| 7 | 4 | 016 |
| 7.5 | 4 | 017 |



Due to technical progress, all information provided is subject to change without prior notice.

# SPRING-LOADED CONNECTORS

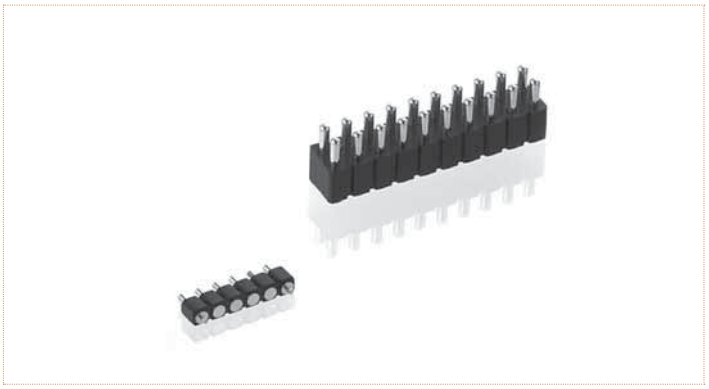
**2.54 mm GRID / SINGLE ROW / DOUBLE ROW / SURFACE MOUNT**



Basic modular connectors with spring-loaded contacts (SLC), surface mount with positioning pins. Contacts with hollow piston design for low profile.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 31)

| | | |
|---|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR | |
| FLAMMABILITY | UL 94V-0 | |
| PISTON AND BARREL | Brass CuZn36Pb3 (C36000) | |
| SPRING | Stainless steel X12 CrNi177, DIN 17224 | |
| MAX. STROKE | 1.4 mm (1.15 mm for 811/813-...-021101) | |
| FORCES | 0.25 N initial | 0.6 N at ½ stroke |
| MECHANICAL LIFE | 100'000 cycles | |
| OPERATING CURRENT | Max. 3.5 A | |
| CONTACT RESISTANCE | 15 mΩ (static measurement, halfway position) | |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) | |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PLATING CODE | BARREL | PISTON |
|---|---|---|
| SS | 0.5 µm gold | 0.5 µm gold |

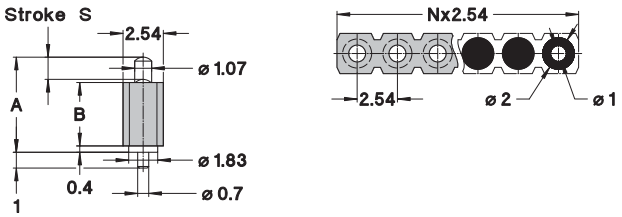
See page 178 for plating specs.

**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 813-SS-**NNN**-30-021101 for a double row version with 16 pins becomes 813-SS-0**16**-30-021101.

### 811-SS-**NNN**-30-**XXX**101

Surface mount SLC connector, low profile, single row, with 2 positioning pins

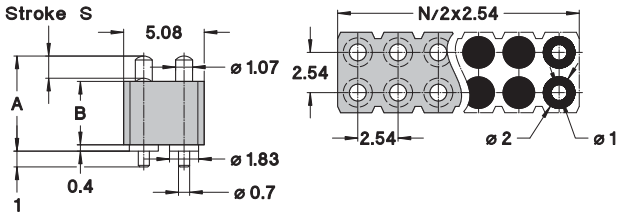
AVAILABILITY FROM 2 to 10 contacts
(standard number of contacts: 10)




### 813-SS-**NNN**-30-**XXX**101

Surface mount SLC connector, double row, with 4 positioning pins

AVAILABILITY FROM 4 to 20 contacts
(standard number of contacts: 20)




## AVAILABLE CONNECTOR HEIGHTS

| INITIAL HEIGHT A (mm) | STROKE S (mm) | PLASTIC BODY HEIGHT B (mm) | XXX CODE |
|---|---|---|---|
| 4.5 | 1.15 | 2.95 | 021 |
| 5 | 1.4 | 2.95 | 022 |
| 5.5 | 1.4 | 2.95 | 023 |
| 6 | 1.4 | 4 | 024 |
| 6.5 | 1.4 | 4 | 025 |
| 7 | 1.4 | 4 | 026 |
| 7.5 | 1.4 | 4 | 027 |

Due to technical progress, all information provided is subject to change without prior notice.

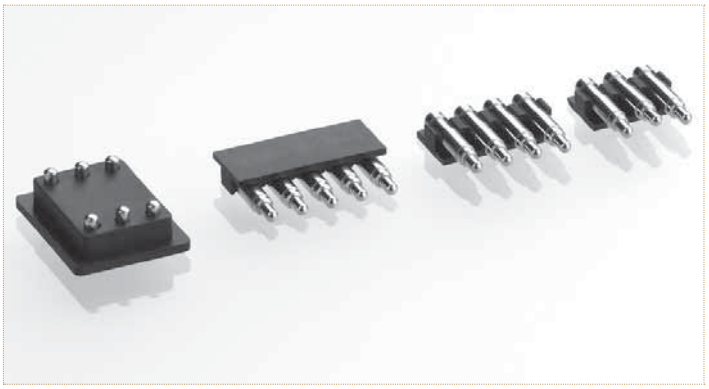
# SPRING-LOADED CONNECTORS

**2.54 mm GRID / SINGLE ROW / DOUBLE ROW / SURFACE MOUNT**

Connectors with spring-loaded contacts (SLC), surface mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 31)

| | | | |
|---|---|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR | | |
| FLAMMABILITY | UL 94V-0 | | |
| PISTON AND BARREL | Brass CuZn36Pb3 (C36000) | | |
| | **8PM...131** | **8PM...260** | **8PM...219** |
| SPRING | Music wire DIN 17723, gold plated | Stainless steel X12 CrNi177, DIN 17224 | Stainless steel X12 CrNi177, DIN 17224 |
| MAX. STROKE | 1.5 mm | 1.5 mm | 1 mm |
| FORCES | 0.2 N initial<br>0.9 N at 1/2 stroke | 0.25 N initial<br>0.95 N at 1/2 stroke | 0.25 N initial<br>0.6 N at 1/2 stroke |
| MECHANICAL LIFE | 50'000 cycles | 50'000 cycles | 100'000 cycles |
| OPERATING CURRENT | Max. 3 A | Max. 3 A | Max. 3 A |
| CONTACT RESISTANCE | 10 mΩ (static measurement, halfway position) | 10 mΩ | 15 mΩ |
| COPLANARITY SMD TERMINATIONS | Max 0.1 mm (measured on 25 mm long connectors) | | |



Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 8PM-11-00**NN**-02-131 with 5 pins becomes 8PM-11-00**05**-02-131.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PLATING CODE | BARREL | PISTON |
|---|---|---|
| 11 | 0.25 µm gold | 0.25 µm gold |
| SS | 0.5 µm gold | 0.5 µm gold |

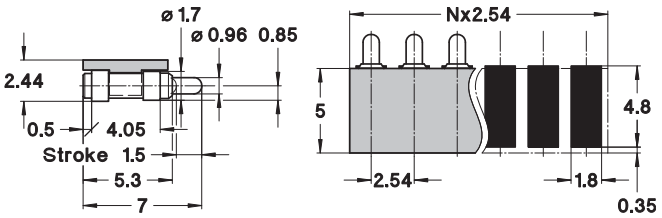
**Bulk:** 8PM-11-00**NN**-02-260

**T & R Packaging*:** 8PM-11-00**NN**-02-260191

Parallel surface mount SLC connector for pick & place automatic assembly

AVAILABILITY FROM 2 to 10 contacts (standard number of contacts: 10)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



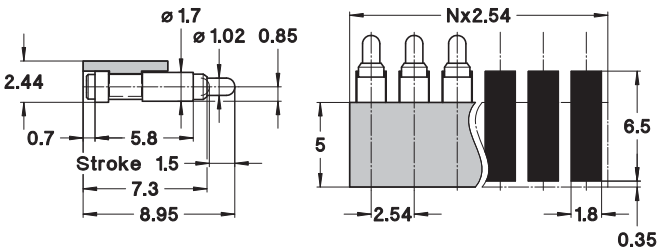

**Bulk:** 8PM-11-00**NN**-02-131

**T & R Packaging*:** 8PM-11-00**NN**-02-131191

Parallel surface mount SLC connector for pick & place automatic assembly

AVAILABILITY FROM 2 to 10 contacts (standard number of contacts: 10)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

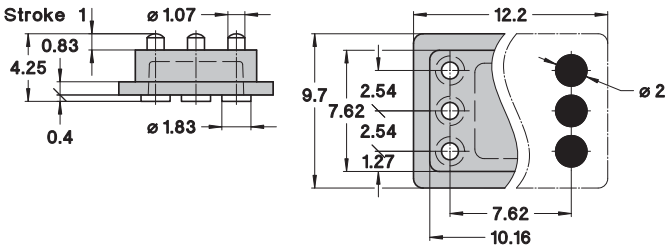



**Bulk:** 8PM-SS-0006-02-219

**T & R Packaging*:** 8PM-SS-0006-02-219191

SLC connector for chipcards with contacting pads acc. to ISO 7816
Standard number of contacts: 6

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.






Due to technical progress, all information provided is subject to change without prior notice.

# PAD CONNECTORS

SINGLE ROW / DOUBLE ROW / SURFACE MOUNT



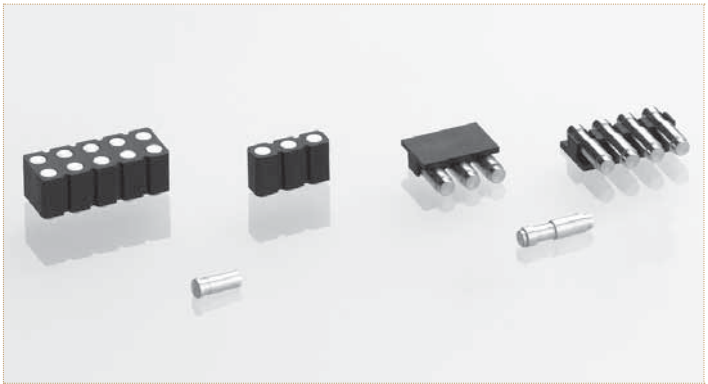
Pad connectors with fixed contacts, counterparts for spring- loaded connectors.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 31)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONTACTING AREA Ø | 1.5 mm |
| OPERATING CURRENT | Max. 3.5 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PLATING CODE | TERMINATION | CONTACTING AREA |
|---|---|---|
| 10, 11 | 0.25 µm gold | 0.25 µm gold |



See page 178 for plating specs.

**NNN / NN number of poles.** Replace **NNN** or **NN** with the requested number of poles, e.g. 802-10-**NNN**-30-507101 for a double row version with 20 pins becomes 802-10-0**20**-30-507101.

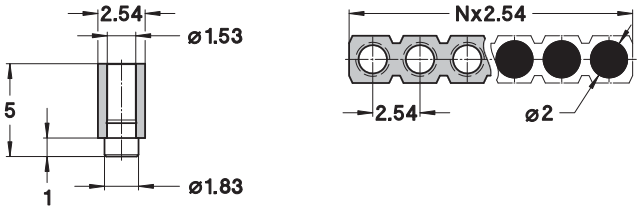
**Bulk:** 800-10-**NNN**-30-507101

**T & R Packaging*:** 800-10-**NNN**-30-507191

SMD pad connector, single row, perpendicular mount

AVAILABILITY FROM 2 to 10 contacts (standard number of contacts: 10)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



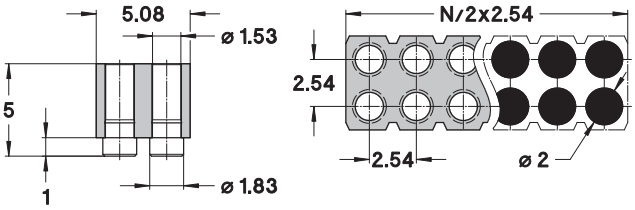

**Bulk:** 802-10-**NNN**-30-507101

**T & R Packaging*:** 802-10-**NNN**-30-507191

SMD pad connector, double row, perpendicular mount

AVAILABILITY FROM 4 to 20 contacts (standard number of contacts: 20)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



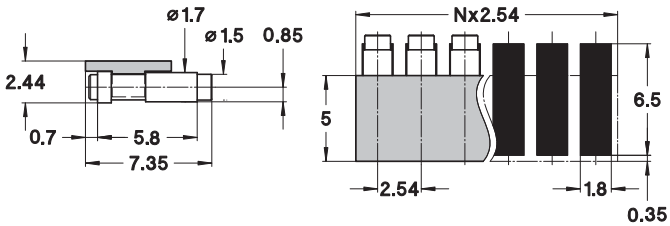

**Bulk:** 8MM-11-00**NN**-02-131

**T & R Packaging*:** 8MM-11-00**NN**-02-131191

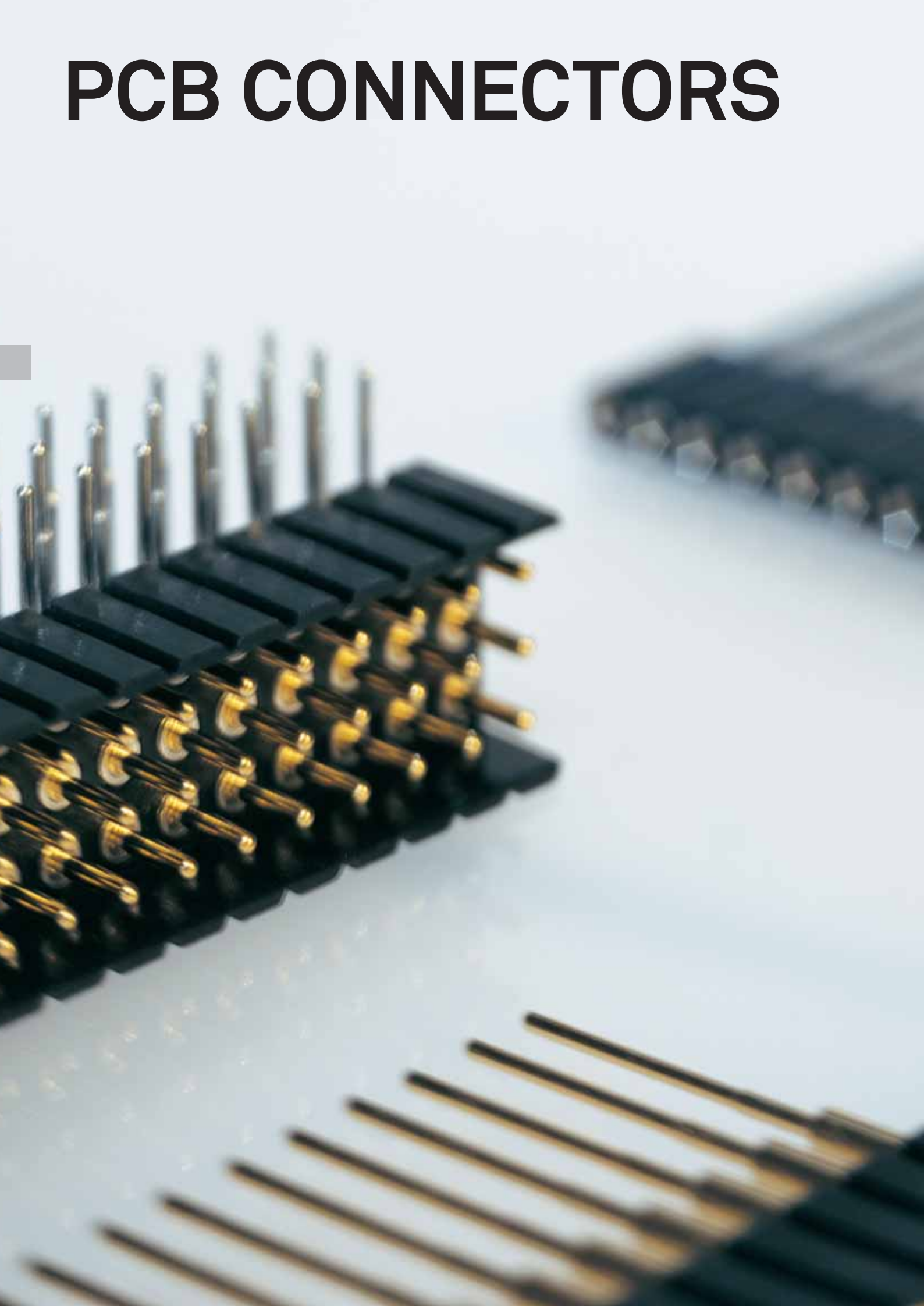
SMD pad connector, single row, parallel mount

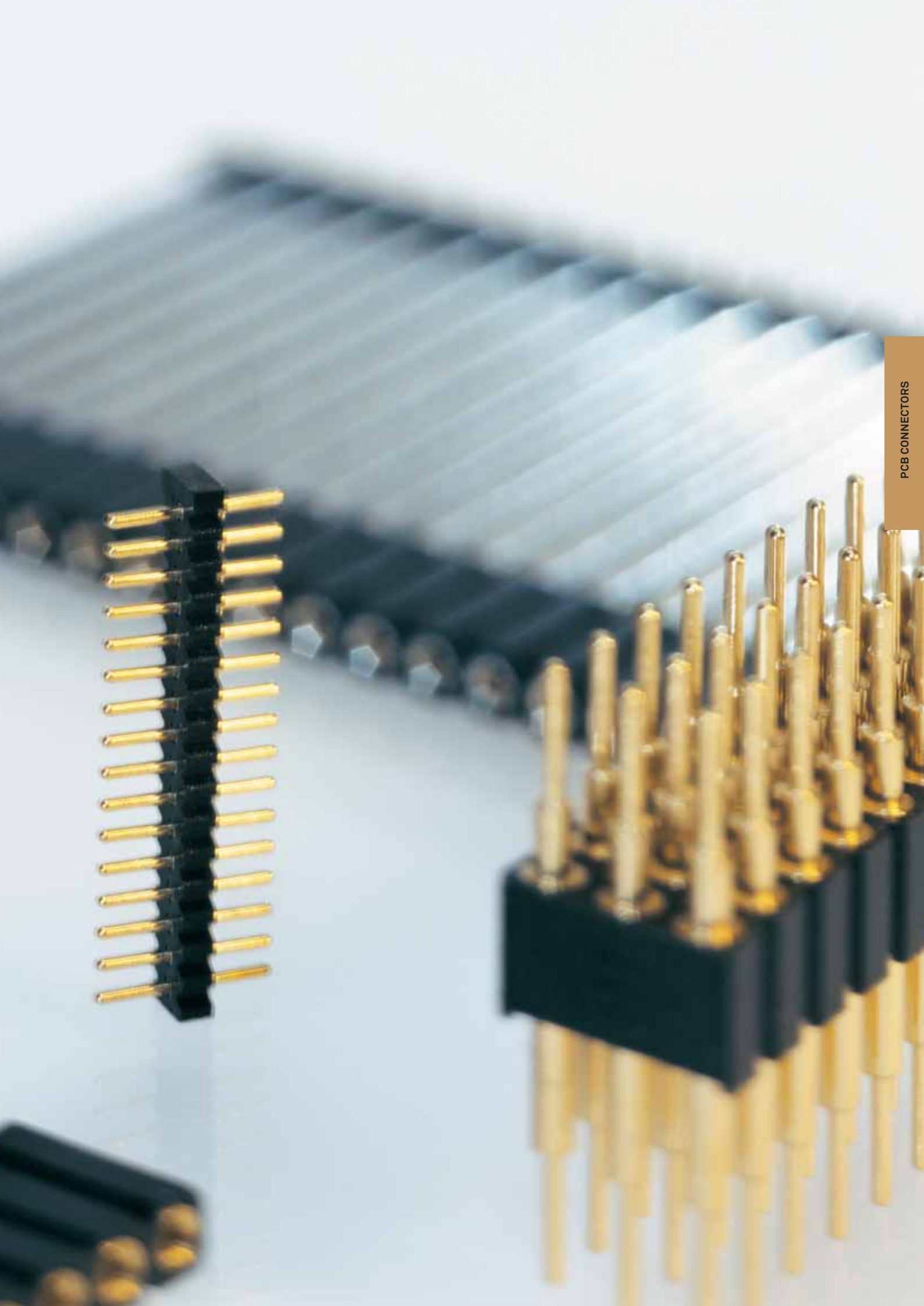
AVAILABILITY FROM 2 to 10 contacts (standard number of contacts: 10)

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



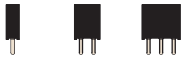
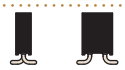
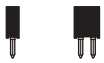
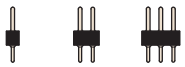
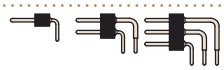
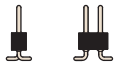
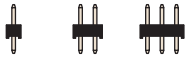
# PCB CONNECTORS





# QUICK SELECTOR CHART

PCB CONNECTORS

| GRID | | 1 mm | 1.27 mm | | | 2 mm (* 1.778 / 1.8 mm) | | | 2.54 mm MATING PIN dia. 0.47 mm | | | 2.54 mm MATING PIN dia. 0.76 mm (* Ø 1 mm) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SINGLE ROW | SINGLE ROW | DOUBLE ROW | TRIPLE ROW | SINGLE ROW | DOUBLE ROW | QUAD ROW | SINGLE ROW | DOUBLE ROW | TRIPLE ROW | SINGLE ROW | DOUBLE ROW | TRIPLE ROW |
| **SOCKET CONNECTORS** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | **SEE PAGE** | | |
| Straight solder tail |  | 44 | 46<br>47 | 46 | 46 | 55*, 57<br>58, 59 | 57<br>58, 59 | | 69, 70<br>71, 72<br>74, 75 | 69, 70<br>71,72<br>73, 74<br>75 | 72<br>75 | 85, 86<br>87, 88<br>89, 90<br>91, 100* | 85,86<br>87, 89<br>90, 91<br>100* | 86, 87<br>89, 90 |
| Right angle solder tail |  | | 48 | 48 | 48 | 60 | 60 | | 76 | 76 | | 92, 93 | 92 | |
| Surface mount perpendicular floating pin |  | | | | | | | 62 | 77 | 77 | | 94 | 94 | |
| Surface mount perpendicular gull-wing |  | | 49 | 49, 50 | | 61 | 61 | | 77 | 77 | | 94, 95 | 94, 95 | |
| Surface mount parallel |  | 44 | 50 | | | 62 | | | 78 | | | 96 | | |
| Solderless compliant press-fit |  | | | | | 63 | 63 | | 79, 80 | 79, 80 | | 97, 98 | 97 | |
| Wire-wrap |  | | | | | | | | 81, 82 | 81, 82 | | 98 | 98 | |
| Carrier |  | | | | | | | | 83, 84 | | | | | |
| **PIN CONNECTORS** | | | | | | | | | | | | | | |
| Straight solder tail |  | 45 | 51 | 51 | 51 | 56*, 64 | 65 | | 100<br>to 103 | 100<br>to 103 | | 108<br>to 110 | 108<br>to 110 | 109<br>110 |
| Right angle solder tail |  | | 52 | 52 | 52 | 65 | 65 | | 104 | 104 | | 111<br>112* | 111<br>112 | 112 |
| Surface mount perpendicular floating pin |  | | | | | | | | 105 | 105 | | 113 | 113 | |
| Surface mount perpendicular gull-wing |  | | 53 | 53, 54 | | 66 | 66 | | 105 | 105 | | 113<br>114 | 113<br>114 | |
| Surface mount parallel |  | 45 | 54 | | | 67 | | | 106 | | | 115 | | |
| Solderless compliant press-fit |  | | | | | | | | 107 | 107 | | 116<br>117 | 116<br>117 | 117 |
| **SQUARE PIN CONNECTORS** | | | | | | ⍁ 0.5 mm | | | | | | ⍁ 0.635 mm | | |
| Straight solder tail |  | | | | | 68 | 68 | | | | | 118 | 118 | 118 |
| Right angle solder tail |  | | | | | 68 | 68 | | | | | 119 | 119 | 119 |
| **HEADERS / JUMPERS** | | | | | | | | | | | | | | |
| • Slotted head<br>• Turret head<br>• Solder cup |  | | | | | | | | | | | 120<br>121 | 120<br>121 | |
| • Male jumpers<br>• Female jumpers |  | | | | | | 123 | | | | | | 122<br>123 | |



Due to technical progress, all information provided is subject to change without prior notice.

The values listed below are general specs applying for PRECI-DIP socket and pin connectors. Please see individual catalog page for additional and product specific technical data.

| | |
|---|---|
| **OPERATING TEMPERATURE RANGE** | -55 ... +125 °C |
| **CLIMATIC CATEGORY (IEC)** | 55/125/21 |
| **OPERATING HUMIDITY RANGE** | Annual mean 75% |
| **MAX. WORKING VOLTAGE** | 100 VRMS/150 VDC (2.54 mm grid) |

PRECI-DIP connectors designated « Series Preci-Dip Connector » are recognized by UL LLC and listed under « Connectors for Use in Data, Signal, Control and Power Applications », File Nr. E174442.



## MECHANICAL CHARACTERISTICS

| | |
|---|---|
| **CLIP RETENTION** | Min. 40 N (no displacement under axial force applied) |
| **CONTACT (SLEEVE / CLIP) RETENTION** | Min. 3.3 N acc. to MIL-DTL-83734, pt 4.6.4.2 |

## ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **INSULATION RESISTANCE BETWEEN ANY TWO ADJACENT CONTACTS** | Min. 10'000 MΩ at 500 VAC |
| **CAPACITANCE BETWEEN ANY TWO ADJACENT CONTACTS** | Max. 1 pF |

**AIR AND CREEPAGE DISTANCES BETWEEN ANY TWO ADJACENT CONTACTS**

| SERIE | 3xx/4xx/7xx | 80x | 83x | 85x | 86x |
|---|---|---|---|---|---|
| mm | 0.7 | 0.85 / 0.7 | 0.5 | 0.4 / 0.5 | 0.5 |

## ENVIRONMENTAL CHARACTERISTICS

The sockets withstand the following environmental tests without mechanical and electrical defects:

- Dry heat steady state IEC 60512-11-9.11i / 60068-2-2.Bb: 125 °C, 16 h
- Damp heat cyclic IEC 60512-11-12.11m / 60068-2-30.Db: 25/55 °C, 90 – 100 %rH, 1 cycle of 24 h
- Cold steady state IEC 60512-11-10.11j / 60068-2-1.A: -55 °C, 2 h
- Thermal shock IEC 60512-11-4.11d / 60068-2-14.Na: -55/125 °C, 5 cycles 30 min.
- Sinusoidal vibrations IEC 60512-6-4.6d / 60068-2-6.Fc: 10 to 500 Hz, 10 g, 1 octave/min., 10 cycles for each axis
- Shock IEC 60512-6-3.6c / 60068-2-27.Ea: 50 g, 11 ms, 3 shocks in three axis

During the above two tests, no contact interruption >50 ns does appear.

- Solderability J-STD-002A, Test A, 245 °C, 5 s, solder alloy SnAg3.8Cu0.7
- Resistance to soldering heat J-STD-020C, 260 °C, 20 s
- Moisture sensitivity J-STD-020C level 1

## SOLDERLESS COMPLIANT PRESS-FIT CHARACTERISTICS

**PRESS-FIT CHARACTERISTICS MEASURED ACC. TO IEC 60352-5**

| | |
|---|---|
| • Press-in force: | 90 N max. (at min. hole dia.) / 65 N typ. |
| • Push-out force: | 30 N min. (at max. hole dia.) / 50 N typ. |
| • Push-out 3rd cycle: | 20 N min. (at max. hole dia.) |

**PCB HOLE DIMENSIONS**

| | |
|---|---|
| • 2 mm grid | Finished hole Ø: 0.7 + 0.09/-0.06 mm<br>Drilled hole Ø: 0.8 ± 0.02 mm |
| • 2.54 mm grid | Finished hole Ø: 1 + 0.09/-0.06 mm<br>Drilled hole Ø: 1.15 ± 0.02 mm |

**PCB HOLE PLATING**

| PCB surface finish | Hole plating |
|---|---|
| • Tin | 5-15 µm tin over min. 25 µm copper |
| • Copper | min. 25 µm copper |
| • Gold over nickel | 0.05-0.2 µm gold over 2.5-5 µm nickel over min. 25 µm copper |

# SOCKET CONNECTORS 1 mm

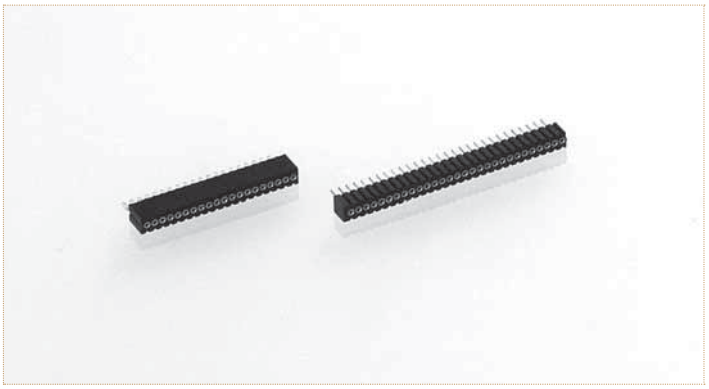
## SINGLE ROW / SOLDER TAIL / SURFACE MOUNT

Ultraminiature PCB socket connectors, solder tail and SMD parallel mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.36 to 0.46 mm |
| FORCES | 0.25 N typ. insertion 0.15 N typ. withdrawal (polished steel gauge Ø 0.40 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding pin connectors, see page 45.



Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 861-87-**NNN**-10-001101 for a single row version with 8 pins becomes 861-87-**008**-10-001101.

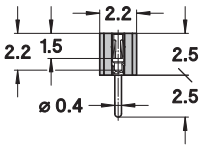
## ORDERING INFORMATION ROHS COMPLIANT PARTS

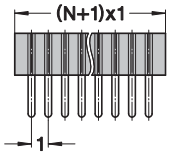
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

861-**PP**-**NNN**-10-001101

Straight socket connector low profile, solder tail, single row

AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)



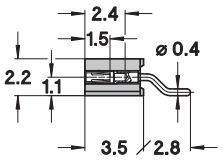



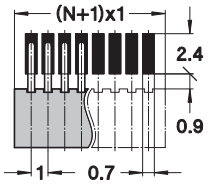

**Bulk:** 861-**PP**-**NNN**-40-001101

**T & R Packaging*:** 861-**PP**-**NNN**-40-001191

SMD socket connector, single row, parallel mount

AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)
For connectors having more than 24 contacts, the coplanarity issue is to be addressed specifically




*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 1 mm

**SINGLE ROW / SOLDER TAIL / SURFACE MOUNT**

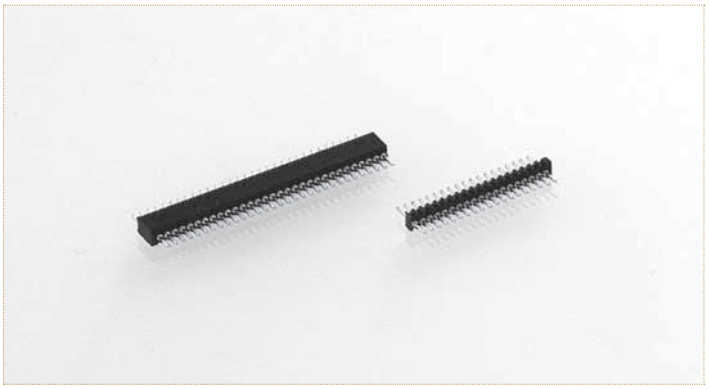


Ultraminiature PCB pin connectors, solder tail and SMD parallel mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.40 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| DIELECTRIC STRENGTH | Min. 500 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding socket connectors, see page 44.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

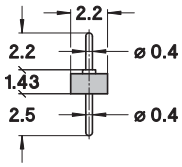
| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |

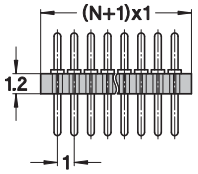
Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 860-10-**NNN**-10-001101 for a single row version with 8 pins becomes 860-10-**008**-10-001101.

860-10-**NNN**-10-001101

Straight pin connector low profile, solder tail, single row

AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)

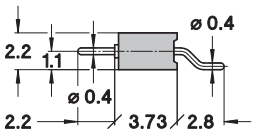


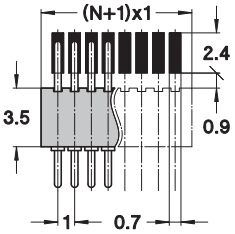




**Bulk:** 860-10-**NNN**-40-001101
**T & R Packaging*:** 860-10-**NNN**-40-001191

SMD pin connector, single row, parallel mount

AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)
For connectors having more than 24 contacts, the coplanarity issue is to be addressed specifically




*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

# SOCKET CONNECTORS 1.27 mm

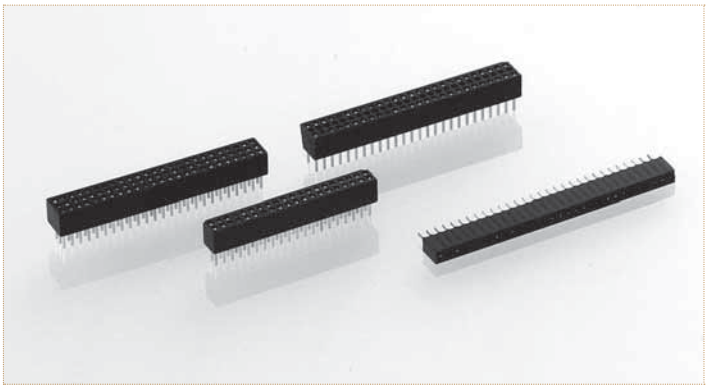
**SINGLE ROW / DOUBLE ROW / TRIPLE ROW / SOLDER TAIL**

Ultraminiature PCB socket connectors, solder tail

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000 |
| CONTACT CLIP (3 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.38 to 0.50 mm |
| FORCES | 0.5 N typ. insertion 0.2 N typ. withdrawal (polished steel gauge Ø 0.41 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 20 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |

For corresponding pin connectors, see pages 51-54.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

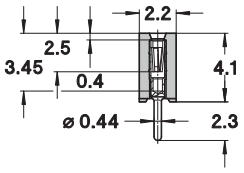
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

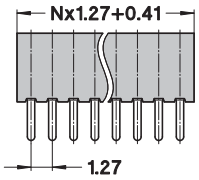
Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 851-87-**NNN**-10-001101 for a single row version with 8 pins becomes 851-87-**008**-10-001101

### 851-**PP**-**NNN**-10-001101

Straight socket connector, solder tail, single row

AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 25 and 50)

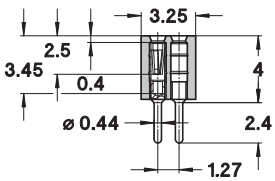


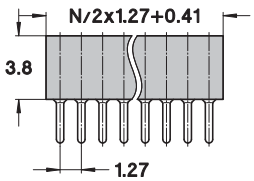




### 853-**PP**-**NNN**-10-001101

Straight socket connector, solder tail, double row

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 50 and 100)

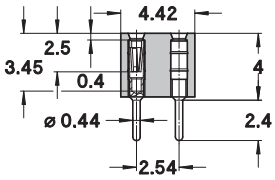


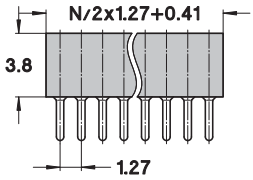




### 853-**PP**-**NNN**-10-002101

Straight socket connector, solder tail, double row with 2.54 mm row to row distance

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)

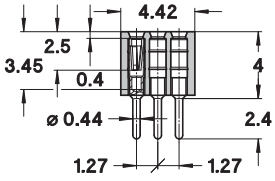


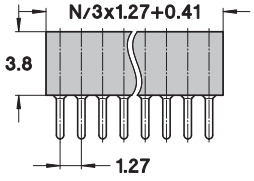




### 855-**PP**-**NNN**-10-001101

Straight socket connector, solder tail, triple row

AVAILABILITY FROM 9 to 150 contacts
(standard number of contacts: 150)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 1.27 mm

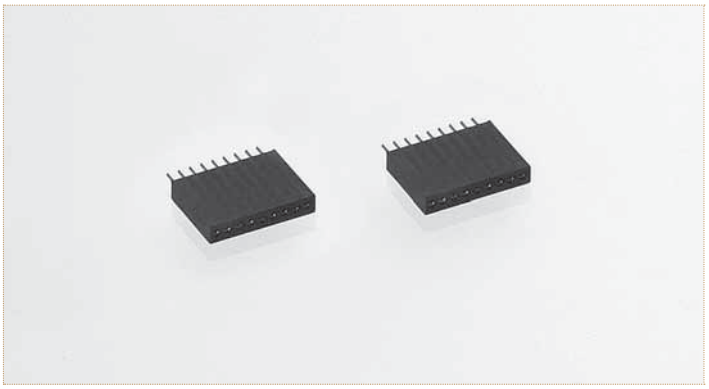
## SINGLE ROW / SOLDER TAIL

Ultraminiature PCB socket connectors, solder tail

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (3 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.38 to 0.50 mm |
| FORCES | 0.5 N typ. insertion 0.2 N typ. withdrawal (polished steel gauge Ø 0.41 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 20 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |

For corresponding pin connectors, see pages 51-54.



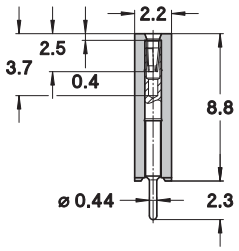
Other plating on request (see page 178 for plating specs).

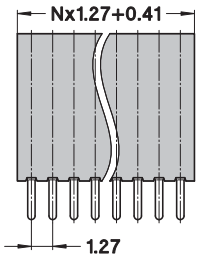
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

851-**PP**-009-10-477101

Straight socket connector height 8.8 mm, solder tail, single row
Standard number of contacts: 9
Please consult for other pin number



# SOCKET CONNECTORS 1.27 mm

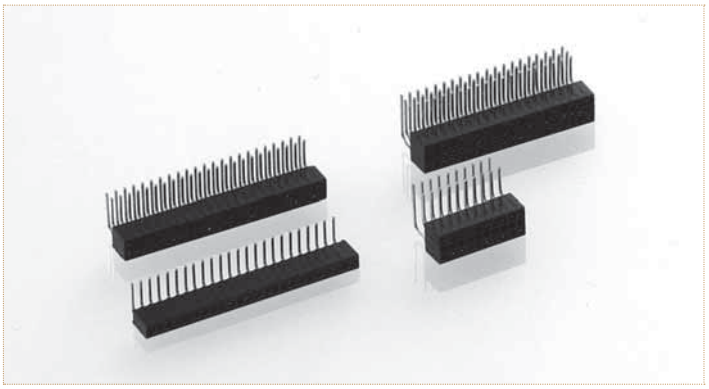
**SINGLE ROW / DOUBLE ROW / TRIPLE ROW / SOLDER TAIL, RIGHT ANGLE**

Ultraminiature PCB socket connectors, solder tail right angle.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (3 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.38 to 0.50 mm |
| FORCES | 0.5 N typ. insertion 0.2 N typ. withdrawal (polished steel gauge Ø 0.41 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 20 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |

For corresponding pin connectors, see pages 51-54.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

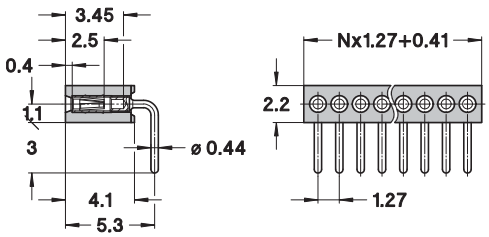
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 851-87-**NNN**-20-001101 for a single row version with 8 pins becomes 851-87-**008**-20-001101.

### 851-**PP**-**NNN**-20-001101

Right angle socket connector, solder tail, single row

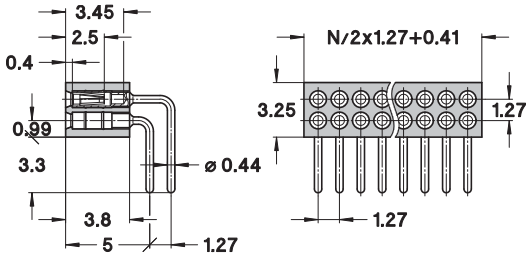
**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 25 and 50)




### 853-**PP**-**NNN**-20-001101

Right angle socket connector, solder tail, double row

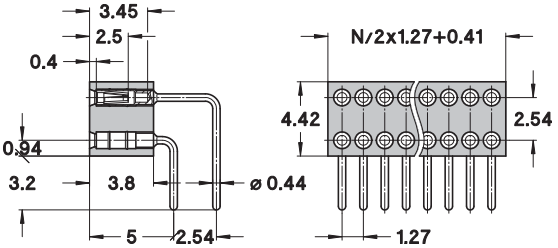
**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 50 and 100)




### 853-**PP**-**NNN**-20-002101

Right angle socket connector, solder tail, double row with 2.54 mm row to row distance

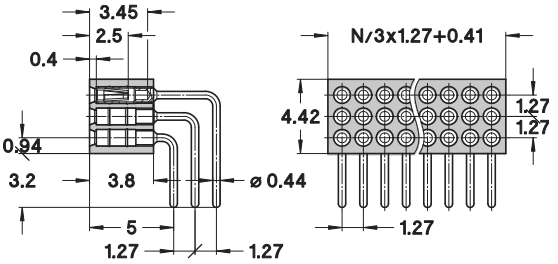
**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 100)




### 855-**PP**-**NNN**-20-001101

Right angle receptacle, solder tail, triple row

**AVAILABILITY FROM** 9 to 150 contacts
(standard number of contacts: 150)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 1.27 mm

SINGLE ROW / DOUBLE ROW / TRIPLE ROW / SURFACE MOUNT

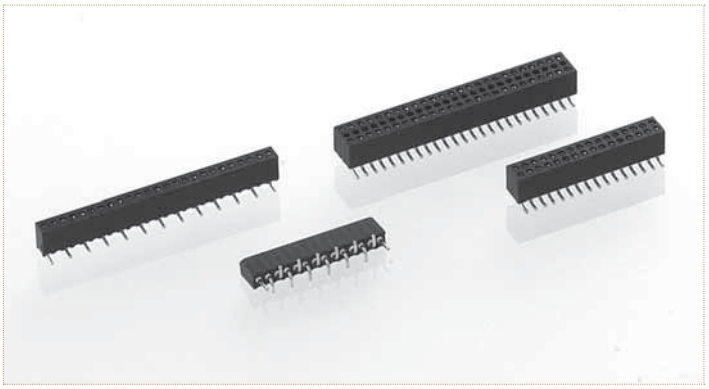


Ultraminiature PCB socket connectors, SMD mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (3 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.35 to 0.50 mm |
| FORCES | 0.5 N typ. insertion 0.2 N typ. withdrawal (polished steel gauge Ø 0.41 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 20 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding pin connectors, see pages 51-54.



Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 851-83-**NNN**-30-001101 for a single row version with 8 pins becomes 851-83-**008**-30-001101.

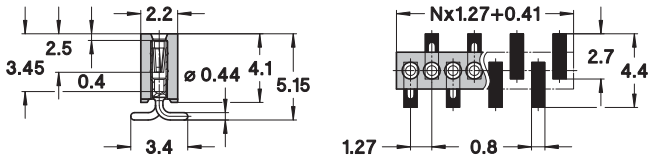
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

**Bulk:** 851-**PP**-**NNN**-30-001101
**T & R Packaging with pick & place cap*:** 851-**PP**-**NNN**-30-001191

SMD socket connector, single row, perpendicular mount

AVAILABILITY FROM 3 to 50 contacts
(standard number of contacts: 25 and 50)
For connectors having more than 19 contacts, the coplanarity issue is to be addressed specifically

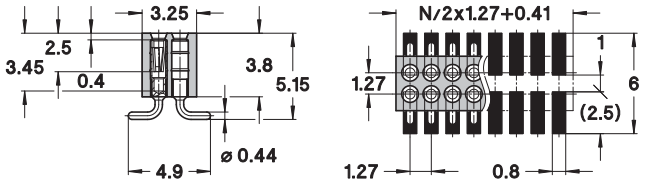



*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 853-**PP**-**NNN**-30-001101
**T & R Packaging with pick & place cap*:** 853-**PP**-**NNN**-30-001191

SMD socket connector, double row, perpendicular mount

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 50 and 100)
For connectors having more than 19 contacts per row, the coplanarity issue is to be addressed specifically

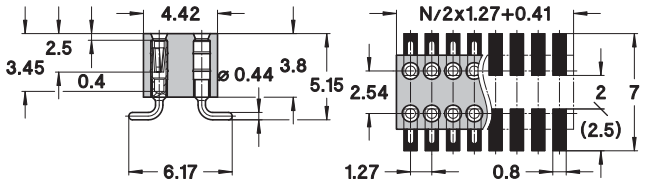



*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 853-**PP**-**NNN**-30-002101
**T & R Packaging with pick & place cap*:** 853-**PP**-**NNN**-30-002191

SMD socket connector, double row with 2.54 mm row to row distance, perpendicular mount

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)
For connectors having more than 19 contacts per row, the coplanarity issue is to be addressed specifically

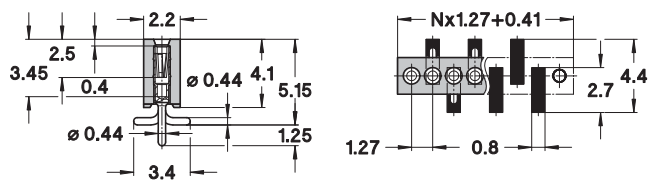



*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

851-**PP**-**NNN**-30-136101

SMD socket connector, single row, perpendicular mount with 2 positioning pins

AVAILABILITY FROM 5 to 50 contacts
(standard number of contacts: 25 and 50)
For connectors having more than 19 contacts, the coplanarity issue is to be addressed specifically



# SOCKET CONNECTORS 1.27 mm

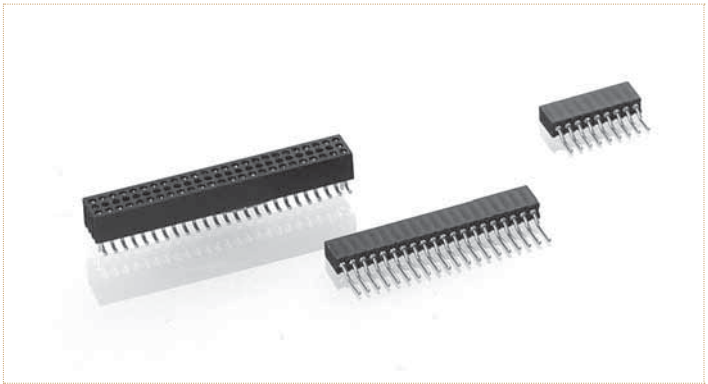
**SINGLE ROW / DOUBLE ROW / SURFACE MOUNT**

Ultraminiature PCB socket connectors, SMD mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **SLEEVE** | Brass CuZn36Pb3 (C36000) |
| **CONTACT CLIP (4 FINGER)** | Beryllium copper (C17200) |
| **MATING PIN Ø** | 0.38 to 0.50 mm |
| **FORCES** | 0.5 N typ. insertion 0.2 N typ. withdrawal (polished steel gauge Ø 0.41 mm) |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 1 A |
| **CONTACT RESISTANCE** | Max. 20 mΩ |
| **DIELECTRIC STRENGTH** | Min. 500 VRMS |
| **COPLANARITY SMD TERMINATIONS** | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding pin connectors, see pages 51-54.



Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 851-83-**NNN**-40-001101 for a single row version with 8 pins becomes 851-83-**008**-40-001101.

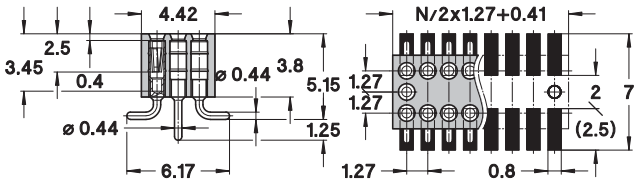
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

### 853-**PP**-**NNN**-30-051101

SMD socket connector, double row with 2.54 mm row to row distance, perpendicular mount with 2 positioning pins

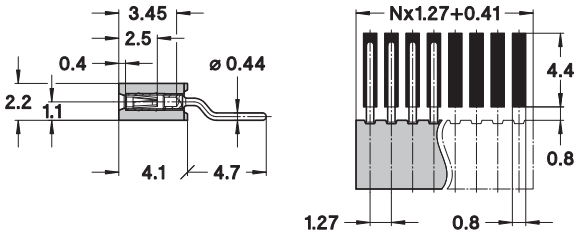
**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 100)
For connectors having more than 19 contacts per row, the coplanarity issue is to be addressed specifically




### 851-**PP**-**NNN**-40-001101

SMD socket connector, single row, parallel mount with long solder termination

**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 25 and 50)
For connectors having more than 19 contacts, the coplanarity issue is to be addressed specifically

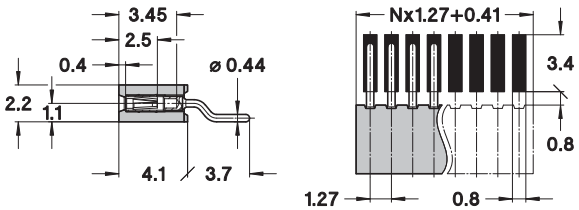



**Bulk:** 851-**PP**-**NNN**-40-252101
**T & R Packaging*:** 851-**PP**-**NNN**-40-252191

SMD socket connector, single row, parallel mount

**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 25 and 50)
For connectors having more than 19 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 1.27 mm

SINGLE ROW / DOUBLE ROW / TRIPLE ROW / SOLDER TAIL



Ultraminiature PCB pin connectors, solder tail.

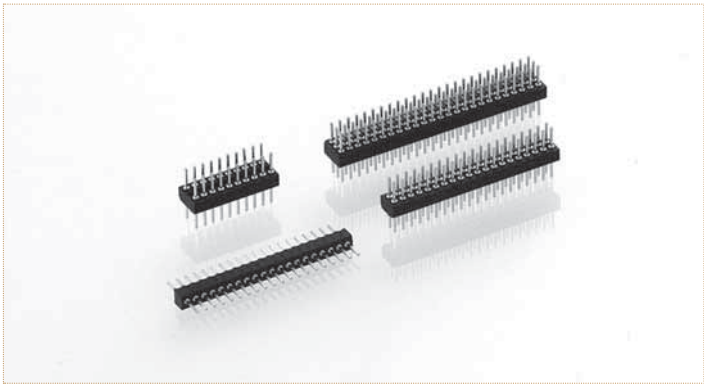
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.41 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 46-50.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

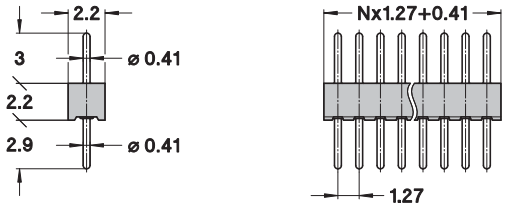


Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 852-10-**NNN**-10-001101 for a double row version with 16 pins becomes 852-10-**016**-10-001101.

### 850-**PP**-**NNN**-10-001101

Straight pin connector, solder tail, single row

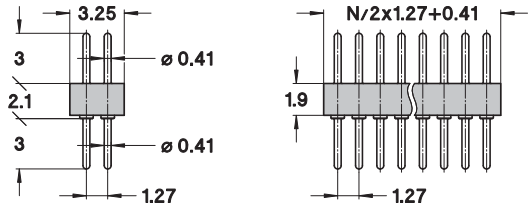
AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 25 and 50)




### 852-**PP**-**NNN**-10-001101

Straight pin connector, solder tail, double row

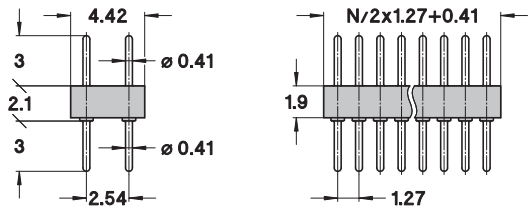
AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 50 and 100)




### 852-**PP**-**NNN**-10-002101

Straight pin connector, solder tail, double row with 2.54 mm row to row distance

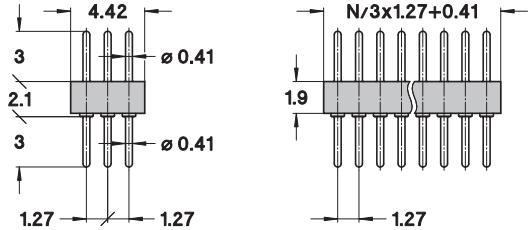
AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)




### 854-**PP**-**NNN**-10-001101

Straight pin connector, solder tail, triple row

AVAILABILITY FROM 9 to 150 contacts
(standard number of contacts: 150)




Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 1.27 mm

**SINGLE ROW / DOUBLE ROW / TRIPLE ROW / SOLDER TAIL, RIGHT ANGLE**

Ultraminiature PCB pin connectors, solder tail, right angle.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.41 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 46-50.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

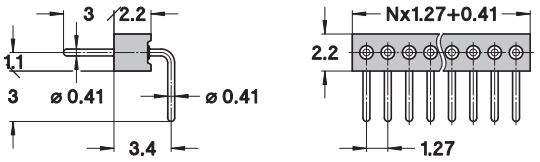


Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 852-10-**NNN**-20-001101 for a double row version with 16 pins becomes 852-10-**016**-20-001101.

### 850-**PP**-**NNN**-20-001101

Right angle pin connector, solder tail, single row

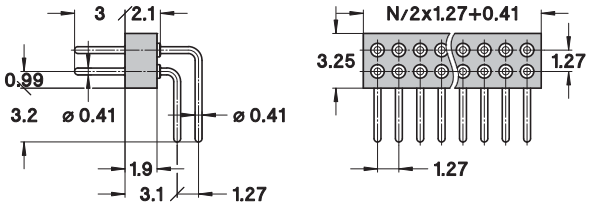
**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 25 and 50)




### 852-**PP**-**NNN**-20-001101

Right angle pin connector, solder tail, double row

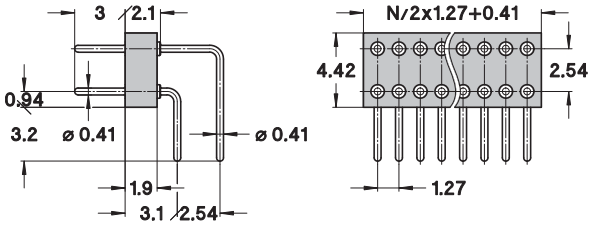
**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 50 and 100)




### 852-**PP**-**NNN**-20-002101

Right angle pin connector, solder tail, double row with 2.54 mm row to row distance

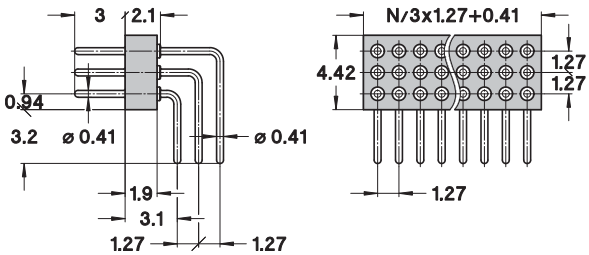
**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 100)




### 854-**PP**-**NNN**-20-001101

Right angle pin connector, solder tail, triple row

**AVAILABILITY FROM** 9 to 150 contacts
(standard number of contacts: 150)






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 1.27 mm

SINGLE ROW / DOUBLE ROW / SURFACE MOUNT

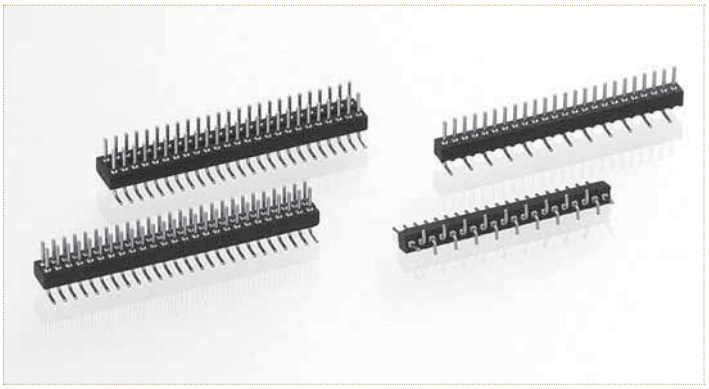


Ultraminiature PCB pin connectors, SMD mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.41 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding socket connectors, see pages 46-50.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

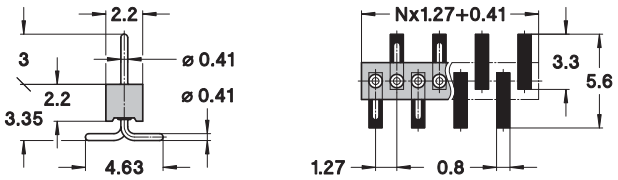
Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 852-10-**NNN**-30-001101 for a double row version with 16 pins becomes 852-10-**016**-30-001101.

**Bulk:** 850-**PP**-**NNN**-30-001101
**T & R Packaging with pick & place cap*:** 850-**PP**-**NNN**-30-001191

SMD pin connector, single row, perpendicular mount

AVAILABILITY FROM 3 to 50 contacts
(standard number of contacts: 25 and 50)
For connectors having more than 19 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

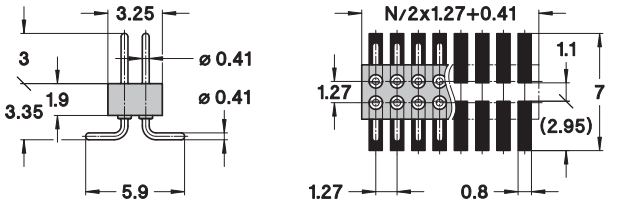



**Bulk:** 852-**PP**-**NNN**-30-001101
**T & R Packaging with pick & place cap*:** 852-**PP**-**NNN**-30-001191

SMD pin connector, double row, perpendicular mount

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 50 and 100)
For connectors having more than 19 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

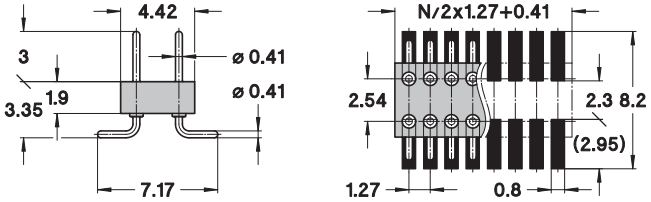



**Bulk:** 852-**PP**-**NNN**-30-002101
**T & R Packaging with pick & place cap*:** 852-**PP**-**NNN**-30-002191

SMD pin connector, double row with 2.54 mm row to row distance, perpendicular mount

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)
For connectors having more than 19 contacts per row, the coplanarity issue is to be addressed specifically

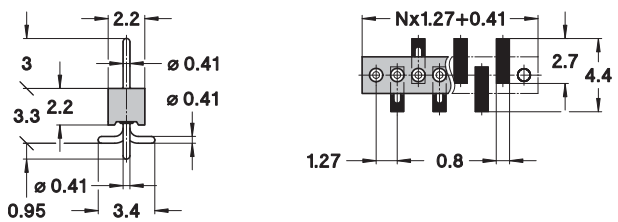
*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.




850-**PP**-**NNN**-30-135101

SMD pin connector, single row, perpendicular mount with 2 positioning pins

AVAILABILITY FROM 5 to 50 contacts
(standard number of contacts: 25 and 50)
For connectors having more than 19 contacts, the coplanarity issue is to be addressed specifically



# PIN CONNECTORS 1.27 mm

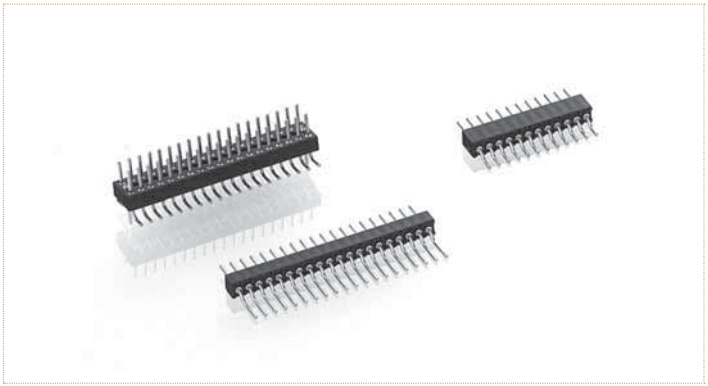
**SINGLE ROW / DOUBLE ROW / SURFACE MOUNT**

Ultraminiature PCB pin connectors, SMD mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **CONTACT** | Brass CuZn36Pb3 (C36000) |
| **CONNECTING PIN Ø** | 0.41 mm |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 1 A |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |
| **COPLANARITY SMD TERMINATIONS** | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding socket connectors, see pages 46-50.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

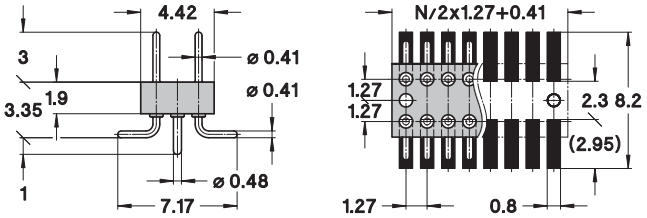
| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 850-10-**NNN**-40-001101 for a single row version with 16 pins becomes 850-10-**016**-40-001101.

### 852-**PP**-**NNN**-30-051101

SMD pin connector, double row with 2.54 mm row to row distance, perpendicular mount with 2 positioning pins

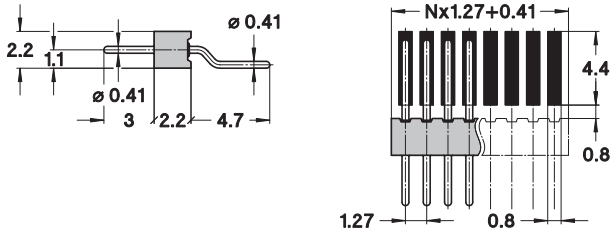
**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 100)
For connectors having more than 19 contacts per row, the coplanarity issue is to be addressed specifically




### 850-**PP**-**NNN**-40-001101

SMD pin connector, single row, parallel mount with long solder termination

**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 25 and 50)
For connectors having more than 19 contacts, the coplanarity issue is to be addressed specifically



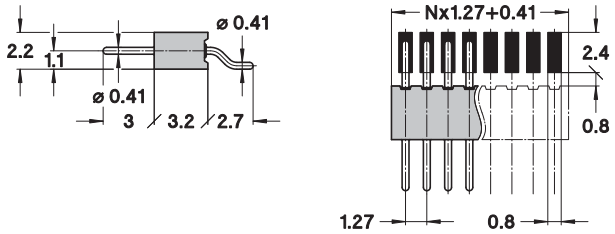

**Bulk:** **T & R Packaging*:**

850-**PP**-**NNN**-40-251101 850-**PP**-**NNN**-40-251191

SMD pin connector, single row, parallel mount short solder termination and wider insulator for easier pick and place

**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 50)
For connectors having more than 19 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 1.778 and 1.8 mm

SINGLE ROW / SOLDER TAIL



Socket connectors, with reduced grid spacing 1.778 and 1.8 mm, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see page 56.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

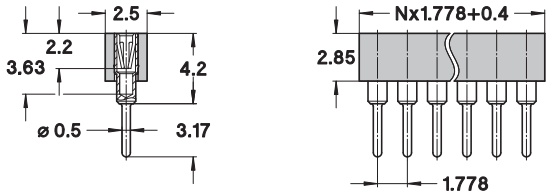
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 317-87-1**NN**-41-005101 for a single row version with 8 pins becomes 317-87-1**08**-41-005101.

### 317-**PP**-1**NN**-41-005101

Straight socket connector, single row, grid spacing 1.778 mm

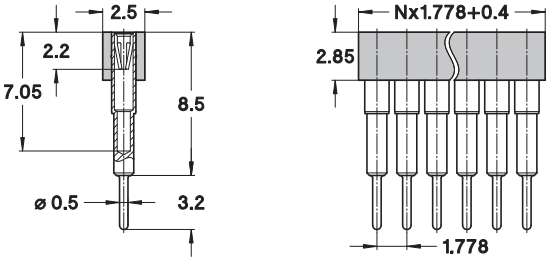
AVAILABILITY FROM 2 to 38 contacts
(standard number of contacts: 38)




### 317-**PP**-1**NN**-41-022101

Straight socket connector elevated, single row, grid spacing 1.778 mm

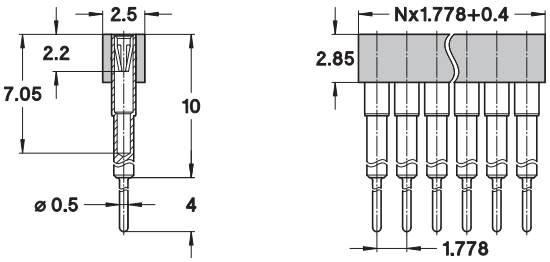
AVAILABILITY FROM 2 to 38 contacts
(standard number of contacts: 38)




### 317-**PP**-1**NN**-41-026101

Straight socket connector elevated, single row, grid spacing 1.778 mm

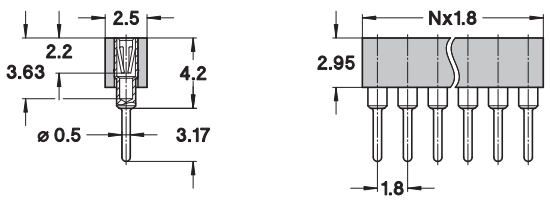
AVAILABILITY FROM 2 to 38 contacts
(standard number of contacts: 38)




### 317-**PP**-1**NN**-01-687101

Straight socket connector, single row, grid spacing 1.8 mm for LCD-displays

AVAILABILITY FROM 2 to 42 contacts
(standard number of contacts: 42)



# PIN CONNECTORS 1.778 mm

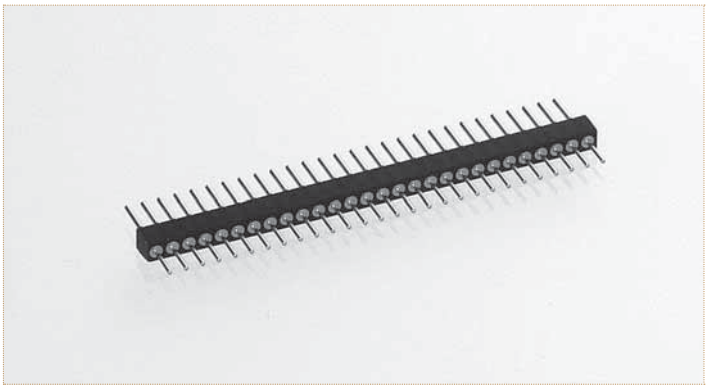
**SINGLE ROW / SOLDER TAIL**

PCB pin connectors, solder tail with reduced pin spacing 1,778 mm.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see page 55.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

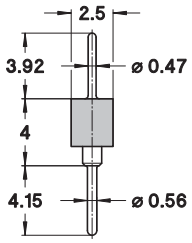
| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

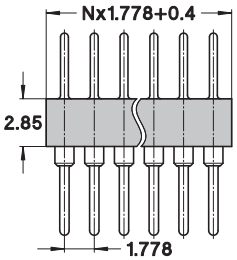
Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 350-10-1**NN**-00-012101 for a single row version with 8 pins becomes 350-10-1**08**-00-012101.

350-**PP**-1**NN**-00-012101

Straight pin connector, single row, grid spacing 1.778 mm

| | |
|---|---|
| AVAILABILITY FROM | 2 to 38 contacts<br>(standard number of contacts: 38) |






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2 mm

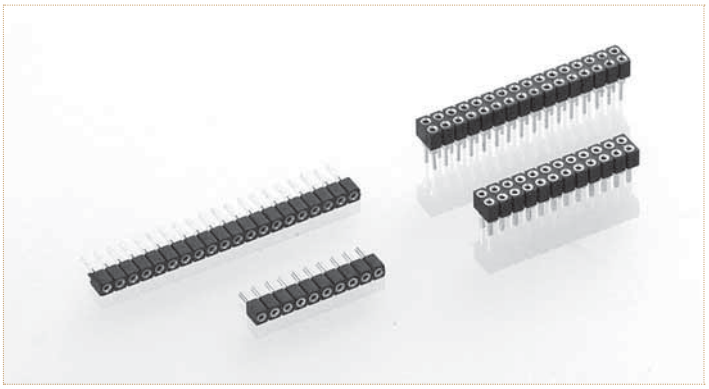
SINGLE ROW / DOUBLE ROW / SOLDER TAIL

"Hard metric" PCB socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polymer LCP-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.40 to 0.66 mm, ⍁ 0.50 mm |
| FORCES | 0.7 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 64-68.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

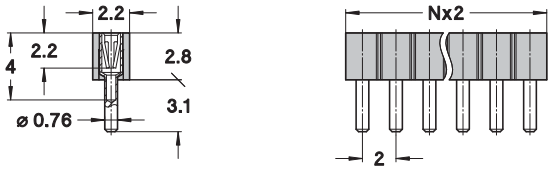
Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 833-87-**NNN**-10-001101 for a double row version with 16 pins becomes 833-87-**016**-10-001101.



### 831-**PP**-**NNN**-10-273101

Straight socket connector, low profile height 2.8 mm, solder tail, single row

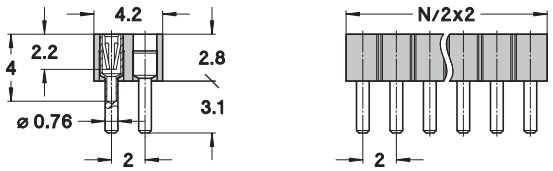
AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)




### 833-**PP**-**NNN**-10-273101

Straight socket connector, low profile height 2.8 mm, solder tail, double row

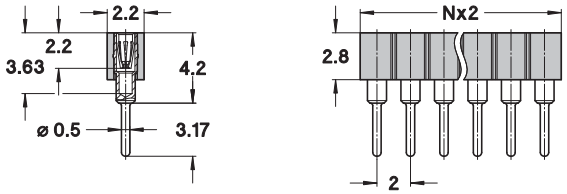
AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)




### 831-**PP**-**NNN**-10-001101

Straight socket connector, height 4.2 mm, solder tail, single row

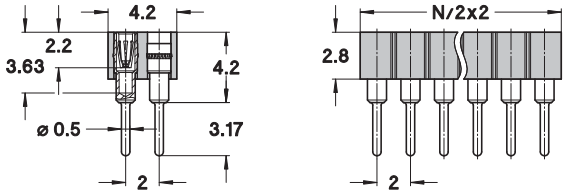
AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)




### 833-**PP**-**NNN**-10-001101

Straight socket connector, height 4.2 mm, solder tail, double row

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)




Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2 mm

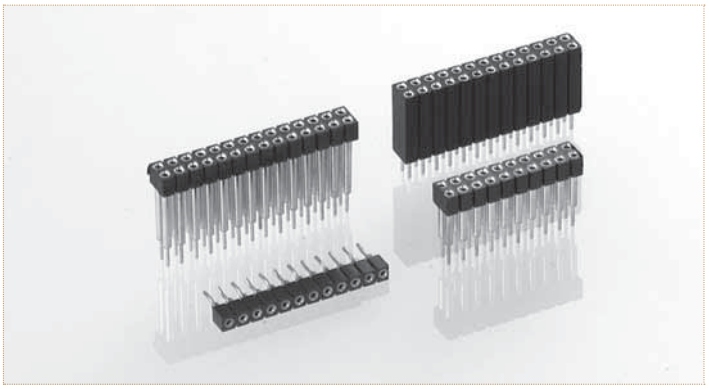
SINGLE ROW / DOUBLE ROW / SOLDER TAIL

"Hard metric" PCB socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polymer LCP-GF30-FR (PCT-GF30-FR for 833...10-457101) |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.40 to 0.56 mm, ☐ 0.50 mm |
| FORCES | 0.7 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 64-68.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

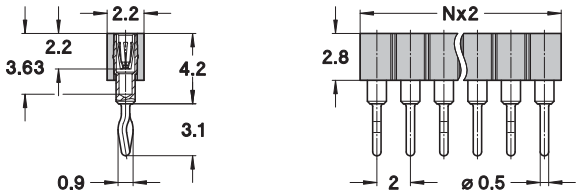
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 833-87-**NNN**-10-453101 for a double row version with 16 pins becomes 833-87-**016**-10-453101.

### 831-**PP**-**NNN**-10-230101

Straight socket connector, height 4.2 mm, with clinched (right/left) solder tails, single row

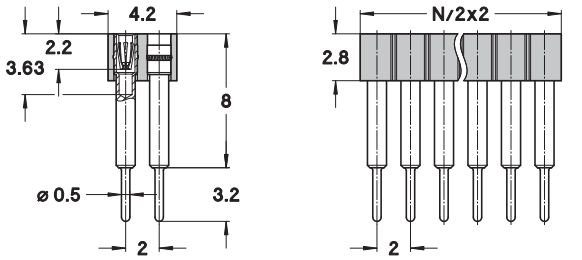
AVAILABILITY FROM 3 to 50 contacts
(standard number of contacts: 50)




### 833-**PP**-**NNN**-10-453101

Straight socket connector, height 8 mm, solder tail, double row

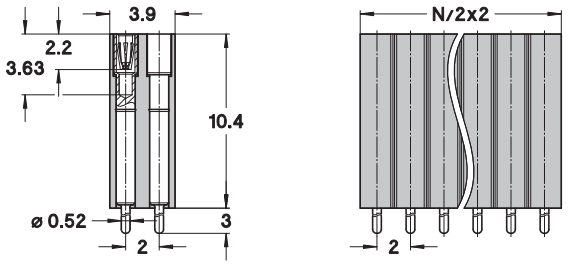
AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)




### 833-**PP**-**NNN**-10-457101

Straight socket connector, height 10.4 mm, solder tail, double row

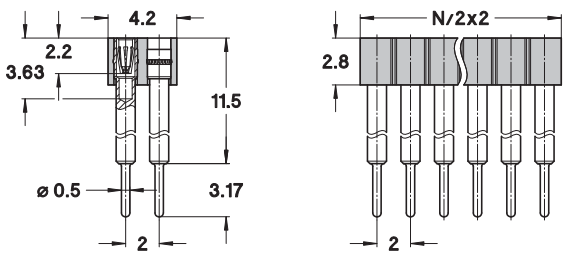
AVAILABILITY FROM 4 to 50 contacts
(standard number of contacts: 50)




### 833-**PP**-**NNN**-10-287101

Straight socket connector, height 11.5 mm, solder tail, double row

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2 mm

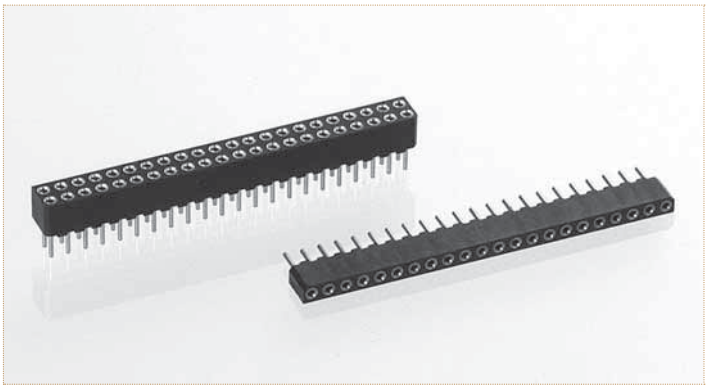
SINGLE ROW / DOUBLE ROW / SOLDER TAIL

"Hard metric" PCB socket connectors, solder tail, polarised.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polymer LCP-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.40 to 0.66 mm, ⍁ 0.50 mm |
| FORCES | 0.7 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 64-68.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

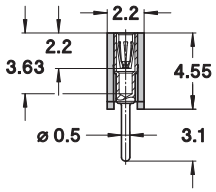
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

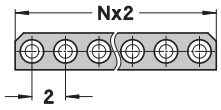
Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 833-87-**NNN**-10-245101 for a double row version with 26 pins becomes 833-87-**026**-10-245101.

### 831-**PP**-**NNN**-10-242101

Straight socket connector height 4.55 mm, solder tail, single row, polarised

AVAILABILITY FROM 22 contacts
Other pin number on request

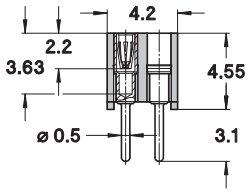


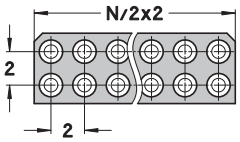




### 833-**PP**-**NNN**-10-245101

Straight socket connector height 4.55 mm, solder tail, double row, polarised

AVAILABILITY FROM 26 and 44 contacts
Other pin number on request



# SOCKET CONNECTORS 2 mm

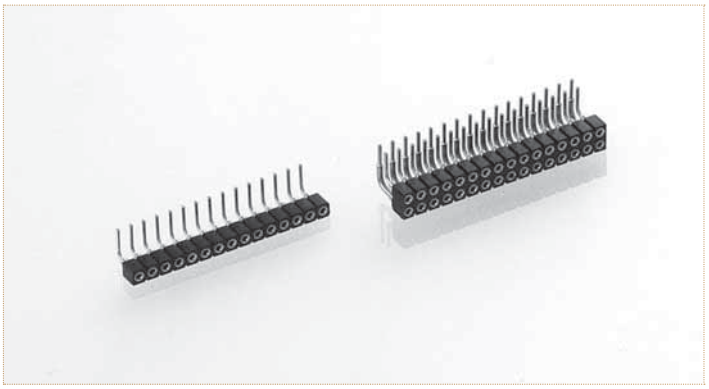
**SINGLE ROW / DOUBLE ROW / SOLDER TAIL / RIGHT ANGLE**

"Hard metric" PCB socket connectors right angle, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polymer LCP-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.40 to 0.66 mm, ⍁ 0.50 mm |
| FORCES | 0.7 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 64-68.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

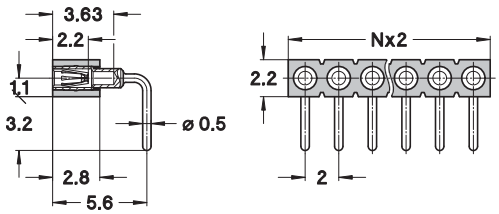
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 833-87-**NNN**-20-001101 for a double row version with 16 pins becomes 833-87-**016**-20-001101.

### 831-**PP**-**NNN**-20-001101

Right angle socket connector, solder tail, single row

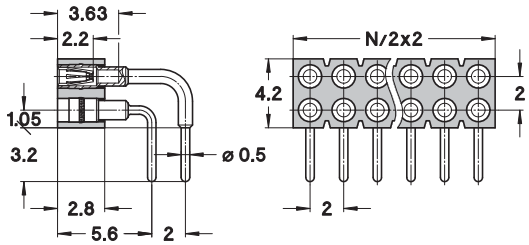
AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)




### 833-**PP**-**NNN**-20-001101

Right angle socket connector, solder tail, double row

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2 mm

SINGLE ROW / DOUBLE ROW / SURFACE MOUNT

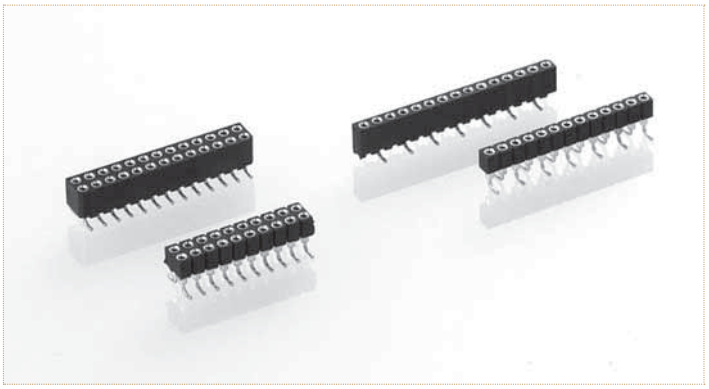


"Hard metric" PCB socket connectors, SMD perpendicular mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polymer LCP-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.40 to 0.56 mm, ⍁ 0.50 mm |
| FORCES | 0.7 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding pin connectors, see pages 64-68.



Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 833-87-**NNN**-30-001101 for a double row version with 16 pins becomes 833-87-**016**-30-001101.

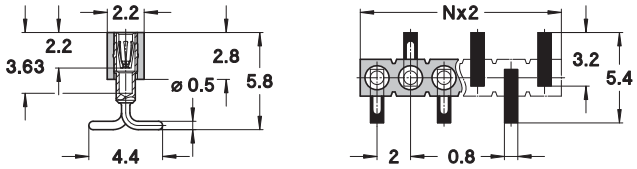
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

**Bulk:** 831-**PP**-**NNN**-30-001101
**T & R Packaging with pick & place cap*:** 831-**PP**-**NNN**-30-001191

SMD socket connector, single row, perpendicular mount

AVAILABILITY FROM 3 to 50 contacts
(standard number of contacts: 50)
For connectors having more than 12 contacts, the coplanarity issue is to be addressed specifically

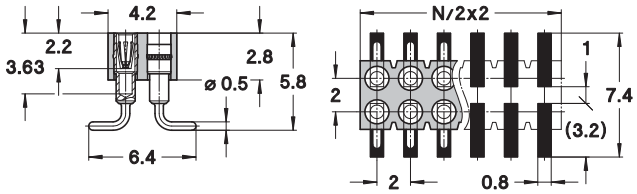



*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 833-**PP**-**NNN**-30-001101
**T & R Packaging with pick & place cap*:** 833-**PP**-**NNN**-30-001191

SMD socket connector, double row, perpendicular mount

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)
For connectors having more than 12 contacts per row, the coplanarity issue is to be addressed specifically

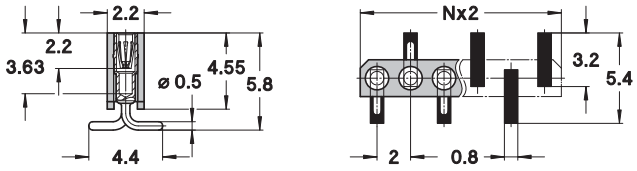



*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 831-**PP**-**NNN**-30-242101
**T & R Packaging with pick & place cap*:** 831-**PP**-**NNN**-30-242191

SMD socket connector, single row, perpendicular mount, polarised

AVAILABILITY 22 contacts
Other pin number on request
For connectors having more than 12 contacts, the coplanarity issue is to be addressed specifically

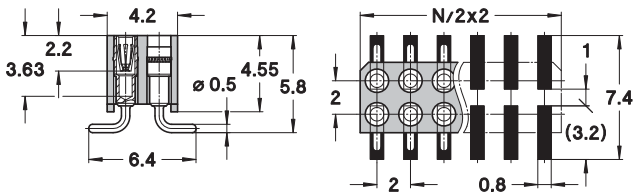



*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 833-**PP**-**NNN**-30-245101
**T & R Packaging with pick & place cap*:** 833-**PP**-**NNN**-30-245191

SMD socket connector, double row, perpendicular mount, polarised

AVAILABILITY FROM 26 and 44 contacts
Other pin number on request
For connectors having more than 12 contacts per row, the coplanarity issue is to be addressed specifically




*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2 mm

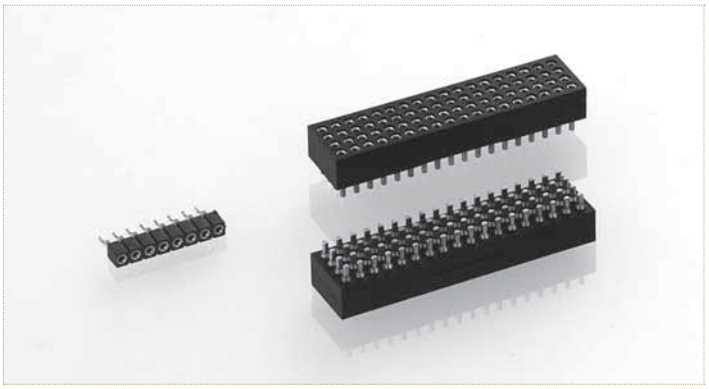
SINGLE ROW / QUAD ROW / SURFACE MOUNT

"Hard metric" PCB socket connectors, SMD mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polymer LCP-GF30-FR (PCT-GF30-FR for 837...30-291101) |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.40 to 0.66 mm, ⍁ 0.50 mm |
| FORCES | 0.7 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding pin connectors, see pages 64-68.



Other plating on request (see page 178 for plating specs).

**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 831-87-**NNN**-40-001101 for a single row version with 16 pins becomes 831-87-**016**-40-001101.

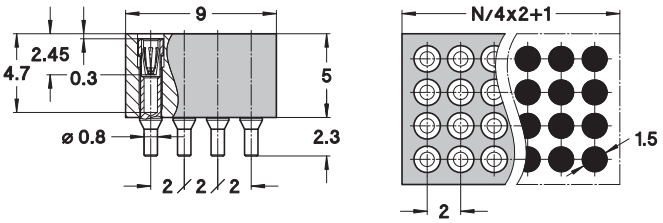
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

### 837-83-**NNN**-30-291101

SMD socket connector, 4 row, perpendicular mount, floating pin

| | |
|---|---|
| AVAILABILITY | 72 and 200 contacts<br>Other pin number on request |



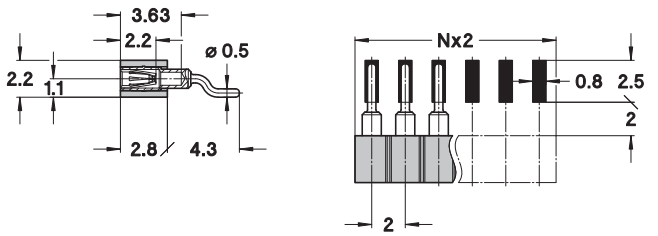

**Bulk:** 831-**PP**-**NNN**-40-001101

**T & R Packaging*:** 831-**PP**-**NNN**-40-001191

SMD socket connector, single row, parallel mount

| | |
|---|---|
| AVAILABILITY FROM | 2 to 50 contacts<br>(standard number of contacts: 50)<br>For connectors having more than 12 contacts, the coplanarity issue is to be addressed specifically |

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2 mm

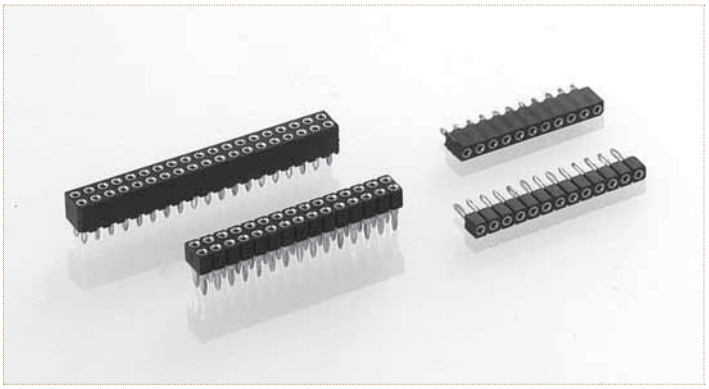
SINGLE ROW / DOUBLE ROW / PRESS-FIT

"Hard metric" PCB socket connectors, solderless press-fit mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polymer LCP-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Bronze CuSn4Pb4Zn4 (C54400) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.40 to 0.66 mm, ⍁ 0.50 mm |
| FORCES | 0.7 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| PCB HOLE Ø | 0.7 +0.07/-0.05 mm finished (0.8 ±0.025 mm drill) |

For corresponding pin connectors, see pages 64-68.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

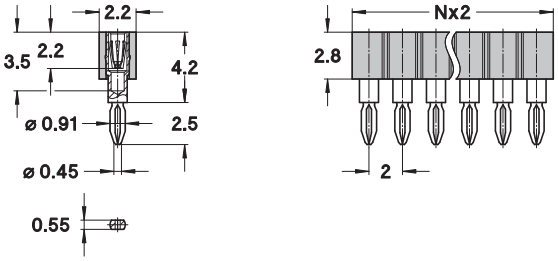
Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 833-87-**NNN**-64-001101 for a double row version with 16 pins becomes 833-87-**016**-64-001101.



### 831-**PP**-**NNN**-64-001101

Press-fit socket connector, single row, compliant pin
for PCB thickness 1.5 to 2 mm

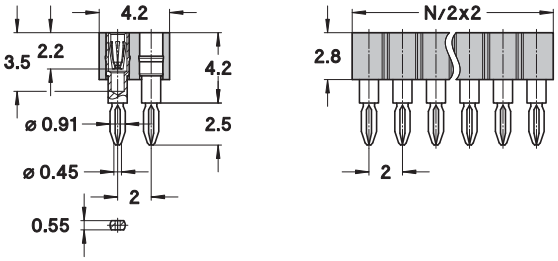
AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)




### 833-**PP**-**NNN**-64-001101

Press-fit socket connector, double row, compliant pin
for PCB thickness 1.5 to 2 mm

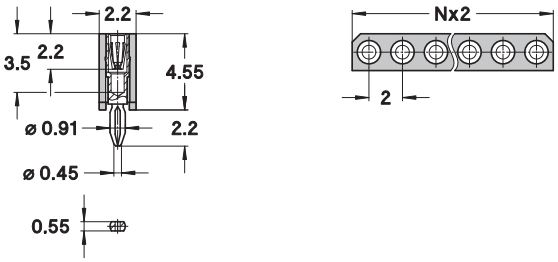
AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)




### 831-**PP**-**NNN**-64-242101

Press-fit socket connector polarised, single row, compliant pin
for PCB thickness 1.5 to 2 mm

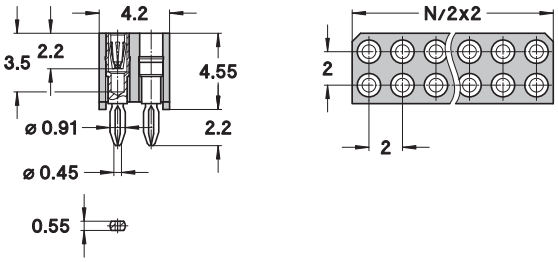
AVAILABILITY 22 contacts
Other pin number on request




### 833-**PP**-**NNN**-64-245101

Press-fit socket connector polarised, double row, compliant pin
for PCB thickness 1.5 to 2 mm

AVAILABILITY 26 and 44 contacts
Other pin number on request



# PIN CONNECTORS 2 mm

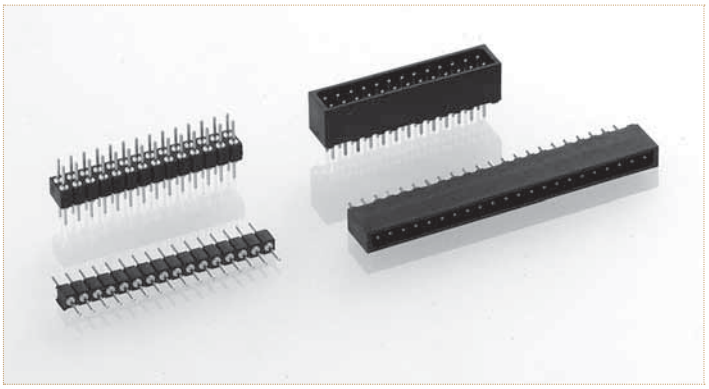
**SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

"Hard metric" PCB pin connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polymer LCP-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **CONTACT** | Brass CuZn36Pb3 (C36000) |
| **CONNECTING PIN Ø** | 0.47 mm) |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 3 A |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 57-63.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3* | Tin | 0.75 µm gold |

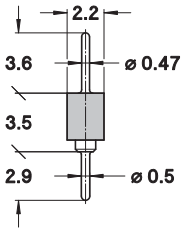
*only for 830/832...12-002101 series

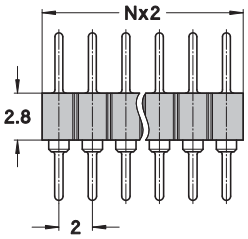
Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 830-10-**NNN**-10-001101 for a single row version with 8 pins becomes 830-10-**008**-10-001101.

### 830-**PP**-**NNN**-10-001101

Straight pin connector, solder tail, single row

**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 50)

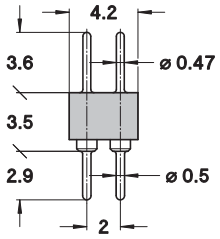


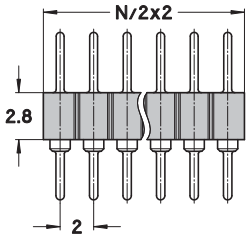




### 832-**PP**-**NNN**-10-001101

Straight pin connector, solder tail, double row

**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 100)

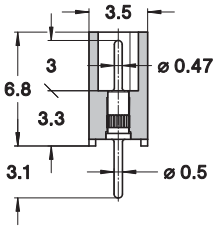


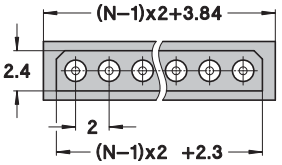




### 830-V3-**NNN**-12-002101

Straight pin connector, solder tail, single row, shrouded and polarised

**AVAILABILITY** 22 contacts
Other pin number on request

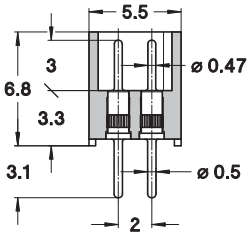


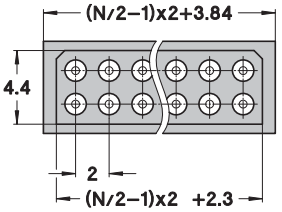




### 832-V3-**NNN**-12-002101

Straight pin connector, solder tail, double row, shrouded and polarised

**AVAILABILITY** 26 and 44 contacts
Other pin number on request






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2 mm

**SINGLE ROW / DOUBLE ROW / SOLDER TAIL / RIGHT ANGLE**



"Hard metric" PCB pin connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

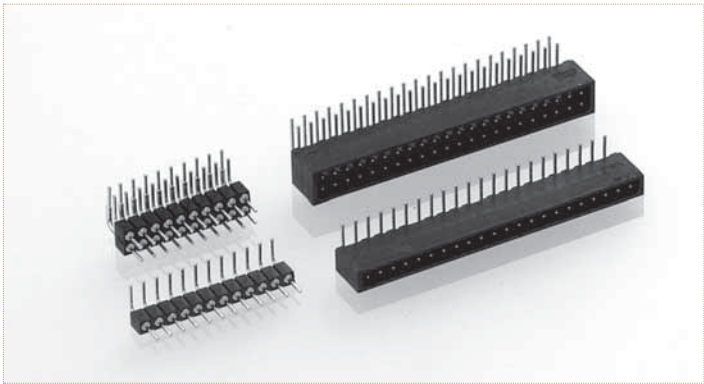
| | |
|---|---|
| INSULATOR | Black glass filled polymer LCP-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 57-63.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3* | Tin | 0.75 µm gold |

*only for 830/832...22-002101 series

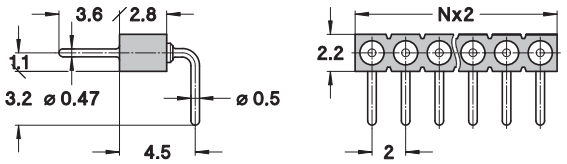


Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 830-10-**NNN**-20-001101 for a single row version with 8 pins becomes 830-10-**008**-20-001101.

### 830-**PP**-**NNN**-20-001101

Right angle pin connector, solder tail, single row

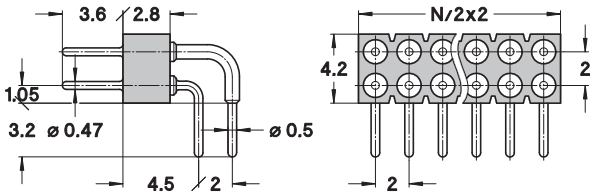
**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 50)




### 832-**PP**-**NNN**-20-001101

Right angle pin connector, solder tail, double row

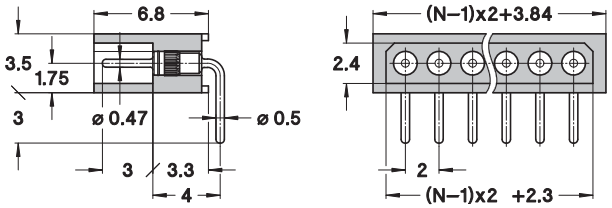
**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 100)




### 830-V3-**NNN**-22-002101

Right angle pin connector, solder tail, single row, shrouded and polarised

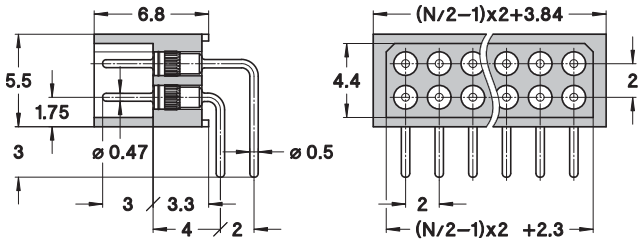
**AVAILABILITY** 22 contacts
Other pin number on request




### 832-V3-**NNN**-22-002101

Right angle pin connector, solder tail, double row, shrouded and polarised

**AVAILABILITY** 26 and 44 contacts
Other pin number on request



# PIN CONNECTORS 2 mm

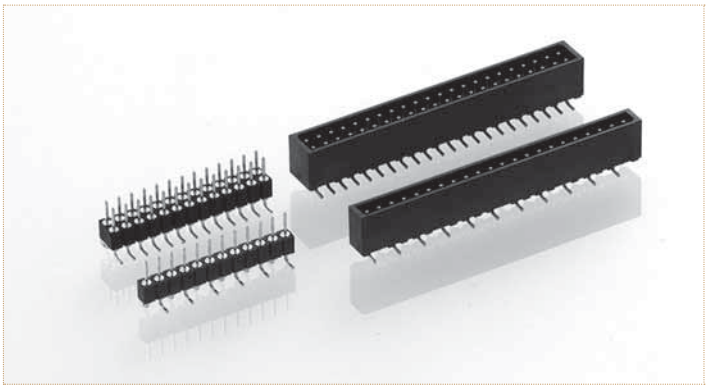
SINGLE ROW / DOUBLE ROW / SURFACE MOUNT

"Hard metric" PCB pin connectors, SMD mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polymer LCP-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding socket connectors, see pages 57-63.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3* | Tin | 0.75 µm gold |

*only for 830/832...32-002101 series

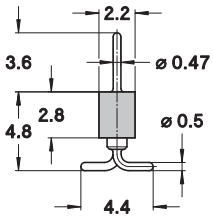
Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 830-10-**NNN**-30-001101 for a single row version with 8 pins becomes 830-10-**008**-30-001101.

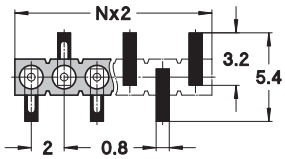
**Bulk:** 830-**PP**-**NNN**-30-001101
**T & R Packaging with pick & place cap*:** 830-**PP**-**NNN**-30-001191

SMD pin connector, single row, perpendicular mount

AVAILABILITY FROM: 3 to 50 contacts
(standard number of contacts: 50)
For connectors having more than 12 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



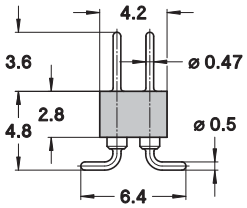



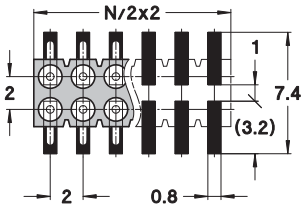

**Bulk:** 832-**PP**-**NNN**-30-001101
**T & R Packaging with pick & place cap*:** 832-**PP**-**NNN**-30-001191

SMD pin connector, double row, perpendicular mount

AVAILABILITY FROM: 4 to 100 contacts
(Standard number of contacts: 100)
For connectors having more than 12 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



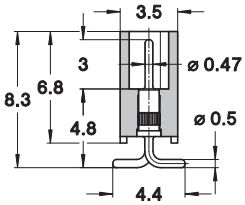



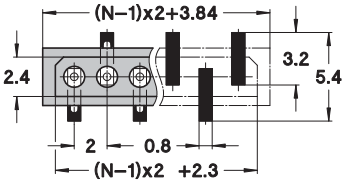

**Bulk:** 830-V3-**NNN**-32-002101
**T & R Packaging with pick & place cap*:** 830-V3-**NNN**-32-002191

SMD pin connector, single row, perpendicular mount, shrouded and polarised

AVAILABILITY: 22 contacts
Other pin number on request
For connectors having more than 12 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



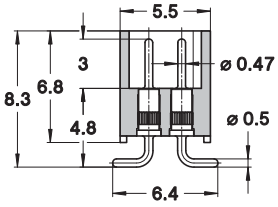



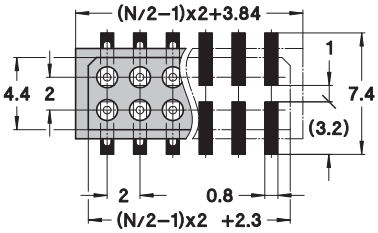

**Bulk:** 832-V3-**NNN**-32-002101
**T & R Packaging with pick & place cap*:** 832-V3-**NNN**-32-002191

SMD pin connector, double row, perpendicular mount, shrouded and polarised

AVAILABILITY: 26 and 44 contacts
Other pin number on request
For connectors having more than 12 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2 mm

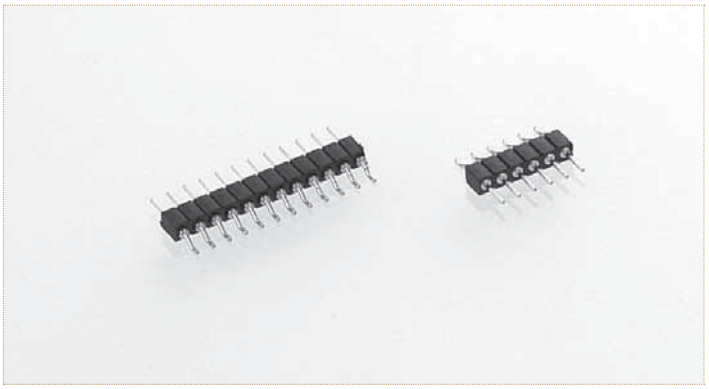
**SINGLE ROW / SURFACE MOUNT**

"Hard metric" PCB pin connectors, SMD mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polymer LCP-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding socket connectors, see pages 57-63.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 830-10-**NNN**-40-001101 for a single row version with 8 pins becomes 830-10-**008**-40-001101.

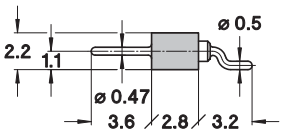
**Bulk:** 830-**PP**-**NNN**-40-001101

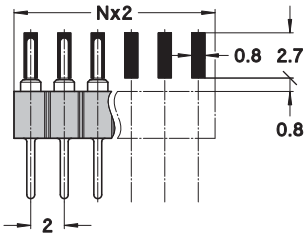
**T & R Packaging*:** 830-**PP**-**NNN**-40-001191

SMD pin connector, single row, parallel mount

**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 50)
For connectors having more than 12 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



# PIN CONNECTORS 2 mm

**SQUARE PIN ⍁ 0.5 mm / SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

Square pin headers, solder tail.

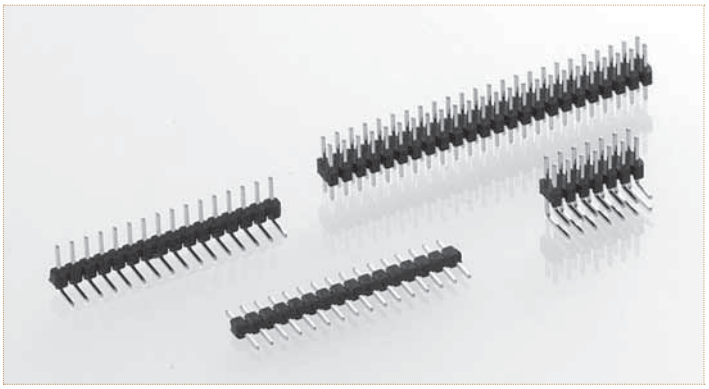
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyamide PA-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass |
| CONNECTING PIN | ⍁ 0.5 mm |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| DIELECTRIC STRENGTH | Min. 500 VRMS |

For corresponding socket connectors, see pages 57-63.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 70 | Flash gold | Flash gold |



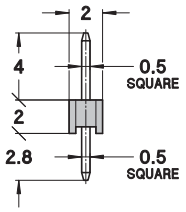
See page 178 for plating specs.

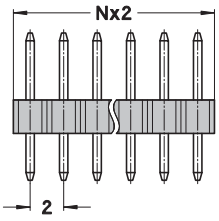
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 880-70-**NNN**-10-001101 for a single row version with 8 pins becomes 880-70-**008**-10-001101.

### 880-70-**NNN**-10-001101

Straight square pin header, solder tail, single row

**AVAILABILITY FROM** 2 to 40 contacts
(standard number of contacts: 40)

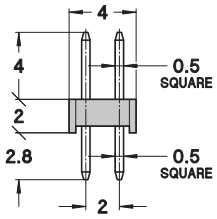


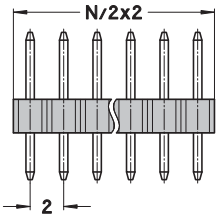




### 882-70-**NNN**-10-001101

Straight square pin header, solder tail, double row

**AVAILABILITY FROM** 4 to 80 contacts
(standard number of contacts: 80)

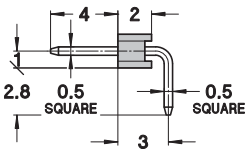


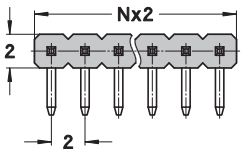




### 880-70-**NNN**-20-001101

Right angle square pin header, solder tail, single row

**AVAILABILITY FROM** 2 to 40 contacts
(standard number of contacts: 40)

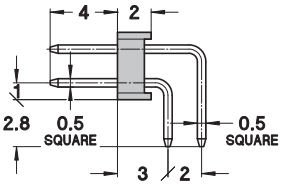


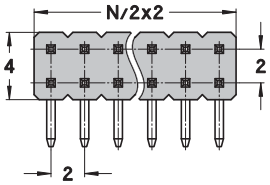




### 882-70-**NNN**-20-001101

Right angle square pin header, solder tail, double row

**AVAILABILITY FROM** 4 to 80 contacts
(standard number of contacts: 80)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

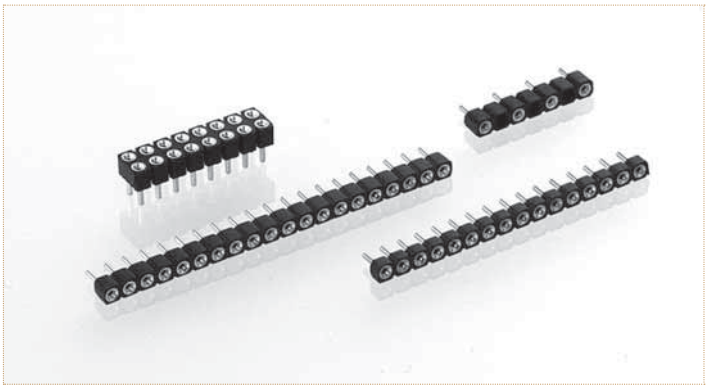
**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

Ultralow and very low profile socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.52 mm |
| FORCES | 3 N typ. insertion 1.5 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

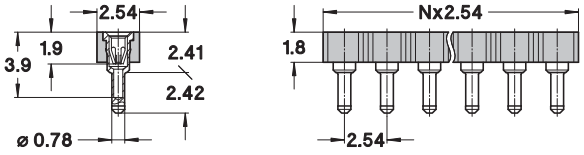
Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 415-83-2**NN**-41-001101 for a double row version with 16 pins becomes 415-83-2**16**-41-001101.



### 315-**PP**-1**NN**-41-003101

Straight socket connector ultralow profile, height 2.4 mm, solder tail, single row

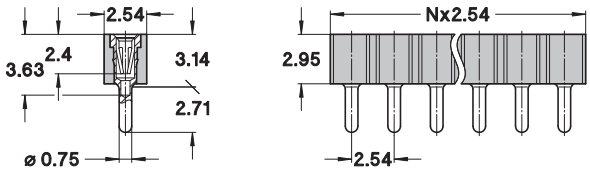
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)
Please note: ultralow version not available as double row




### 315-**PP**-1**NN**-41-001101

Straight socket connector very low profile, height 3.14 mm, solder tail, single row

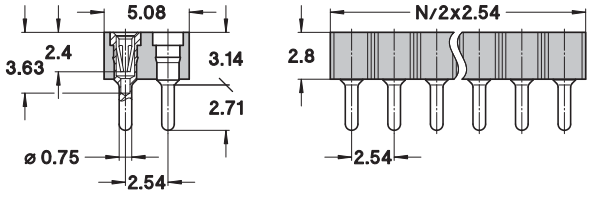
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 415-**PP**-2**NN**-41-001101

Straight socket connector very low profile, height 3.14 mm, solder tail, double row

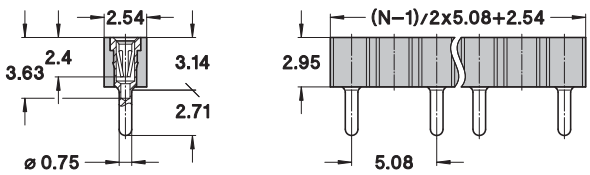
**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)
Please note: ultralow version not available as double row




### 315-**PP**-1**YY**-01-881101

Straight socket connector very low profile, height 3.14 mm, partially equipped 5.08 mm, solder tail, single row

**AVAILABILITY FROM** 2 to 32 contacts
**YY number of poles:**
please consult for ordering code



# SOCKET CONNECTORS 2.54 mm

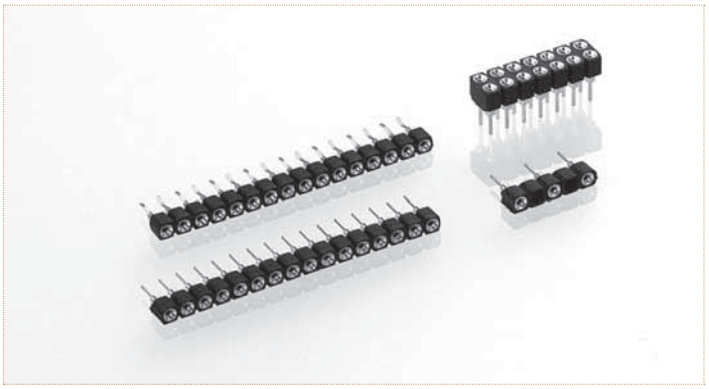
**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

Socket connector strips, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

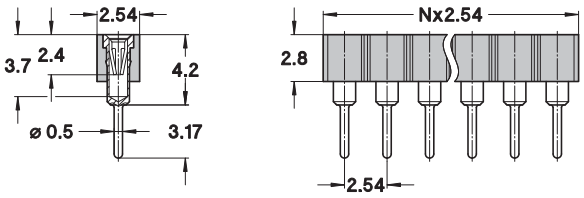
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 410-83-2**NN**-41-001101 for a double row version with 16 pins becomes 410-83-2**16**-41-001101.

### 310-**PP**-1**NN**-41-001101

Straight socket connector height 4.2 mm, solder tail, single row

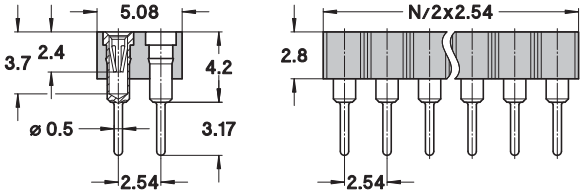
AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)




### 410-**PP**-2**NN**-41-001101

Straight socket connector height 4.2 mm, solder tail, double row

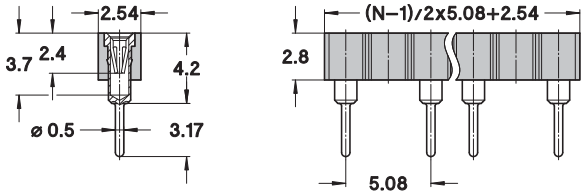
AVAILABILITY FROM 4 to 72 contacts
(standard number of contacts: 72)




### 310-**PP**-1**YY**-01-609101

Straight socket connector height 4.2 mm, solder tail, single row, partially equipped 5.08 mm

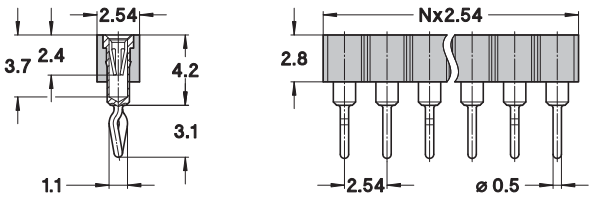
AVAILABILITY FROM 2 to 32 contacts
**YY number of poles:**
please consult for ordering code




### 310-**PP**-1**NN**-01-666101

Straight socket connector height 4.2 mm, with clinched (right/left) solder tails, single row

AVAILABILITY FROM 3 to 64 contacts
(standard number of contacts: 64)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

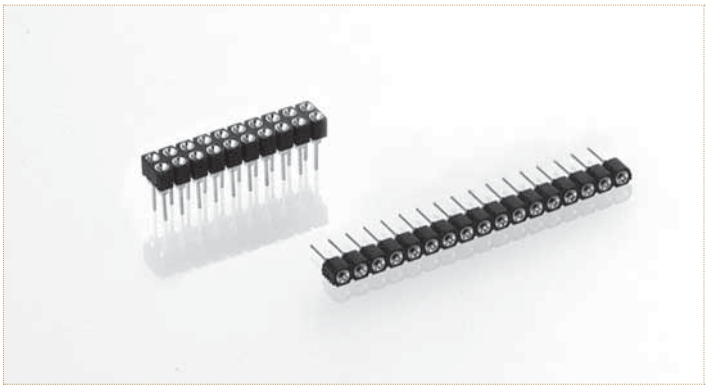
**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

Socket connectors, long solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **SLEEVE** | Brass CuZn36Pb3 (C36000) |
| **CONTACT CLIP (4 FINGER)** | Beryllium copper (C17200) |
| **MATING PIN Ø** | 0.40 to 0.56 mm |
| **FORCES** | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 3 A |
| **CONTACT RESISTANCE** | Max. 10 mΩ |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

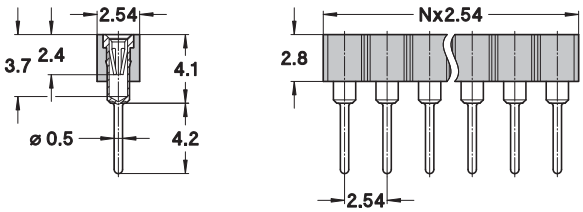
Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 411-83-2**NN**-41-001101 for a double row version with 16 pins becomes 411-83-2**16**-41-001101.



### 311-**PP**-1**NN**-41-001101

Straight socket connector height 4.1 mm, long solder tail, single row

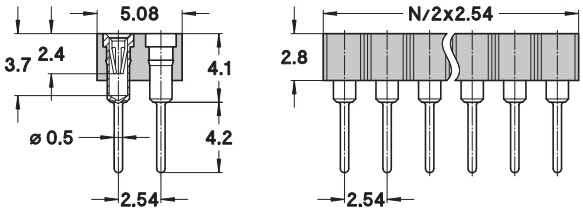
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 411-**PP**-2**NN**-41-001101

Straight socket connector height 4.1 mm, long solder tail, double row

**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)



# SOCKET CONNECTORS 2.54 mm

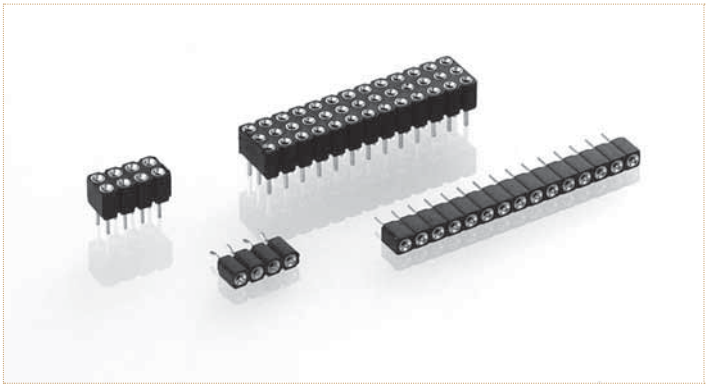
**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW**
**SOLDER TAIL**

Socket connectors, solder tail with standoff.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200)) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

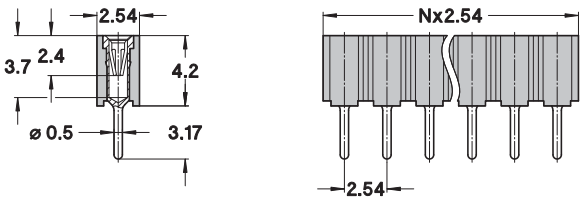
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested nu.mber of poles, e.g. 410-83-2**NN**-01-640101 for a double row version with 16 pins becomes 410-83-2**16**-01-640101.

### 310-**PP**-1**NN**-01-640101

Straight socket connector height 4.2 mm, solder tail, single row, with standoff

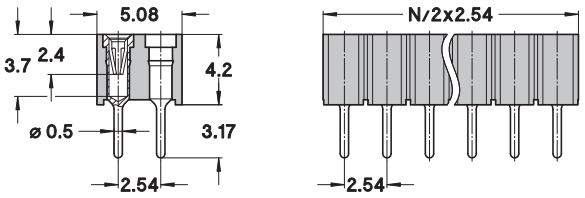
**AVAILABILITY FROM** 2 to 32 contacts
(standard number of contacts: 32)




### 410-**PP**-2**NN**-01-640101

Straight socket connector height 4.2 mm, solder tail, double row, with standoff

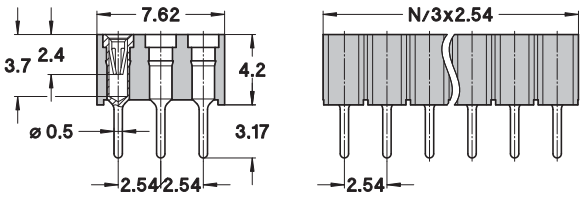
**AVAILABILITY FROM** 4 to 64 contacts
(standard number of contacts: 64)




### 410-**PP**-3**NN**-01-640101

Straight socket connector height 4.2 mm: solder tail, triple row, with standoff

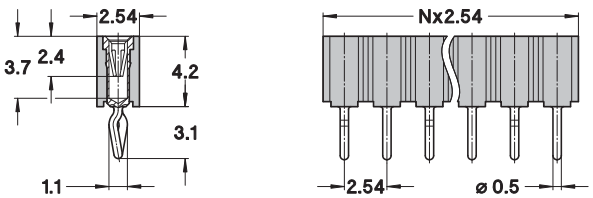
**AVAILABILITY FROM** 9 to 96 contacts
(standard number of contacts: 96)




### 310-**PP**-1**NN**-01-754101

Straight socket connector height 4.2 mm, with clinched (right/left) solder tails, single row, with standoff

**AVAILABILITY FROM** 3 to 32 contacts
(standard number of contacts 32):






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

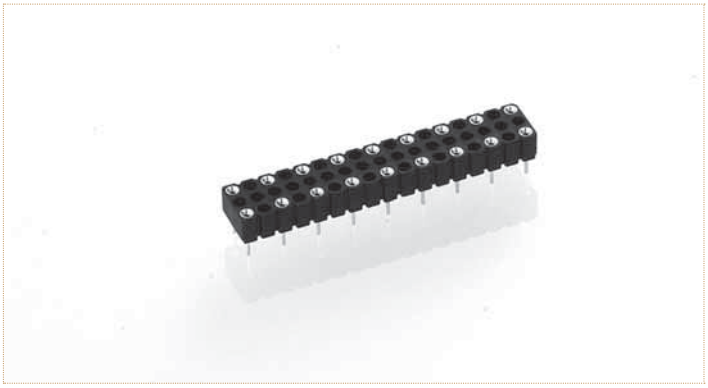
**MATING PIN Ø 0.47 mm / DOUBLE ROW / SOLDER TAIL**

Socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.36 to 0.46 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



Other plating on request (see page 178 for plating specs).

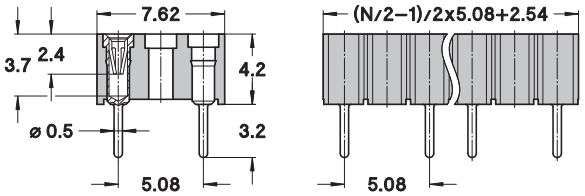
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

805-**PP**-**YYY**-10-229101

Straight socket connector height 4.2 mm. solder tail, double row, partially equipped 5.08 mm

| | |
|---|---|
| AVAILABILITY FROM | 4 to 32 contacts |
| | **YYY number of poles:** |
| | please consult for ordering code |



# SOCKET CONNECTORS 2.54 mm

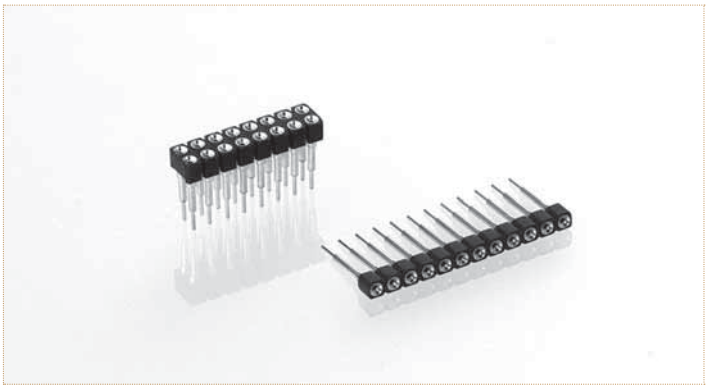
**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

Interconnect socket strips, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

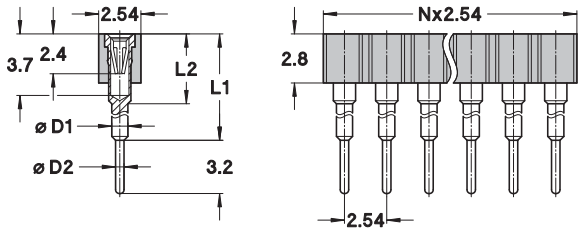
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 416-83-2**NN**-41-007101 for a double row version with 16 pins becomes 416-83-2**16**-41-007101.

316-**PP**-1**NN**-41-XXX101

Interconnect socket strip, solder tail, single row

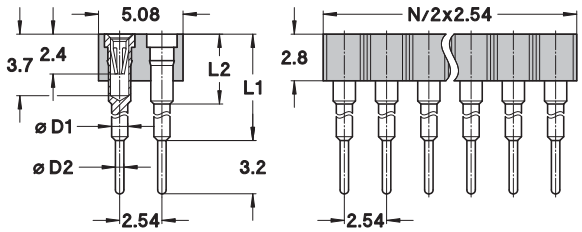
AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)




416-**PP**-2**NN**-41-XXX101

Interconnect socket strip, solder tail, double row

AVAILABILITY FROM 4 to 72 contacts
(standard number of contacts: 72)




## AVAILABLE CONTACT LENGTHS

| CONTACT LENGTH L1 (mm) | L2 (mm) | CONTACT DIAMETER D1 (mm) | D2 (mm) | XXX CODE |
|---|---|---|---|---|
| 6 | 4.2 | 1 | 0.51 | 006 |
| 7 | 4.2 | 1 | 0.51 | 018 |
| 8 | 4.2 | 1 | 0.51 | 003 |
| 9 | 4.85 | 1 | 0.46 | 012 |
| 10 | 4.2 | 1 | 0.51 | 007 |
| 11 | 4.2 | 0.85 | 0.51 | 002 |
| 12 | 4.2 | 1 | 0.51 | 008 |
| 13 | 4.2 | 1 | 0.51 | 009 |
| 15 | 4.2 | 1 | 0.51 | 001 |
| 18 | 4.2 | 1 | 0.51 | 011 |
| 22 | 4.2 | 1 | 0.51 | 004 |
| 33 | 4.2 | 1.18 | 0.51 | 013 |



Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW**
**SOLDER TAIL**

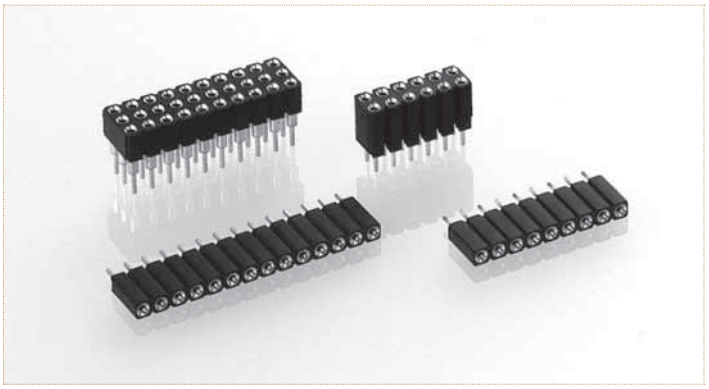


Socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

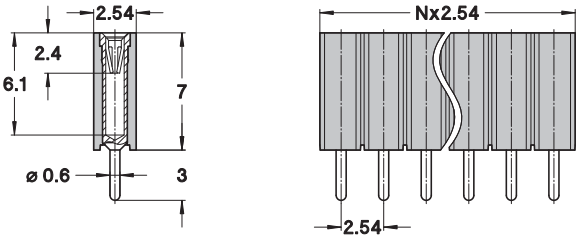
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-83-**NNN**-10-132101 for a double row version with 16 pins becomes 803-83-**016**-10-132101.

### 801-**PP**-**NNN**-10-132101

Straight socket connector height 7 mm, solder tail, single row

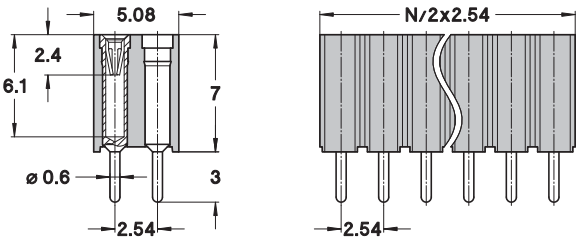
AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)




### 803-**PP**-**NNN**-10-132101

Straight socket connector height 7 mm, solder tail, double row

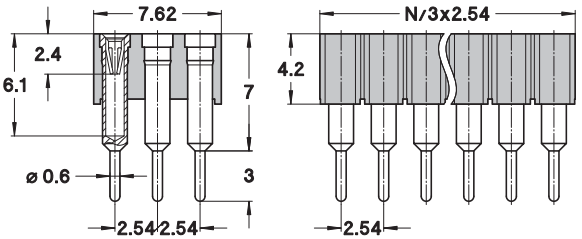
AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)




### 805-**PP**-**NNN**-10-132101

Straight socket connector height 7 mm, solder tail, triple row

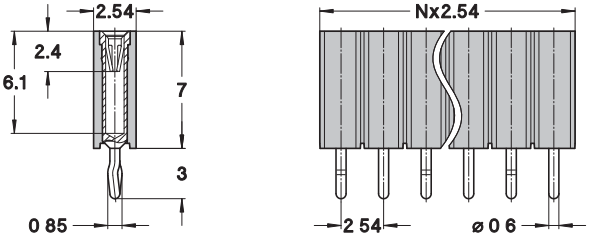
AVAILABILITY FROM 9 to 96 contacts
(standard number of contacts: 96)




### 801-**PP**-**NNN**-10-173101

Straight socket connector height 7 mm, with clinched (right/left) solder tails, single row

AVAILABILITY FROM 3 to 50 contacts
(standard number of contacts: 50)



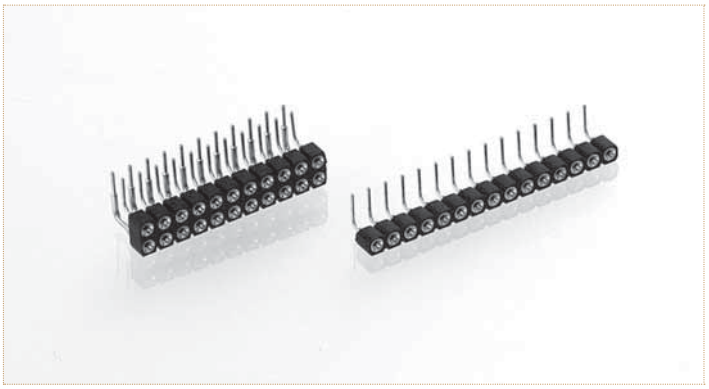
# SOCKET CONNECTORS 2.54 mm

**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / SOLDER TAIL / RIGHT ANGLE**

Right angle socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

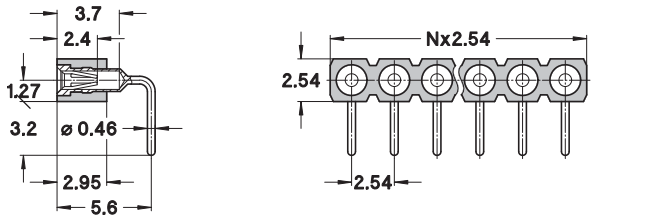
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 499-83-2**NN**-10-003101 for a double row version with 16 pins becomes 499-83-2**16**-10-003101.

### 399-**PP**-1**NN**-10-003101

Right angle socket connector, single row

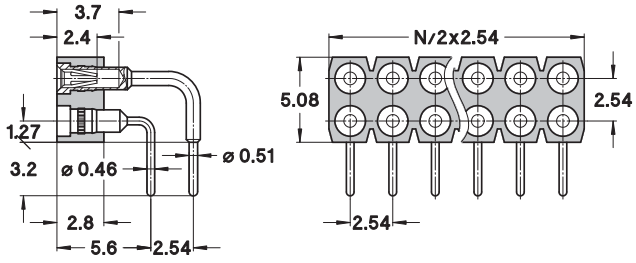
AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)




### 499-**PP**-2**NN**-10-003101

Right angle socket connector, double row

AVAILABILITY FROM 4 to 72 contacts
(standard number of contacts 72):






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / SURFACE MOUNT**

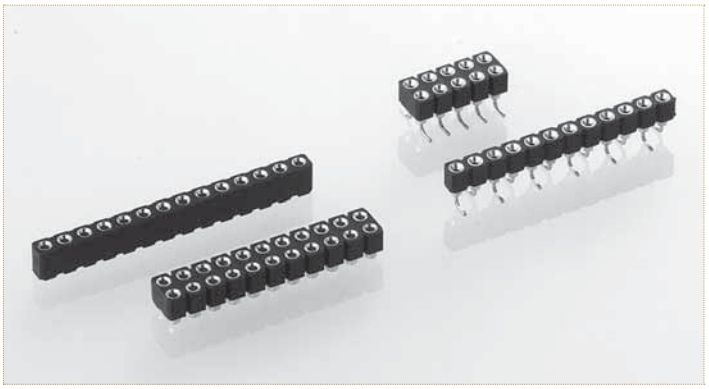


Socket connectors, SMD perpendicular mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding pin connectors, see pages 101-108.



Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 410-87-2**NN**-41-105101 for a double row version with 16 pins becomes 410-87-2**16**-41-105101.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

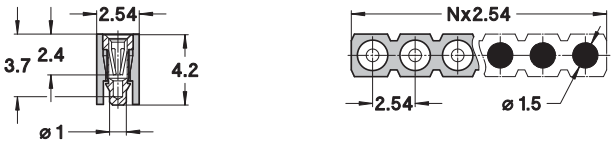
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

**Bulk:** 314-**PP**-1**NN**-01-899101
**T & R Packaging*:** 314-**PP**-1**NN**-01-899191

SMD socket connector, low profile, single row, perpendicular mount with self-levelling floating contacts

AVAILABILITY FROM 2 to 12 contacts (standard number of contacts: 12)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

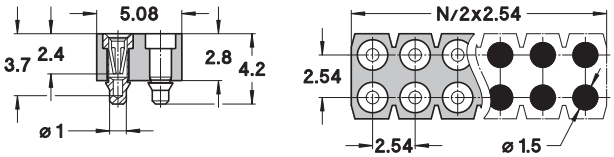



**Bulk:** 414-**PP**-2**NN**-41-134101
**T & R Packaging*:** 414-**PP**-2**NN**-41-134191

SMD socket connector, low profile, double row, perpendicular mount with self-levelling floating contacts

AVAILABILITY FROM 4 to 64 contacts (standard number of contacts: 64)
For connectors having more than 9 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

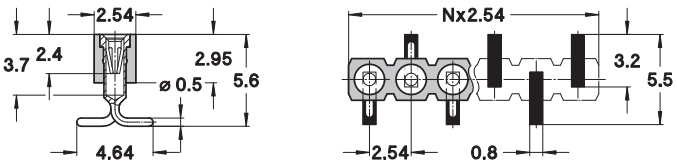



**Bulk:** 310-**PP**-1**NN**-41-105101
**T & R Packaging with pick & place cap*:** 310-**PP**-1**NN**-41-105191

SMD socket connector, single row, perpendicular mount with gull-wing terminations

AVAILABILITY FROM 3 to 64 contacts (standard number of contacts: 64)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

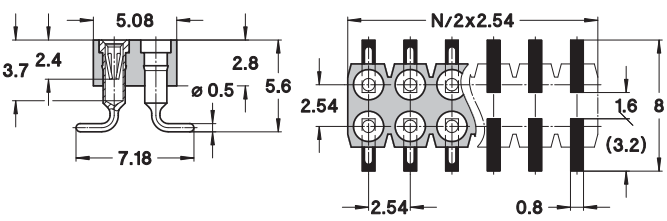



**Bulk:** 410-**PP**-2**NN**-41-105101
**T & R Packaging with pick & place cap*:** 410-**PP**-2**NN**-41-105191

SMD socket connector, double row, perpendicular mount with gull-wing terminations

AVAILABILITY FROM 4 to 72 contacts (standard number of contacts: 72)
For connectors having more than 9 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



# SOCKET CONNECTORS 2.54 mm

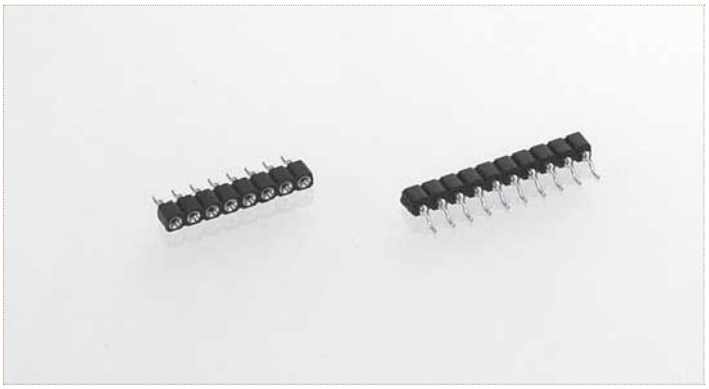
**MATING PIN Ø 0.47 mm / SINGLE ROW / SURFACE MOUNT**

Socket connectors, SMD parallel mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding pin connectors, see pages 101-108.



Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 310-87-1**NN**-41-205101 for a single row version with 8 pins becomes 310-87-1**08**-41-205101.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

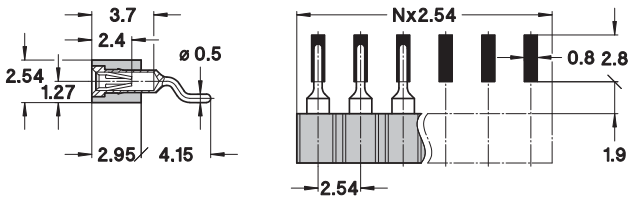
**Bulk:** 310-**PP**-1**NN**-41-205101

**T & R Packaging*:** 310-**PP**-1**NN**-41-205191

SMD socket connector, single row, parallel mount

AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

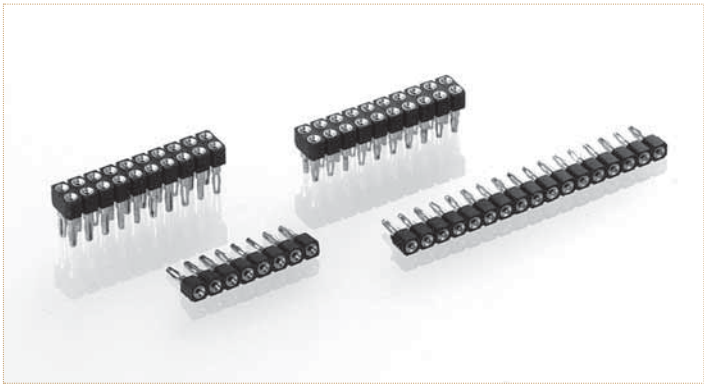
**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / PRESS-FIT**

Socket connectors, press-fit with compliant pin for solderless mount in PCB plated through holes.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **SLEEVE** | Bronze CuSn4Pb4Zn4 (C54400) |
| **CONTACT CLIP (4 FINGER)** | Beryllium copper (C17200) |
| **MATING PIN Ø** | 0.40 to 0.56 mm |
| **FORCES** | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 3 A |
| **CONTACT RESISTANCE** | Max. 10 mΩ |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |
| **PCB HOLE Ø** | 1 mm +0.09/-0.06 mm finished (1.15 ±0.025 mm drill) |

For corresponding pin connectors, see pages 101-108.



Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 346-83-1**NN**-41-036101 for a single row version with 8 pins becomes 346-83-1**08**-41-036101.

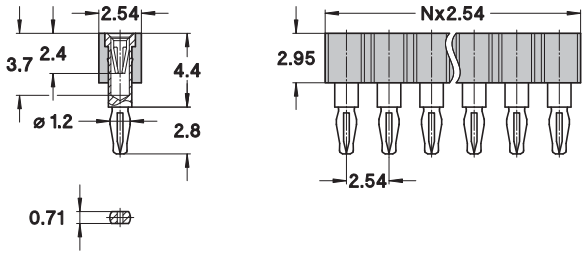
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

### 346-**PP**-1**NN**-41-036101

Press-fit socket connector, single row, compliant pin
for PCB thickness 1.5 to 2.5 mm

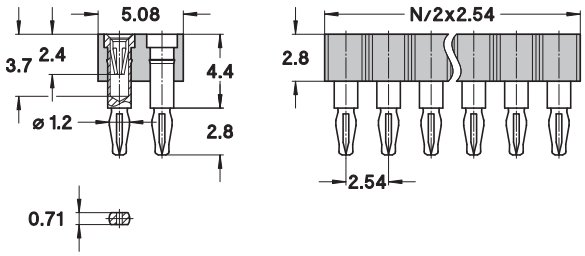
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 446-**PP**-2**NN**-41-036101

Press-fit socket connector,double row, compliant pin
for PCB thickness 1.5 to 2.5 mm

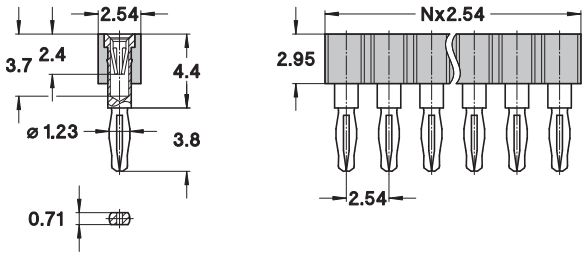
**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)




### 346-**PP**-1**NN**-41-035101

Press-fit socket connector,single row, compliant pin
for PCB thickness 2.1 to 3.2 mm

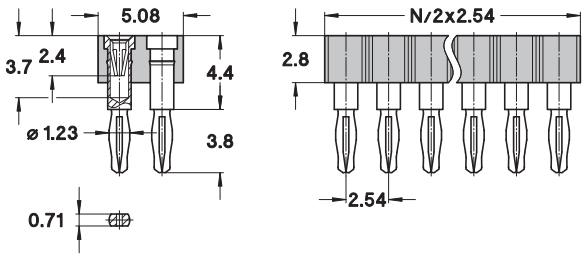
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 446-**PP**-2**NN**-41-035101

Press-fit socket connector, double row, compliant pin
for PCB thickness 2.1 to 3.2 mm

**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

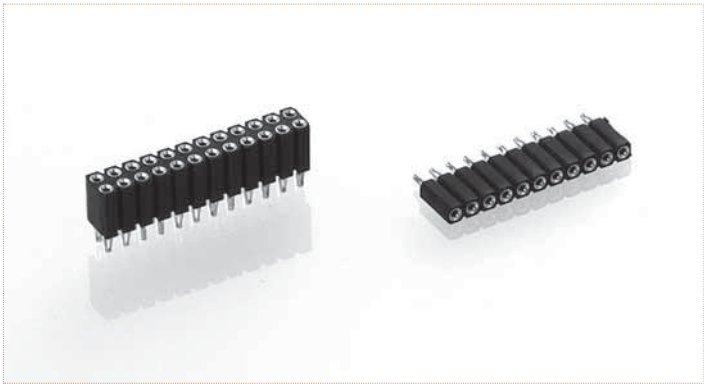
**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / PRESS-FIT**

Socket connectors, press-fit with compliant pin for solderless mount in PCB plated through holes.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **SLEEVE** | Bronze CuSn4Pb4Zn4 (C54400) |
| **CONTACT CLIP (4 FINGER)** | Beryllium copper (C17200) |
| **MATING PIN Ø** | 0.40 to 0.56 mm |
| **FORCES** | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 3 A |
| **CONTACT RESISTANCE** | Max. 10 mΩ |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |
| **PCB HOLE Ø** | 1 mm +0.09/-0.06 mm finished (1.15 ±0.025 mm drill) |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

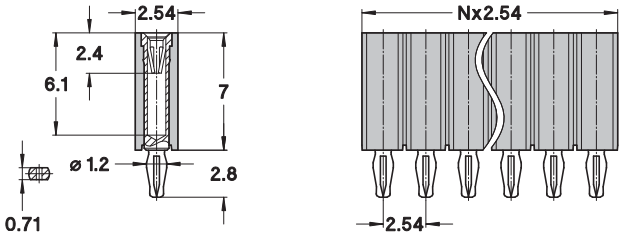
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 801-87-**NNN**-65-410101 for a single row version with 8 pins becomes 801-87-**008**-65-410101.

### 801-**PP**-**NNN**-65-410101

Press-fit socket connector height 7 mm, single row, compliant pin for PCB thickness 1.5 to 2.5 mm

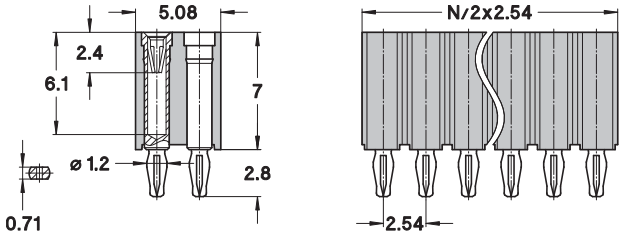
**AVAILABILITY FROM** 2 to 50 contacts (standard number of contacts: 50)




### 803-**PP**-**NNN**-65-410101

Press-fit receptacle socket height 7 mm, double row, compliant pin for PCB thickness 1.5 to 2.5 mm

**AVAILABILITY FROM** 4 to 100 contacts (standard number of contacts: 100)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

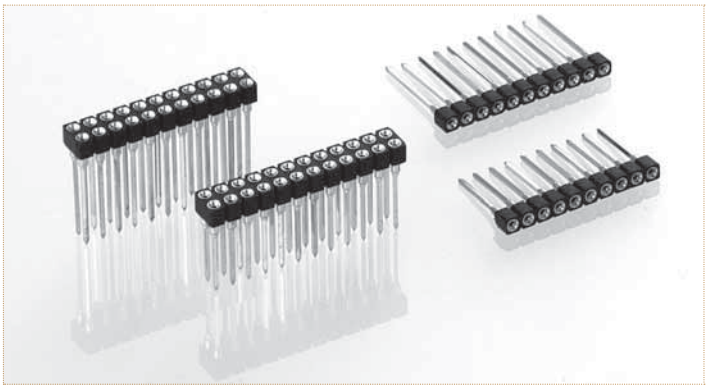
**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / WIRE-WRAP**

Socket connectors with wire-wrap terminations.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

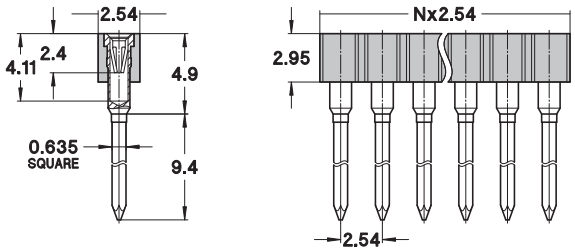
Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 422-83-2**NN**-41-001101 for a double row version with 16 pins becomes 422-83-2**16**-41-001101.



### 322-**PP**-1**NN**-41-001101

Wire-wrap socket connector height 4.9 mm, 2-level, single row

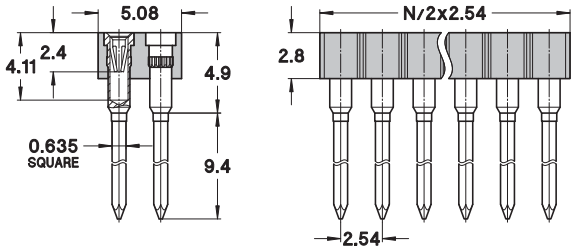
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 422-**PP**-2**NN**-41-001101

Wire-wrap socket connector height 4.9 mm, 2-level, double row

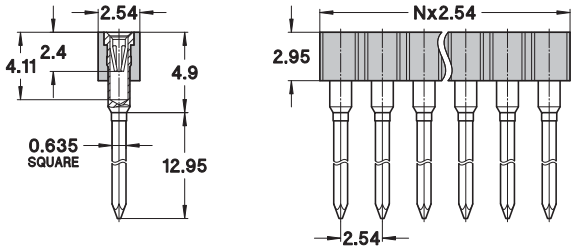
**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)




### 323-**PP**-1**NN**-41-001101

Wire-wrap socket connector height 4.9 mm, 3-level, single row

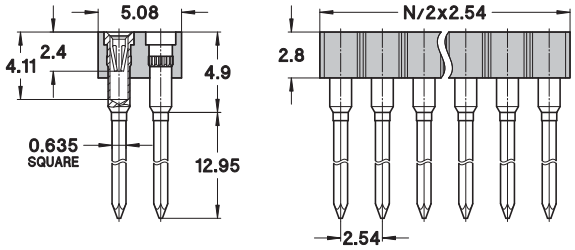
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 423-**PP**-2**NN**-41-001101

Wire-wrap socket connector height 4.9 mm, 3-level, double row

**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)



# SOCKET CONNECTORS 2.54 mm

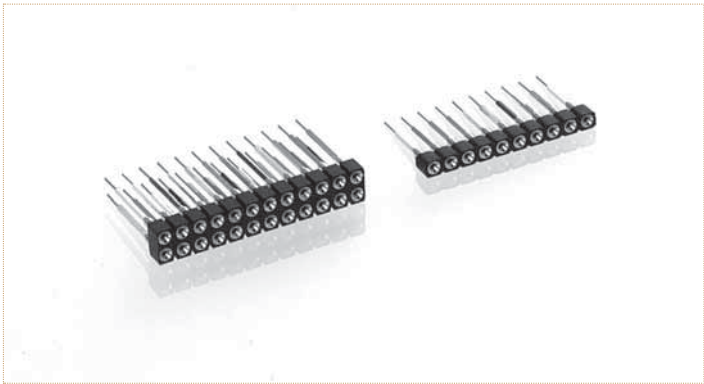
**MATING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / WIRE-WRAP**

Socket connectors with wire-wrap terminations and connecting pin for board stacking.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

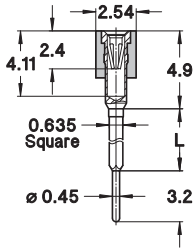
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 83 | Tin | 0.75 µm gold |

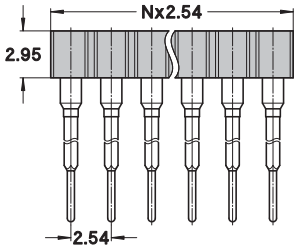
Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 426-83-2**NN**-41-001101 for a double row version with 16 pins becomes 426-83-2**16**-41-001101.

### 326-83-1**NN**-41-**XXX**101

Wire-wrap socket connector with connecting pin, height 4.9 mm, single row

AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)

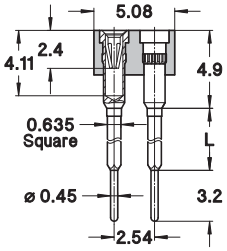


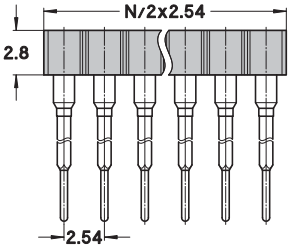




### 426-83-2**NN**-41-**XXX**101

Wire-wrap socket connector with connecting pin, height 4.9 mm, double row

AVAILABILITY FROM 4 to 72 contacts
(standard number of contacts: 72)




## AVAILABLE CONTACT LENGTHS

| CONTACT LENGTH L (mm) | WW-LEVEL | XXX CODE |
|---|---|---|
| 5.9 | 1 | 001 |
| 8.9 | 2 | 002 |
| 11.9 | 3 | 003 |



Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

**MATING PIN Ø 0.47 mm / SINGLE ROW / CARRIER ASSEMBLIES**

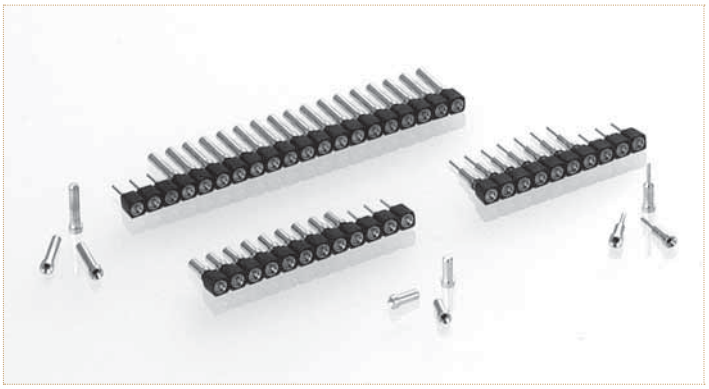


"Zero profile" socket connectors. Single socket contacts for solder mount into PCB, supplied on disposable carriers.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

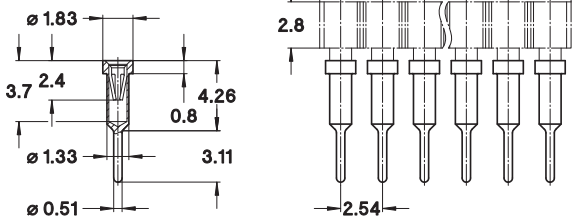
Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested nu.mber of poles, e.g. 714-83-1**NN**-41-001101 for a single row version with 8 pins becomes 714-83-1**08**-41-001101.

### 712-**PP**-1**NN**-41-001101

Single row carrier with standard socket contact with solder tail

AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)

Double row, disposable carrier strips on request

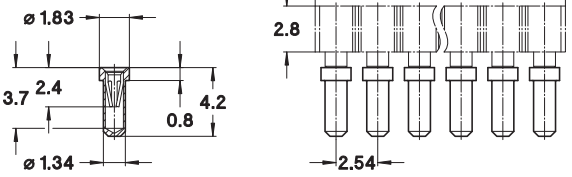



### 714-**PP**-1**NN**-41-001101

Single row carrier with low profile contact
for solder mount into PCB hole Ø 1.4-1.8 mm, PCB thickness 1 to 2.6 mm

AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)

Double row, disposable carrier strips on request

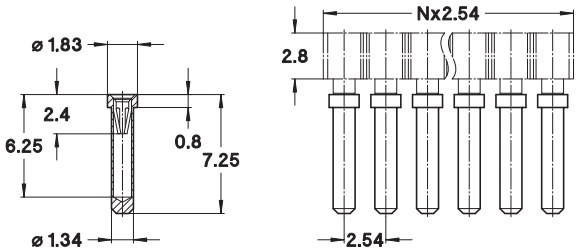



### 714-**PP**-1**NN**-41-014101

Single row carrier with low profile contact
for solder mount into PCB hole Ø 1.4-1.8 mm, PCB thickness 1 to 5 mm

AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)

Double row, disposable carrier strips on request



# SOCKET CONNECTORS 2.54 mm

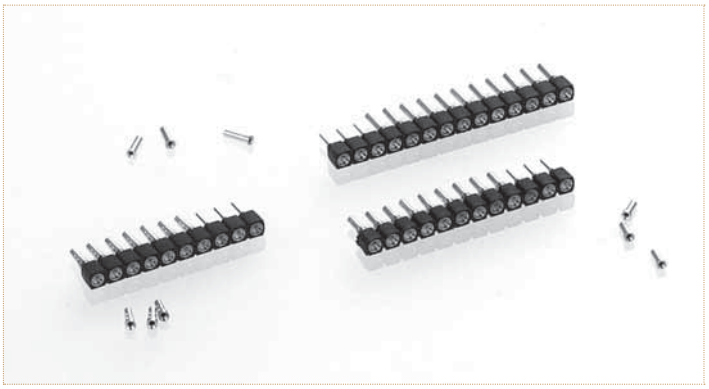
**MATING PIN Ø 0.47 mm / SINGLE ROW / CARRIER ASSEMBLIES**

"Zero profile" socket connectors. Single socket contacts for solder and press-fit solderless mount into PCB, supplied on disposable carriers.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (3 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.40 to 0.52 mm |
| FORCES | 1 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 101-108.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

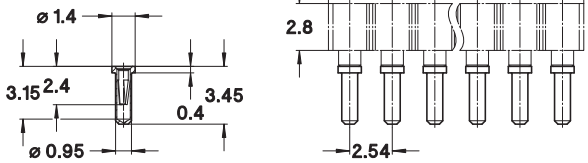
Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 714-83-1**NN**-31-018101 for a single row version with 8 pins becomes 714-83-1**08**-31-018101.

### 714-**PP**-1**NN**-31-012101

Single row carrier with ultra thin, low profile contact
or solder mount into PCB hole Ø 1-1.3 mm, PCB thickness 1 to 2.4 mm

**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)

Double row, disposable carrier strips on request

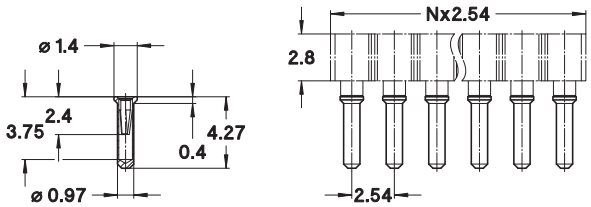



### 714-**PP**-1**NN**-31-018101

Single row carrier with ultra thin, low profile contact
for solder mount into PCB hole Ø 1-1.3 mm, PCB thickness 1 to 3.4 mm

**AVAILABILITY FROM** 1 to 64 contacts
(standard number of contacts: 64)

Double row, disposable carrier strips on request

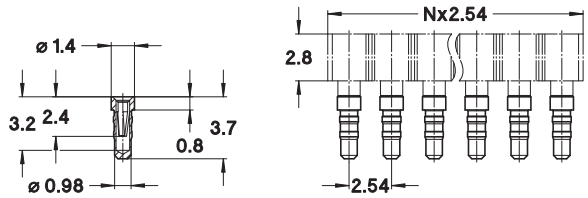



### 714-**PP**-1**NN**-31-008101

Single row carrier with contacts for solderless press-fit mount into plated
trough PCB hole Ø 1.05 ±0.05 mm finished, PCB thickness 1.5 to 2.5 mm

**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)

Double row, disposable carrier strips on request






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

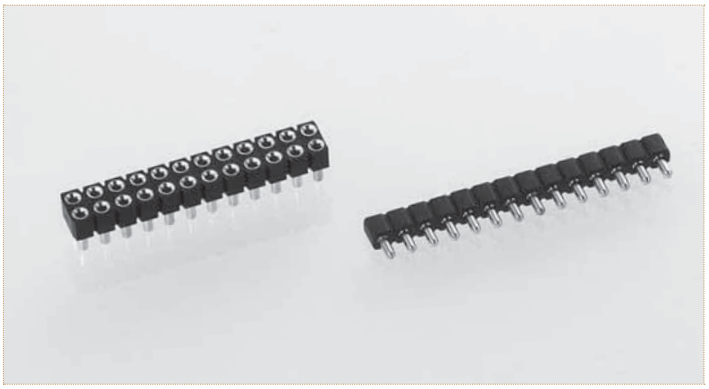
**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

Very low profile socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 109-119.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

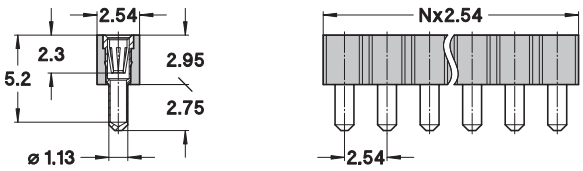
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-10-268101 for a double row version with 16 pins becomes 803-87-**016**-10-268101.

### 801-**PP**-**NNN**-10-268101

Straight socket connector, very low profile, height 2.95 mm, solder tail, single row

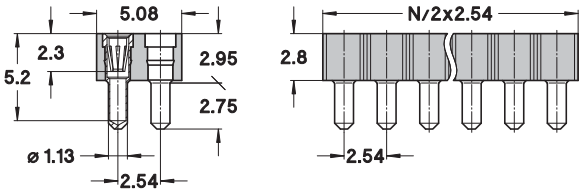
**AVAILABILITY FROM** 2 to 64 contacts (standard number of contacts: 64)




### 803-**PP**-**NNN**-10-268101

Straight socket connector, very low profile, height 2.95 mm, solder tail, double row

**AVAILABILITY FROM** 4 to 72 contacts (standard number of contacts: 72)



# SOCKET CONNECTORS 2.54 mm

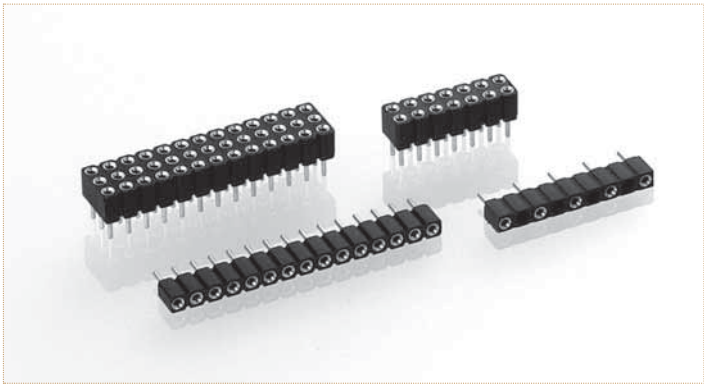
**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW**
**SOLDER TAIL**

Very low profile socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 109-119.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

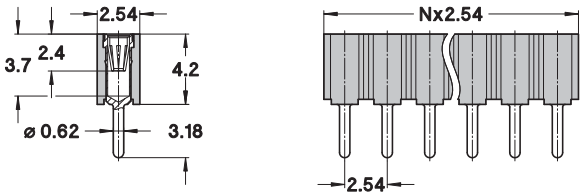
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-10-012101 for a double row version with 16 pins becomes 803-87-**016**-10-012101.

### 801-**PP**-**NNN**-10-012101

Straight socket connector, low profile, height 4.2 mm, solder tail, single row

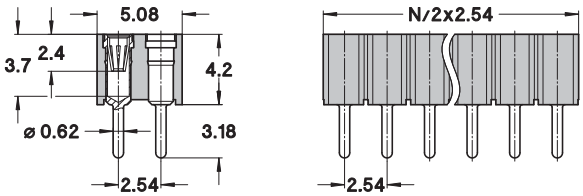
AVAILABILITY FROM 2 to 32 contacts
(standard number of contacts: 32)




### 803-**PP**-**NNN**-10-012101

Straight socket connector, low profile, height 4.2 mm, solder tail, double row

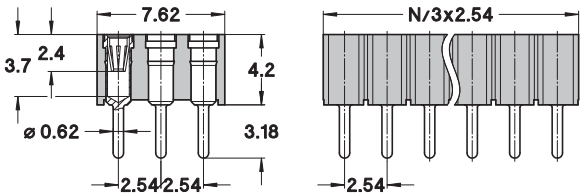
AVAILABILITY FROM 4 to 64 contacts
(standard number of contacts: 64)




### 805-**PP**-**NNN**-10-012101

Straight socket connector, low profile, height 4.2 mm, solder tail, triple row

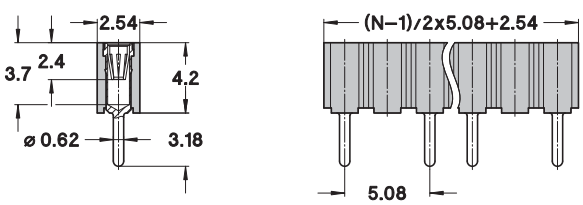
AVAILABILITY FROM 9 to 96 contacts
(standard number of contacts: 96)




### 801-**PP**-**YYY**-10-458101

Straight socket connector, low profile, height 4.2 mm, solder tail, single row, partially equipped 5.08 mm

AVAILABILITY FROM 2 to 16 contacts
**YYY number of poles:**
please consult for ordering code






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW SOLDER TAIL**

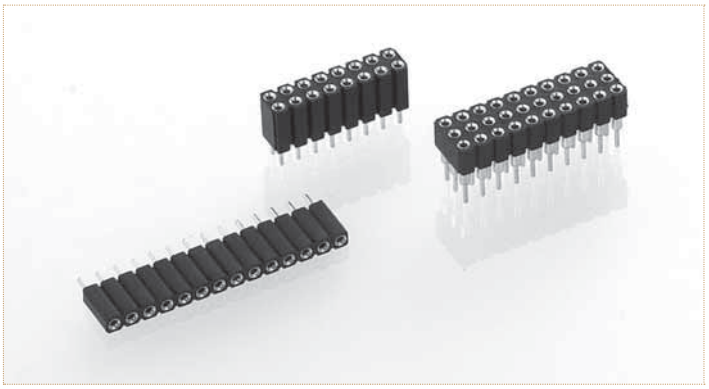


Socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 109-119.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

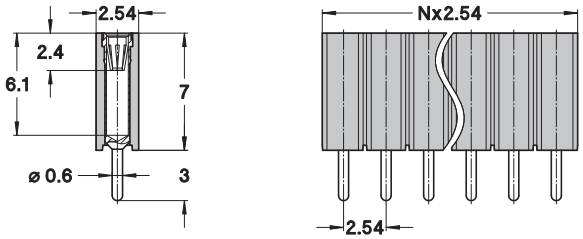
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-10-001101 for a double row version with 16 pins becomes 803-87-**016**-10-001101.

801-**PP**-**NNN**-10-001101

Straight socket connector, height 7 mm, solder tail, single row

AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)

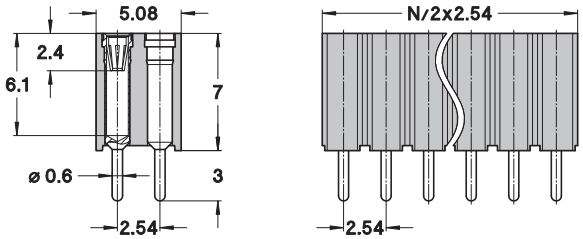



**Bulk:** 803-**PP**-**NNN**-10-001101
**T & R Packaging*:** 803-**PP**-**NNN**-10-001191

Straight socket connector, height 7 mm, solder tail, double row

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)

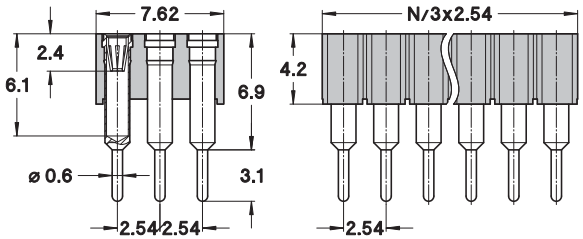
*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.




805-**PP**-**NNN**-10-001101

Straight socket connector, height 6.9 mm, solder tail, triple row

AVAILABILITY FROM 9 to 96 contacts
(standard number of contacts: 96)



# SOCKET CONNECTORS 2.54 mm

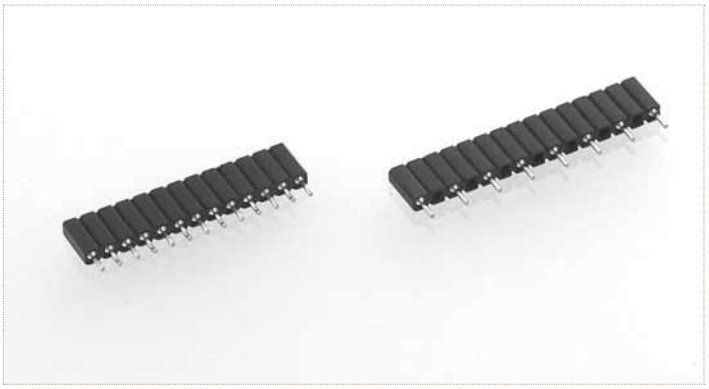
**MATING PIN Ø 0.76 mm / SINGLE ROW / SOLDER TAIL**

Socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 109-119.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

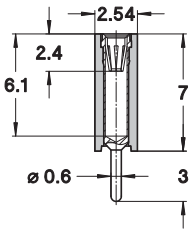
Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 801-87-**NNN**-10-143101 for a single row version with 16 pins becomes 801-87-**016**-10-143101.

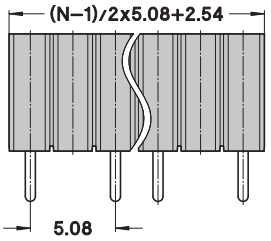
### 801-**PP-YYY**-10-101101

Straight socket connector, height 7 mm, solder tail, single row, partially equipped 5.08 mm

**AVAILABILITY FROM** 2 to 25 contacts

**YYY number of poles:**
please consult for ordering code

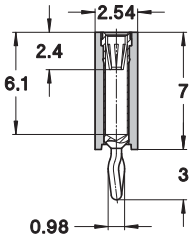


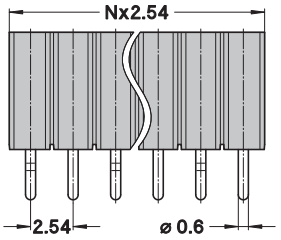




### 801-**PP-NNN**-10-143101

Straight socket connector, height 7 mm with clinched (right/left) solder tail, single row

**AVAILABILITY FROM** 3 to 50 contacts
(standard number of contacts: 50)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW SOLDER TAIL**

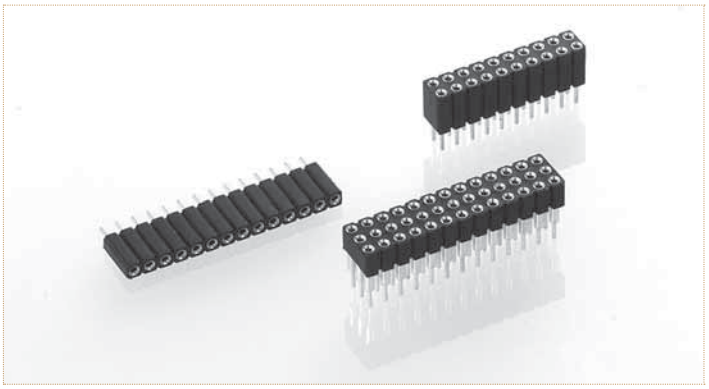


Socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 109-119.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

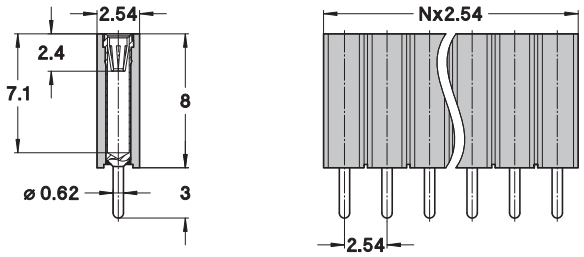
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-10-003101 for a double row version with 16 pins becomes 803-87-**016**-10-003101.

### 801-**PP**-**NNN**-10-003101

Straight socket connector, height 8 mm, solder tail, single row

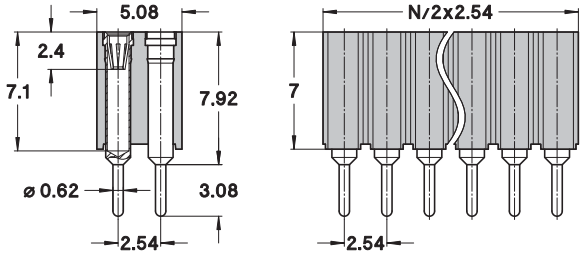
AVAILABILITY FROM 2 to 36 contacts
(standard number of contacts: 36)




### 803-**PP**-**NNN**-10-003101

Straight socket connector, height 7.9 mm, solder tail, double row

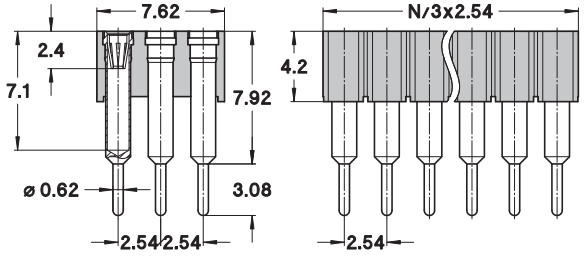
AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)




### 805-**PP**-**NNN**-10-003101

Straight socket connector, height 7.9 mm, solder tail, triple row

AVAILABILITY FROM 9 to 96 contacts
(standard number of contacts: 96)



# SOCKET CONNECTORS 2.54 mm

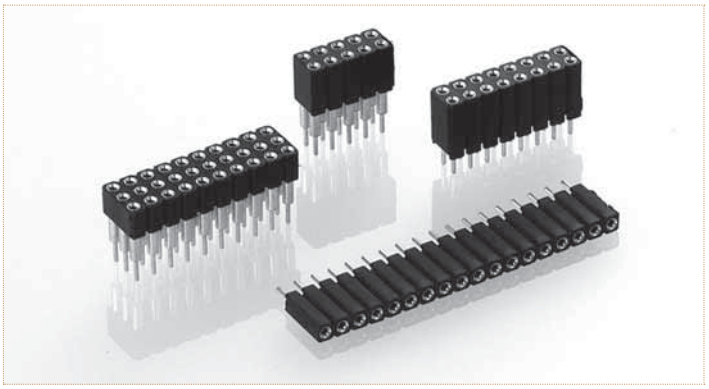
**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW**
**SOLDER TAIL**

Socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 109-119.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

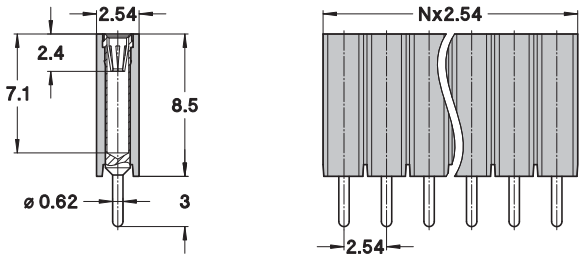
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-10-005101 for a double row version with 16 pins becomes 803-87-**016**-10-005101.

### 801-**PP**-**NNN**-10-005101

Straight socket connector, height 8.5 mm, solder tail, single row

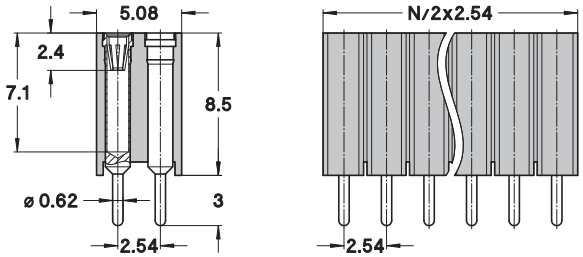
AVAILABILITY FROM 2 to 36 contacts
(standard number of contacts: 36)




### 803-**PP**-**NNN**-10-005101

Straight socket connector, height 8.5 mm, solder tail, double row

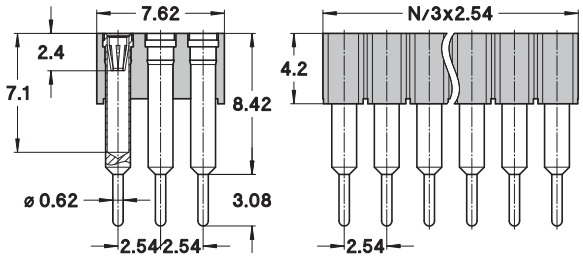
AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)




### 805-**PP**-**NNN**-10-005101

Straight socket connector, height 8.4 mm, solder tail, triple row

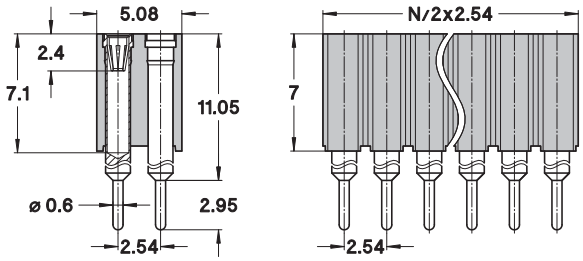
AVAILABILITY FROM 9 to 96 contacts
(standard number of contacts: 96)




### 803-**PP**-**NNN**-10-269101

Straight socket connector, height 11 mm, solder tail, double row

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

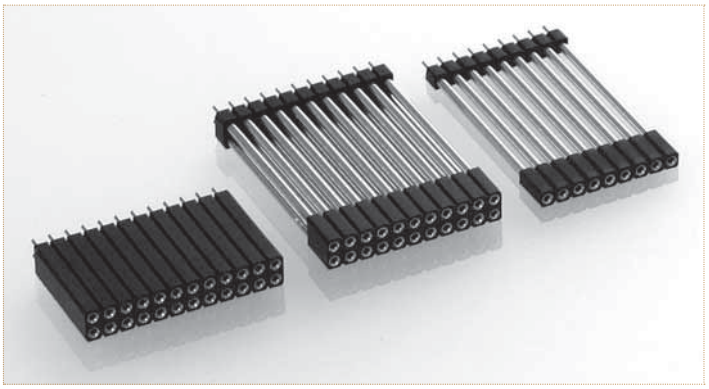


Socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 109-119.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

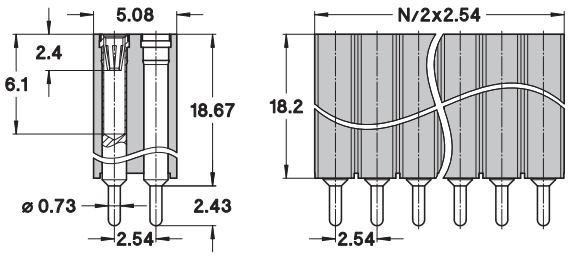
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-10-216101 for a double row version with 16 pins becomes 803-87-**016**-10-216101.

### 803-**PP**-**NNN**-10-249101

Straight socket connector, height 19.7 mm, solder tail, double row

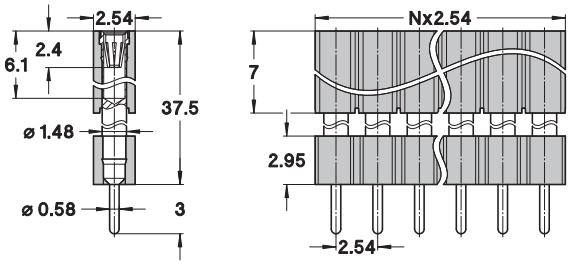
AVAILABILITY FROM 4 to 40 contacts
(standard number of contacts: 40)




### 801-**PP**-**NNN**-10-216101

Straight socket connector, height 37.5 mm, solder tail, single row

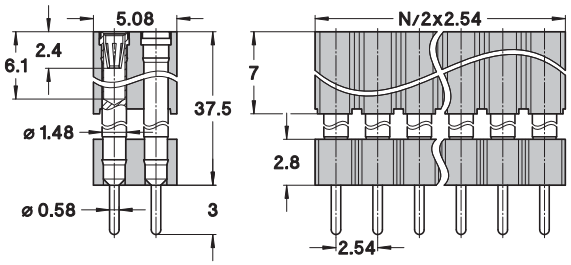
AVAILABILITY FROM 2 to 32 contacts
(standard number of contacts: 32)




### 803-**PP**-**NNN**-10-216101

Straight socket connector, height 37.5 mm, solder tail, double row

AVAILABILITY FROM 4 to 72 contacts
(standard number of contacts: 72)



# SOCKET CONNECTORS 2.54 mm

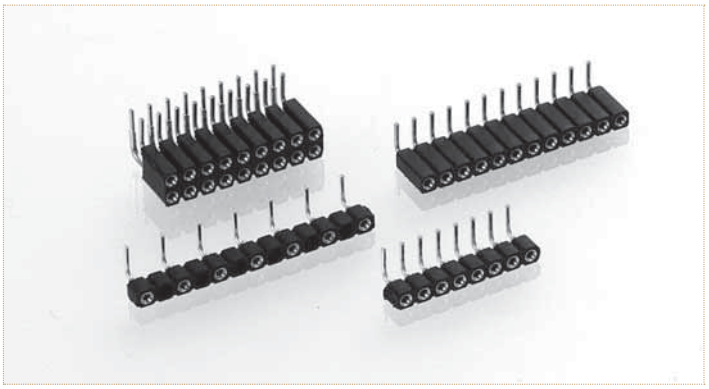
**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / SOLDER TAIL / RIGHT ANGLE**

Right angle socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 109-119.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

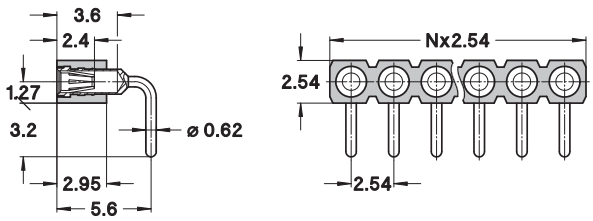
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-20-001101 for a double row version with 16 pins becomes 803-87-**016**-20-001101.

### 801-**PP**-**NNN**-20-002101

Right angle short socket connector, solder tail, single row

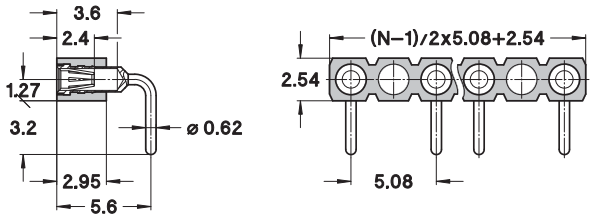
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)
Option: right angle short receptacle, solder tail, double row available on request




### 801-**PP**-**YYY**-20-442101

Right angle short socket connector, solder tail, single row, partially equipped 5.08 mm

**AVAILABILITY FROM** 2 to 32 contacts
**YYY number of poles:**
please consult for ordering code

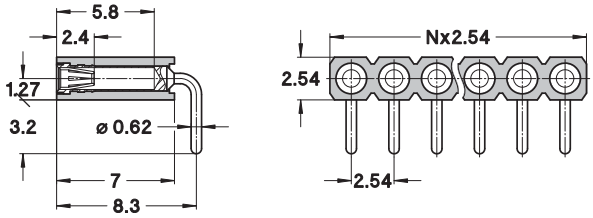



**Bulk:** 801-**PP**-**NNN**-20-001101
**T & R Packaging*:** 801-**PP**-**NNN**-20-001191

Right angle socket connector, solder tail, single row

**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 50)

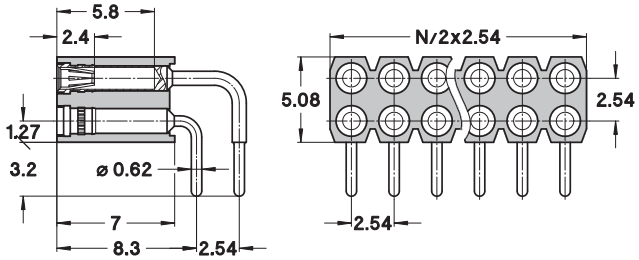
*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.




### 803-**PP**-**NNN**-20-001101

Right angle socket connector, solder tail, double row

**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 100)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

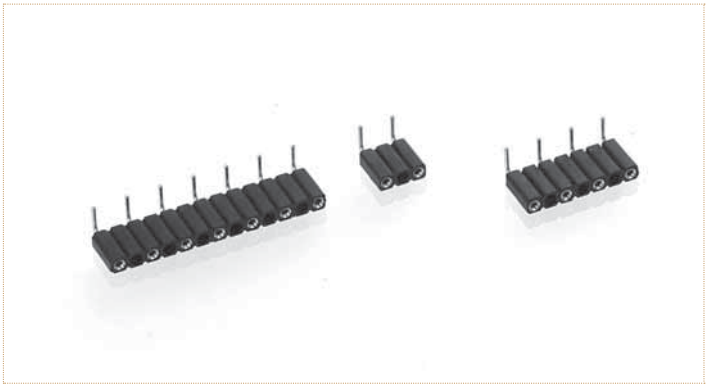
**MATING PIN Ø 0.76 mm / SINGLE ROW / SOLDER TAIL / RIGHT ANGLE**

Right angle socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 109-119.



Other plating on request (see page 178 for plating specs).

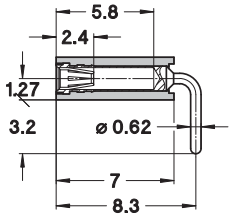
## ORDERING INFORMATION ROHS COMPLIANT PARTS

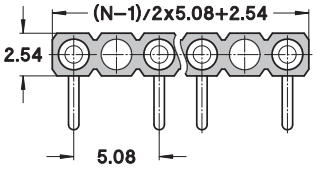
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

801-**PP**-**YYY**-20-101101

Right angle socket connector, solder tail, single row, partially equipped 5.08 mm

| | |
|---|---|
| AVAILABILITY FROM | 2 to 25 contacts |
| | **YYY number of poles:** |
| | please consult for ordering code |



# SOCKET CONNECTORS 2.54 mm

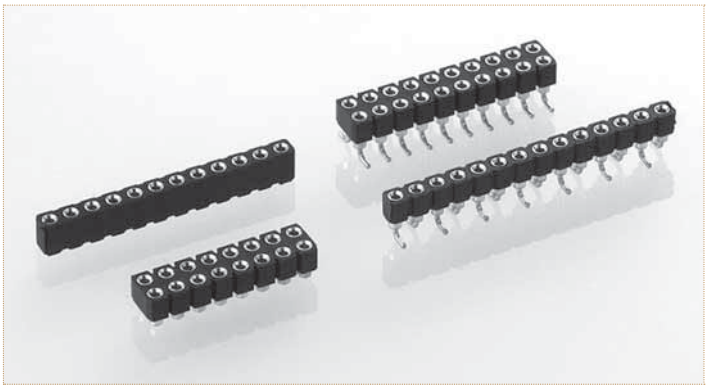
**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / SURFACE MOUNT**

Socket connectors, SMD perpendicular mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding pin connectors, see pages 109-119.



Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-30-002101 for a double row version with 16 pins becomes 803-87-**016**-30-002101.

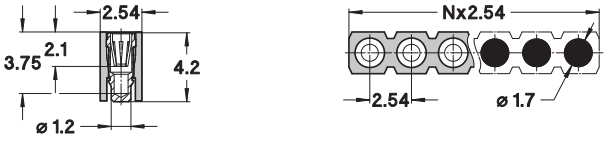
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

**Bulk:** 801-**PP**-**NNN**-30-480101
**T & R Packaging with pick & place cap*:** 801-**PP**-**NNN**-30-480191

SMD socket connector, single row, perpendicular mount with self-levelling floating contacts

AVAILABILITY FROM: 2 to 12 contacts
(standard number of contacts: 12)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

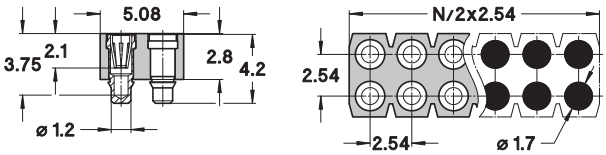



*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 803-**PP**-**NNN**-30-480101
**T & R Packaging with pick & place cap*:** 803-**PP**-**NNN**-30-480191

SMD socket connector, double row, perpendicular mount with self-levelling floating contacts

AVAILABILITY FROM: 4 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts per row, the coplanarity issue is to be addressed specifically

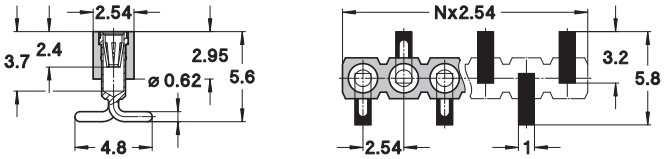



*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 801-**PP**-**NNN**-30-002101
**T & R Packaging with pick & place cap*:** 801-**PP**-**NNN**-30-002191

SMD socket connector, single row, perpendicular mount with gull-wing terminations

AVAILABILITY FROM: 3 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

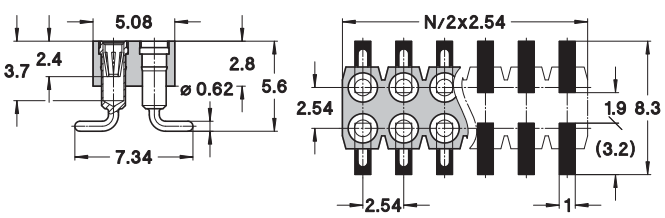



*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 803-**PP**-**NNN**-30-002101
**T & R Packaging with pick & place cap*:** 803-**PP**-**NNN**-30-002191

SMD socket connector, double row, perpendicular mount with gull-wing terminations

AVAILABILITY FROM: 4 to 72 contacts
(standard number of contacts: 40 and 72)
For connectors having more than 9 contacts per row, the coplanarity issue is to be addressed specifically




*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / SURFACE MOUNT**

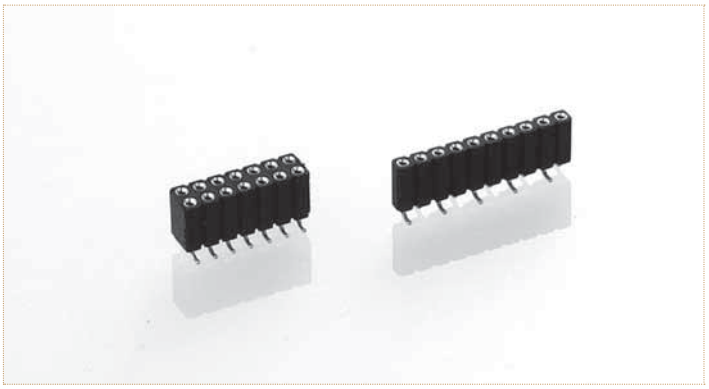


Socket connectors, SMD perpendicular mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **SLEEVE** | Brass CuZn36Pb3 (C36000) |
| **CONTACT CLIP (6 FINGER)** | Beryllium copper (C17200) |
| **MATING PINS** | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| **FORCES** | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 3 A |
| **CONTACT RESISTANCE** | Max. 10 mΩ |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |
| **COPLANARITY SMD TERMINATIONS** | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding pin connectors, see pages 109-119.



Other plating on request (see page 178 for plating specs).
**NNN number of poles**. Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-30-001101 for a double row version with 16 pins becomes 803-87-**016**-30-001101.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

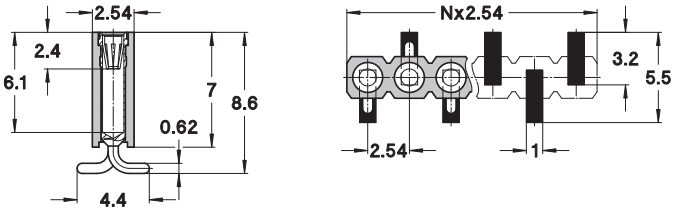
**Bulk:** 801-**PP**-**NNN**-30-001101

**T & R Packaging with pick & place cap*:** 801-**PP**-**NNN**-30-001191

SMD socket connector, single row, perpendicular mount with gull-wing terminations

**AVAILABILITY FROM** 3 to 50 contacts
(standard number of contacts: 50)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



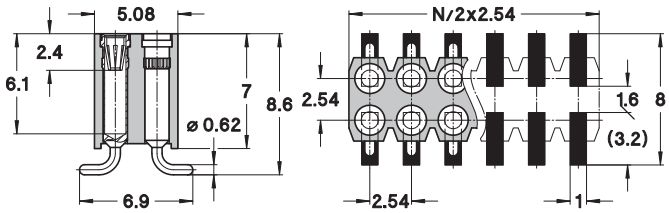

**Bulk:** 803-**PP**-**NNN**-30-001101

**T & R Packaging with pick & place cap*:** 803-**PP**-**NNN**-30-001191

SMD socket connector, double row, perpendicular mount with gull-wing terminations

**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 100)
For connectors having more than 9 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



# SOCKET CONNECTORS 2.54 mm

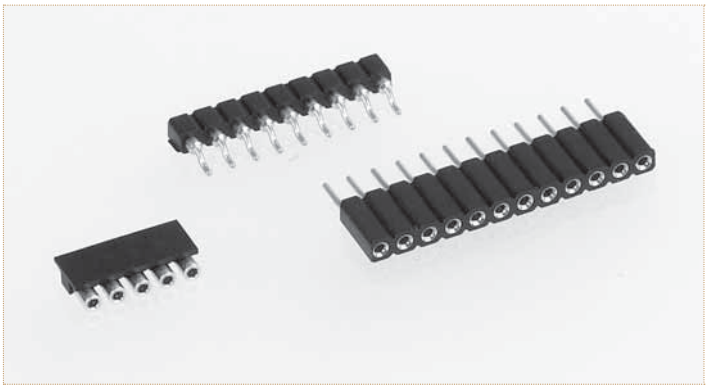
**MATING PIN Ø 0.76 mm / SINGLE ROW / SURFACE MOUNT**

Socket connectors, SMD parallel mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **SLEEVE** | Brass CuZn36Pb3 (C36000) |
| **CONTACT CLIP (6 FINGER)** | Beryllium copper (C17200) |
| **MATING PINS** | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| **FORCES** | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 3 A |
| **CONTACT RESISTANCE** | Max. 10 mΩ |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |
| **COPLANARITY SMD TERMINATIONS** | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding pin connectors, see pages 109-119.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 78, 87 | Tin | Gold flash |
| 38, 83 | Tin | Gold 0.75 µm |

Code 78, 38 for 8FM...02-146 series / 87, 83 for 801...40-00X101 series

Other plating on request (see page 178 for plating specs).

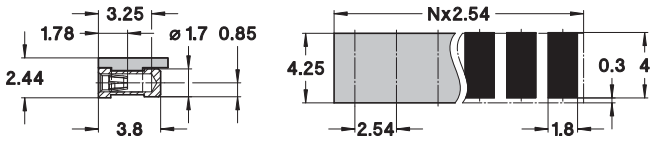
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 801-87-**NNN**-40-002101 for a single row version with 8 pins becomes 801-87-**008**-40-002101.

**Bulk:** 8FM-**PP**-0**NNN**-02-278

**T & R Packaging with pick & place cap*:** 8FM-**PP**-0**NNN**-02-278191

SMD socket connector, parallel mount, low profile minimum PCB space requirement, single row

**AVAILABILITY FROM** 2 to 10 contacts
(standard number of contacts: 10)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically



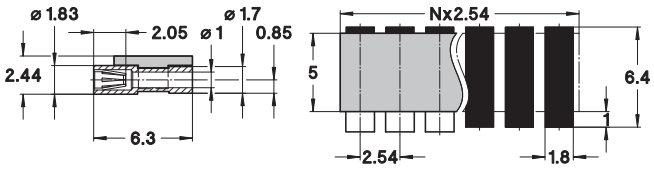

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 8FM-**PP**-0**NNN**-02-146

**T & R Packaging with pick & place cap*:** 8FM-**PP**-0**NNN**-02-146191

SMD socket connector, parallel mount, low profile minimum PCB space requirement, single row

**AVAILABILITY FROM** 2 to 10 contacts
(standard number of contacts: 10)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically



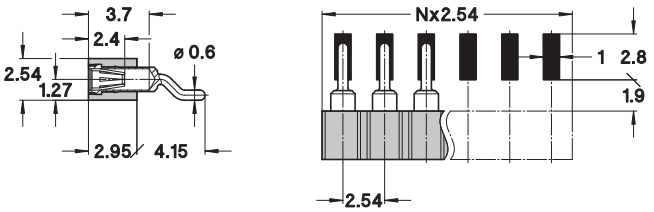

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 801-**PP**-**NNN**-40-002101

**T & R Packaging*:** 801-**PP**-**NNN**-40-002191

SMD socket connector, parallel mount, short contact, single row

**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically



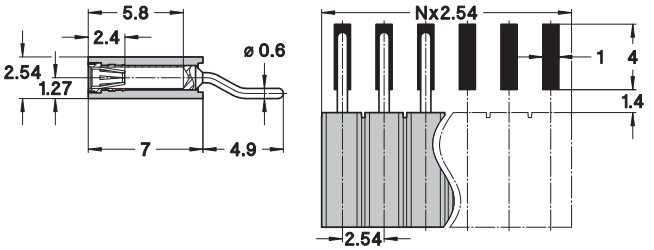

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

**Bulk:** 801-**PP**-**NNN**-40-001101

**T & R Packaging*:** 801-**PP**-**NNN**-40-001191

SMD socket connector, parallel mount, long contact, single row

**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 50)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically




*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

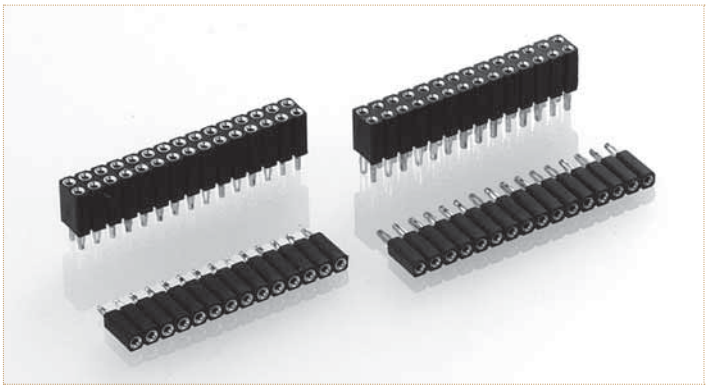
**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / PRESS-FIT**

Socket connectors, press-fit with compliant pin for solderless mount in PCB plated through holes.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Bronze CuSn4Pb4Zn4 (C54400) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PINS | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| PCB HOLE Ø | 1 mm +0.09/-0.06 mm finished (1.15 ±0.025 mm drill) |

For corresponding pin connectors, see pages 109-119.



Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 801-87-**NNN**-65-001101 for a single row version with 8 pins becomes 801-87-**008**-65-001101.

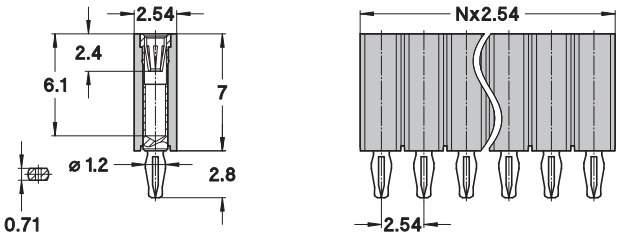
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

### 801-**PP**-**NNN**-65-001101

Press-fit socket connector, single row, compliant pin for PCB thickness 1.5 to 2.5 mm

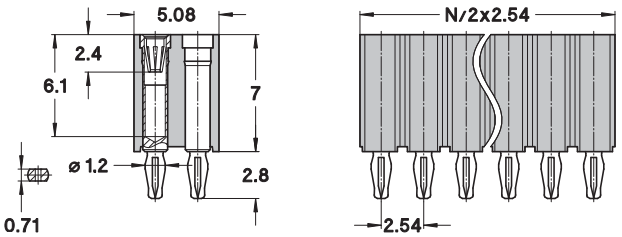
**AVAILABILITY FROM** 2 to 50 contacts (standard number of contacts: 50)




### 803-**PP**-**NNN**-65-001101

Press-fit socket connector, double row, compliant pin for PCB thickness 1.5 to 2.5 mm

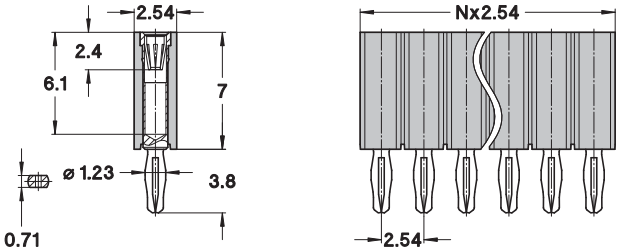
**AVAILABILITY FROM** 4 to 100 contacts (standard number of contacts: 100)




### 801-**PP**-**NNN**-66-001101

Press-fit socket connector, single row, compliant pin for PCB thickness 2.1 to 3.2 mm

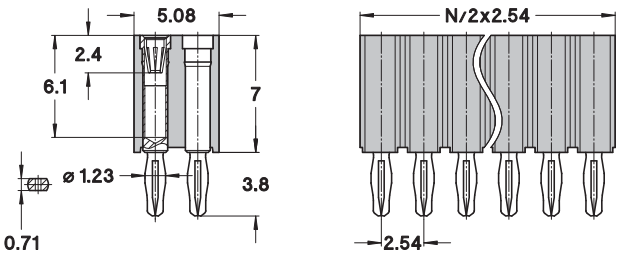
**AVAILABILITY FROM** 2 to 50 contacts (standard number of contacts: 50)




### 803-**PP**-**NNN**-66-001101

Press-fit socket connector, double row, compliant pin for PCB thickness 2.1 to 3.2 mm

**AVAILABILITY FROM** 4 to 100 contacts (standard number of contacts: 100)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

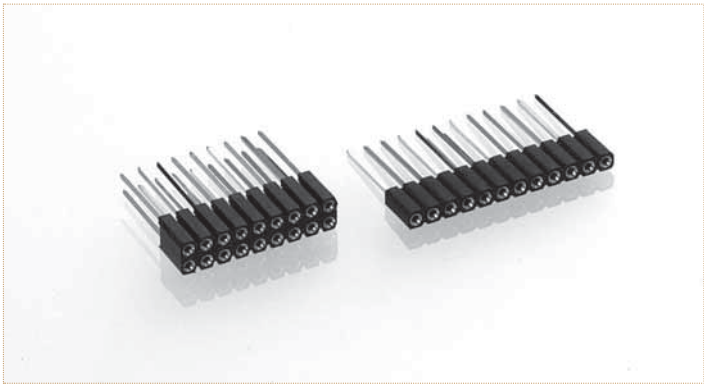
**MATING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / WIRE-WRAP**

Socket connectors.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **SLEEVE** | Brass CuZn36Pb3 (C36000) |
| **CONTACT CLIP (6 FINGER)** | Beryllium copper (C17200) |
| **MATING PINS** | Ø 0.70 to 0.90 mm, ⍁ 0.635 mm |
| **FORCES** | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 0.76 mm) |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 3 A |
| **CONTACT RESISTANCE** | Max. 10 mΩ |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |

For corresponding pin connectors, see pages 109-119.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

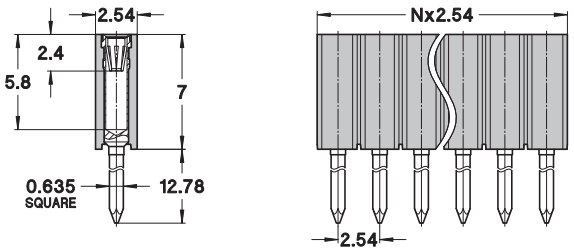
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-53-001101 for a double row version with 16 pins becomes 803-87-**016**-53-001101.

### 801-**PP**-**NNN**-53-001101

Wire-wrap socket connector, height 7 mm, 3-level, single row

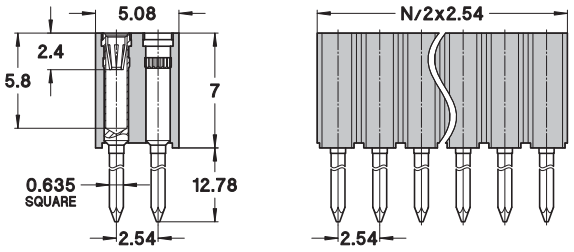
**AVAILABILITY FROM** 2 to 50 contacts
(standard number of contacts: 50)




### 803-**PP**-**NNN**-53-001101

Wire-wrap socket connector, height 7 mm, 3-level, double row

**AVAILABILITY FROM** 4 to 100 contacts
(standard number of contacts: 100)






Due to technical progress, all information provided is subject to change without prior notice.

# SOCKET CONNECTORS 2.54 mm

**MATING PIN Ø 1 mm / SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

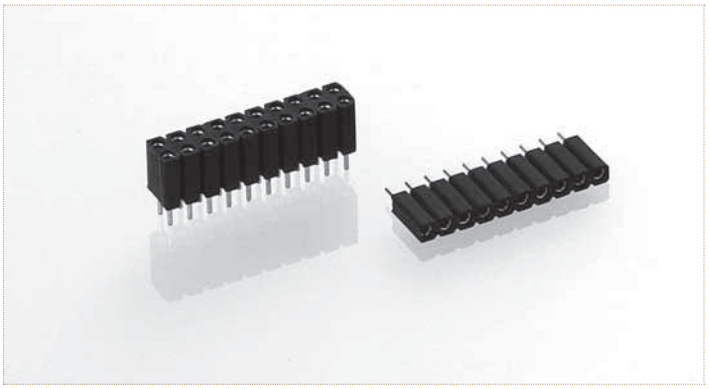


Socket connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| MATING PIN Ø | 0.95 to 1.08 mm |
| FORCES | 1.2 N typ. insertion 0.6 N typ. withdrawal (polished steel gauge Ø 1 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding pin connectors, see page 113.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

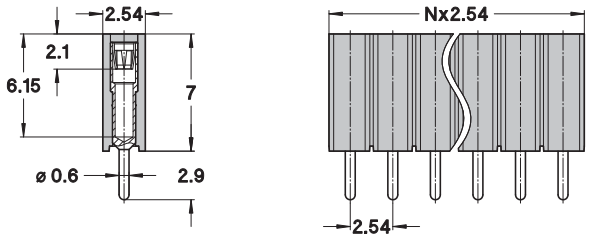
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 803-87-**NNN**-10-004101 for a double row version with 16 pins becomes 803-87-**016**-10-004101.

### 801-**PP**-**NNN**-10-004101

Straight socket connector, height 7 mm, solder tail, single row

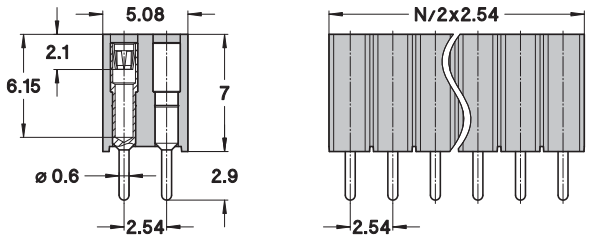
AVAILABILITY FROM 2 to 50 contacts
(standard number of contacts: 50)




### 803-**PP**-**NNN**-10-004101

Straight socket connector, height 7 mm, solder tail, double row

AVAILABILITY FROM 4 to 100 contacts
(standard number of contacts: 100)



# PIN CONNECTORS 2.54 mm

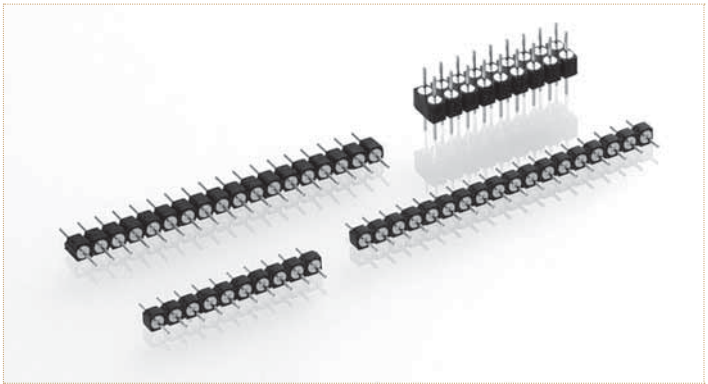
**CONNECTING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW SOLDER TAIL**

Pin connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm and 0.49 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 69-84.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3* | Tin | 0.75 µm gold |

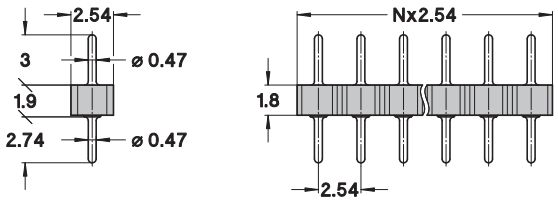
*only for 350/450...00-006101 series

Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 450-10-2NN-00-006101 for a double row version with 16 pins becomes 450-10-2**16**-00-006101.

### 350-**PP**-1**NN**-00-019101

Straight pin connector ultralow profile, height 1.9 mm, solder tail, single row

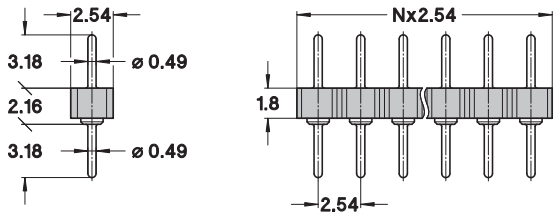
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 350-**PP**-1**NN**-00-024101

Straight pin connector ultralow profile, height 2.2 mm, solder tail, single row

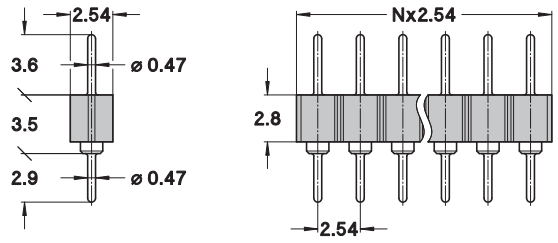
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 350-**PP**-1**NN**-00-006101

Straight pin connector low profile, height 3.5 mm, solder tail, single row

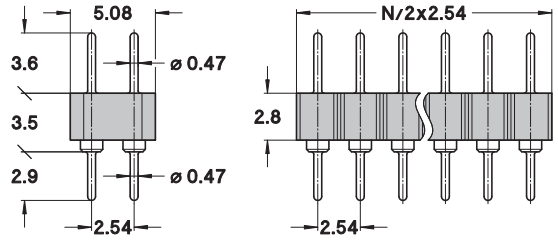
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 450-**PP**-2**NN**-00-006101

Straight pin connector low profile, height 3.5 mm, solder tail, double row

**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW SOLDER TAIL**

Pin connectors, solder tail.

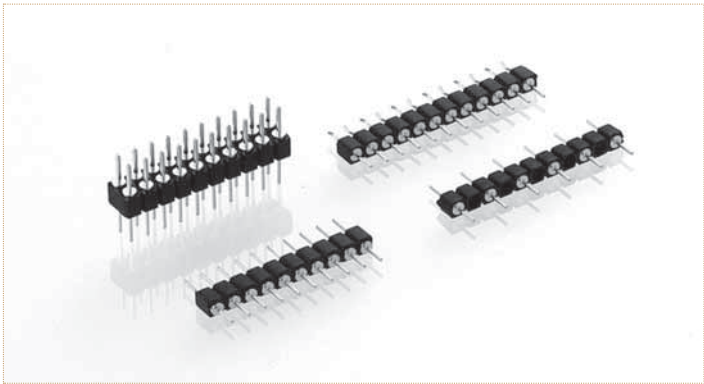
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 69-84.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |



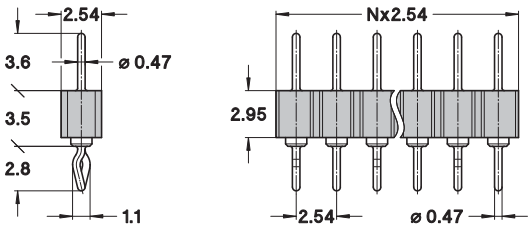
Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 350-10-1**NN**-00-001101 for a single row version with 8 pins becomes 350-10-1**08**-00-001101.



### 350-**PP**-1**NN**-01-666101

Straight pin connector, height 3.5 mm, with clinched (right/left) solder tails, single row

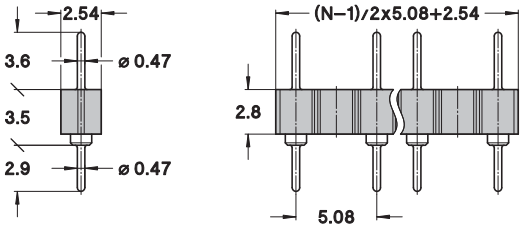
**AVAILABILITY FROM** 3 to 64 contacts
(standard number of contacts: 64)




### 350-**PP**-1**YY**-01-714101

Straight pin connector, height 3.5 mm, solder tail, single row, partially equipped 5.08 mm

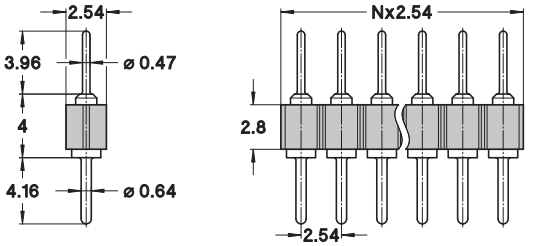
**AVAILABILITY FROM** 2 to 32 contacts
**YY number of poles:**
please consult for ordering code




### 350-**PP**-1**NN**-00-001101

Straight pin connector, height 4 mm, solder tail, single row

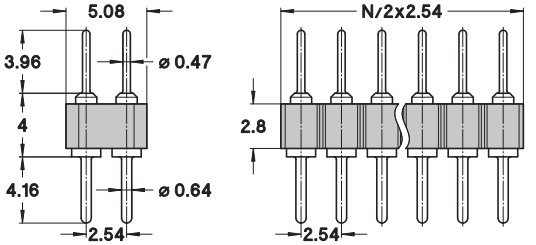
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 450-**PP**-2**NN**-00-001101

Straight pin connector, height 4 mm, solder tail, double row

**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)



# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW SOLDER TAIL**

Pin connectors, solder tail.

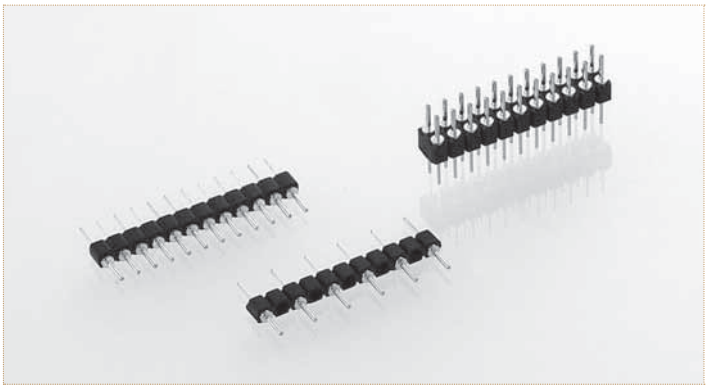
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 69-84.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |



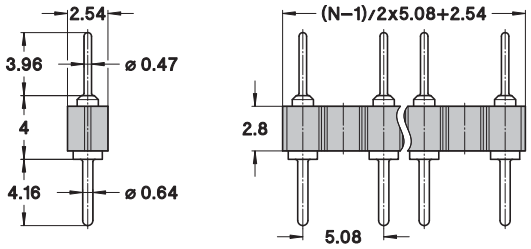
Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 450-10-2**NN**-00-013101 for a double row version with 16 pins becomes 450-10-2**16**-00-013101.

### 350-**PP**-1**YY**-01-609101

Straight pin connector, low profile, height 4 mm, solder tail, single row, partially equipped 5.08 mm

**AVAILABILITY FROM** 2 to 32 contacts

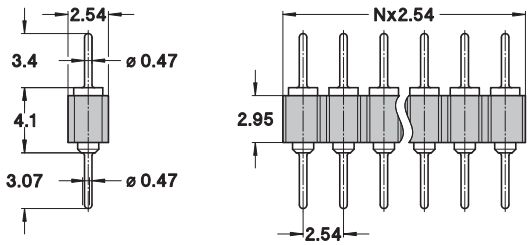
**YY number of poles:**
please consult for ordering code




### 350-**PP**-1**NN**-00-013101

Straight pin connector, height 4.1 mm, solder tail, single row

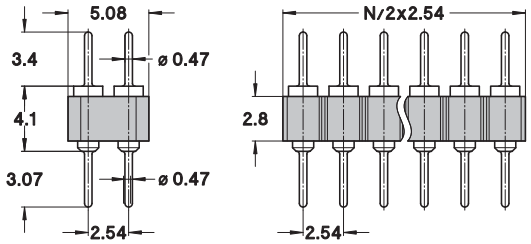
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 450-**PP**-2**NN**-00-013101

Straight pin connector, height 4.1 mm, solder tail, double row

**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW SOLDER TAIL**

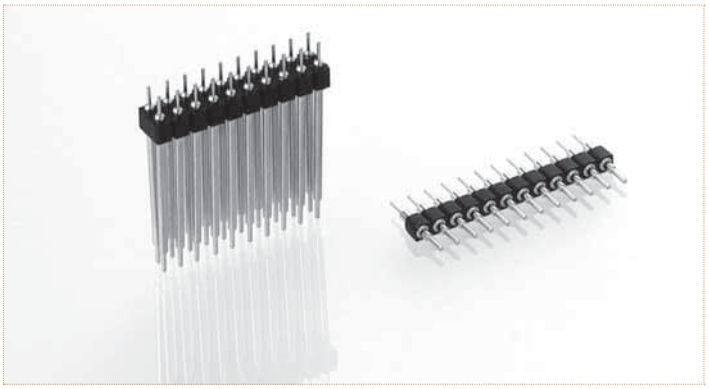


Pin interconnect connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 69-80.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

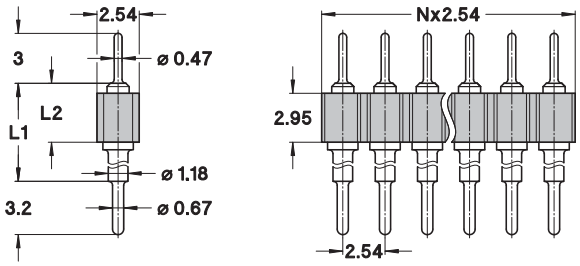
| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 451-10-2**NN**-00-003101 for a double row version with 8 pins becomes 451-10-2**08**-00-003101.

### 351-**PP**-1**NN**-00-**XXX**101

Straight interconnect pin connector, solder tail, single row

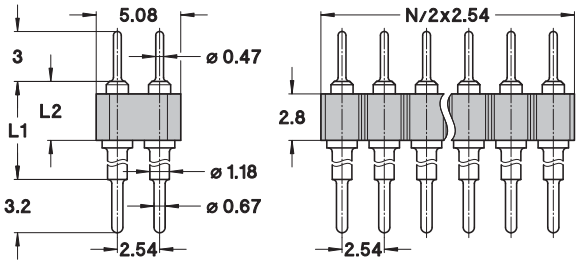
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 451-**PP**-2**NN**-00-**XXX**101

Straight interconnect pin connector, solder tail, double row

**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)




## AVAILABLE CONTACT LENGTHS

| CONTACT LENGTH L1 (mm) | L2 (mm) | XXX CODE |
|---|---|---|
| 6.2 | 4.7 | 003 |
| 8.4 | 3.55 | 004 |
| 15.3 | 3.55 | 005 |
| 21.2 | 3.55 | 016 |
| 27.4 | 3.55 | 017 |

Other lengths on request

# PIN CONNECTORS 2.54 mm

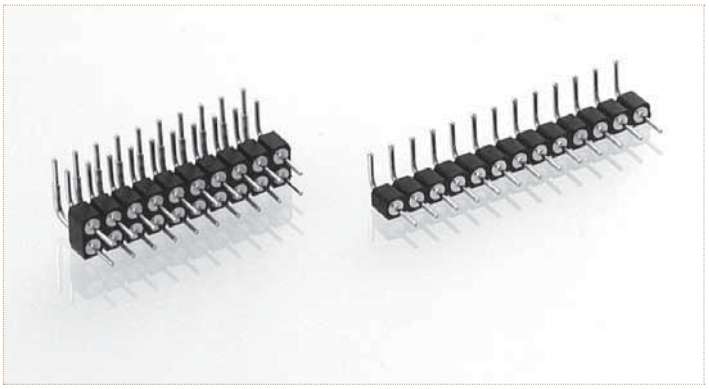
**CONNECTING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW**
**SOLDER TAIL / RIGHT ANGLE**

Right angle pin connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 69-84.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

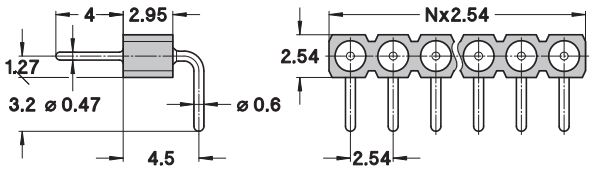
| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 499-10-2**NN**-10-009101 for a double row version with 8 pins becomes 499-10-2**08**-10-009101.

### 399-**PP**-1**NN**-10-009101

Right angle pin connector, solder tail, single row

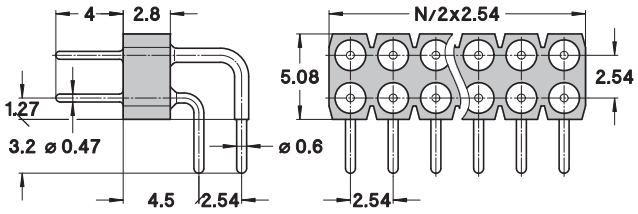
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 499-**PP**-2**NN**-10-009101

Right angle pin connector, solder tail, double row

**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW SURFACE MOUNT**

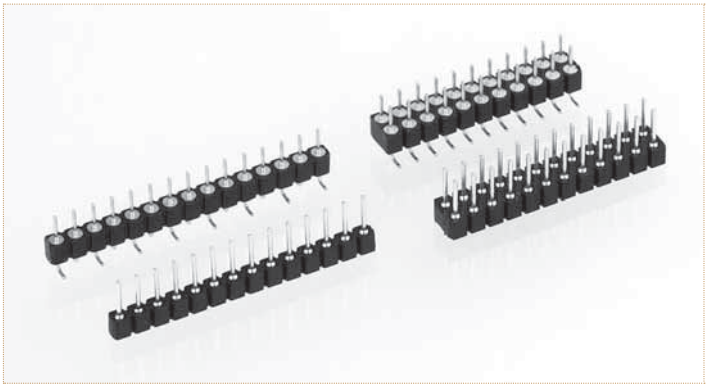


Pin connectors, SMD.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding socket connectors, see pages 69-84.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3* | Tin | 0.75 µm gold |

*only for 350/450...00-106101 series

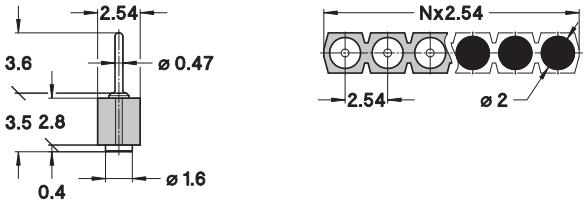
Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 350-10-1**NN**-00-106101 for a single row version with 8 pins becomes 350-10-1**08**-00-106101.

**Bulk:** 350-**PP**-1**NN**-01-899101
**T & R Packaging with pick & place cap*:** 350-**PP**-1**NN**-01-899191

SMD pin connector, low profile, single row, perpendicular mount with self-levelling floating contacts

AVAILABILITY FROM: 2 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

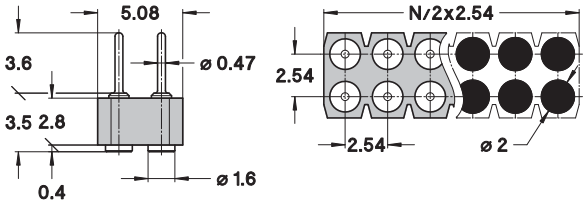



**Bulk:** 450-**PP**-2**NN**-01-899101
**T & R Packaging with pick & place cap*:** 450-**PP**-2**NN**-01-899191

SMD pin connector, low profile, double row, perpendicular mount with self-levelling floating contacts

AVAILABILITY FROM: 4 to 72 contacts
(standard number of contacts: 72)
For connectors having more than 9 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

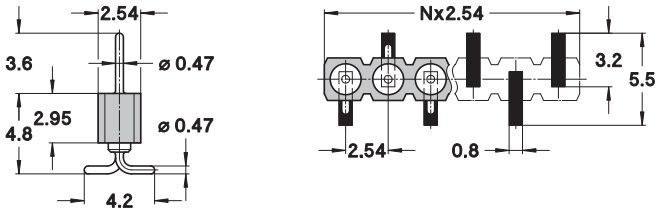



**Bulk:** 350-**PP**-1**NN**-00-106101
**T & R Packaging with pick & place cap*:** 350-**PP**-1**NN**-00-106191

SMD pin connector, single row, perpendicular mount with gull-wing terminations

AVAILABILITY FROM: 3 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

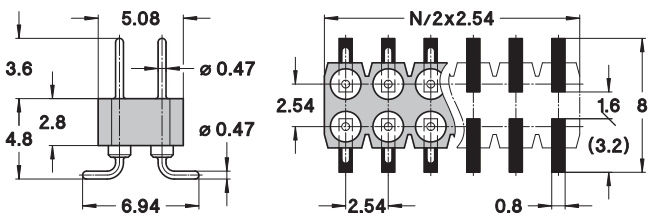



**Bulk:** 450-**PP**-2**NN**-00-106101
**T & R Packaging with pick & place cap*:** 450-**PP**-2**NN**-00-106191

SMD pin connector, double row, perpendicular mount with gull-wing terminations

AVAILABILITY FROM: 4 to 72 contacts
(standard number of contacts: 72)
For connectors having more than 9 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.




Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

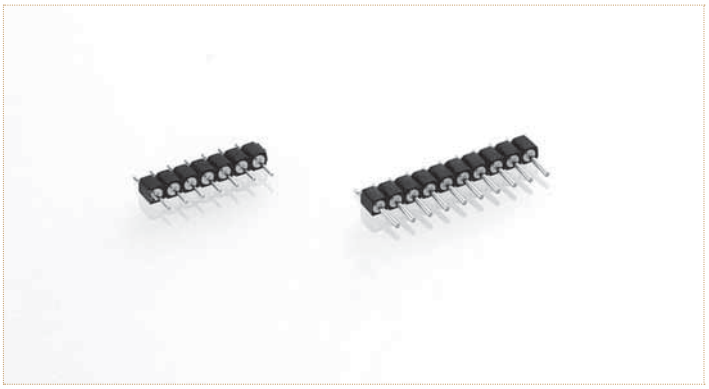
**CONNECTING PIN Ø 0.47 mm / SINGLE ROW / SURFACE MOUNT**

Pin connectors, SMD.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding socket connectors, see pages 69-84.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 350-10-1**NN**-00-206101 for a single row version with 8 pins becomes 350-10-1**08**-00-206101.

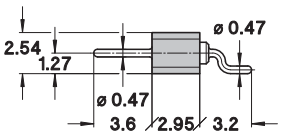
**Bulk:**
350-**PP**-1**NN**-00-206101

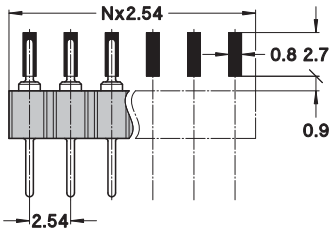
**T & R Packaging*:**
350-**PP**-1**NN**-00-206191

SMD pin connector, single row, parallel mount

AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.47 mm / SINGLE ROW / DOUBLE ROW / PRESS-FIT**

Pin connectors, press-fit with compliant pin for solderless mount in PCB plated through holes.

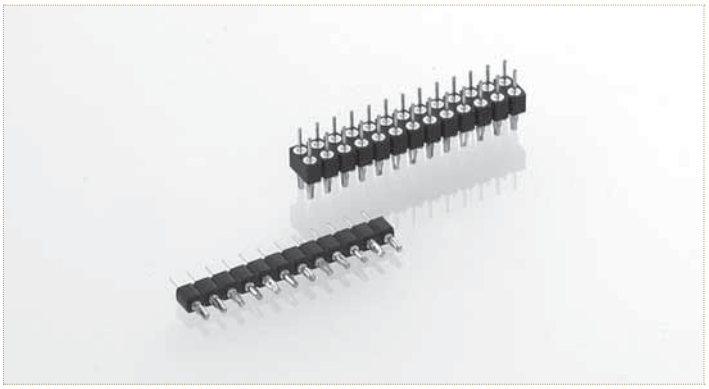
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Bronze CuSn4Pb4Zn4 (C54400) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| PCB HOLE Ø | 1 mm +0.09/-0.06 mm finished<br>(1.15 ±0.025 mm drill) |

For corresponding socket connectors, see pages 69-84.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| V3 | Tin | 0.75 µm gold |

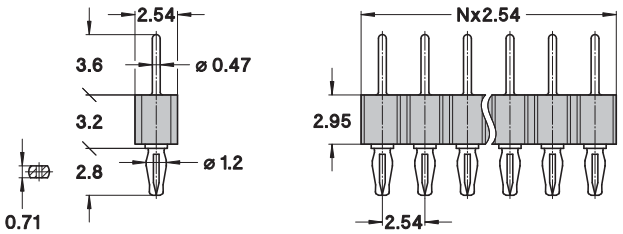


Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 356-V3-1**NN**-00-014101 for a single row version with 8 pins becomes 356-V3-1**08**-00-014101.

### 356-V3-1**NN**-00-014101

Press-fit pin connector, single row, compliant pin for PCB thickness 1.5 to 2.5 mm

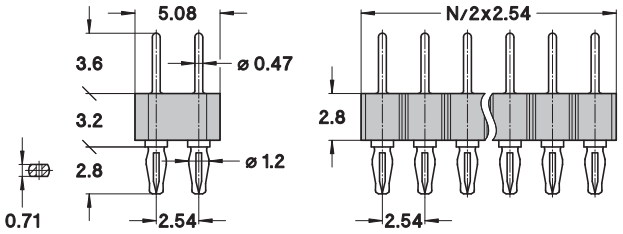
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 456-V3-2**NN**-00-014101

Press-fit pin connector, double row, compliant pin for PCB thickness 1.5 to 2.5 mm

**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW SOLDER TAIL**

Pin connectors, solder tail.

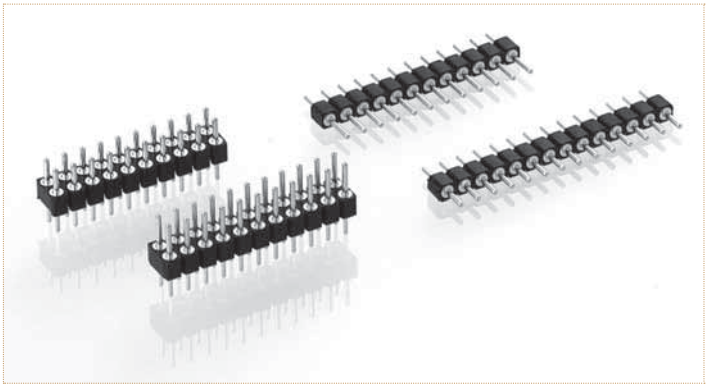
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **CONTACT** | Brass CuZn36Pb3 (C36000) |
| **CONNECTING PIN Ø** | 0.76 mm |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 3 A |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 85-99.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

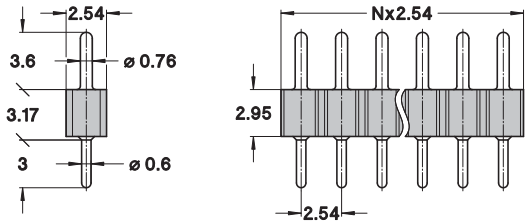


Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 800-10-**NNN**-10-001101 for a single row version with 8 pins becomes 800-10-**008**-10-001101.

### 800-**PP**-**NNN**-10-002101

Straight pin connector, height 3.2 mm, short pin, solder tail, single row

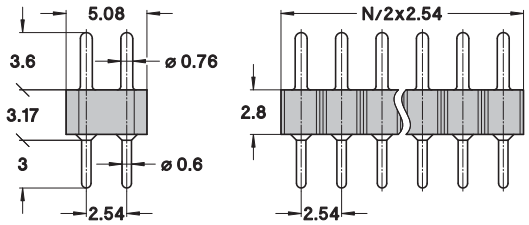
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 802-**PP**-**NNN**-10-002101

Straight pin connector, height 3.2 mm, short pin, solder tail, double row

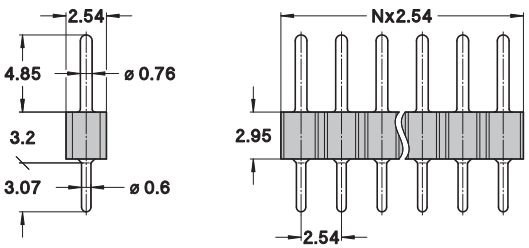
**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)




### 800-**PP**-**NNN**-10-001101

Straight pin connector, height 3.2 mm, long pin, solder tail, single row

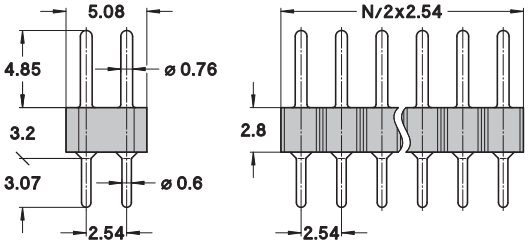
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)
Option: partially equipped 5.08 mm connector
PN 800-PP-YYY-10-101101 available on request




### 802-**PP**-**NNN**-10-001101

Straight pin connector, height 3.2 mm, long pin, solder tail, double row

**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW SOLDER TAIL**

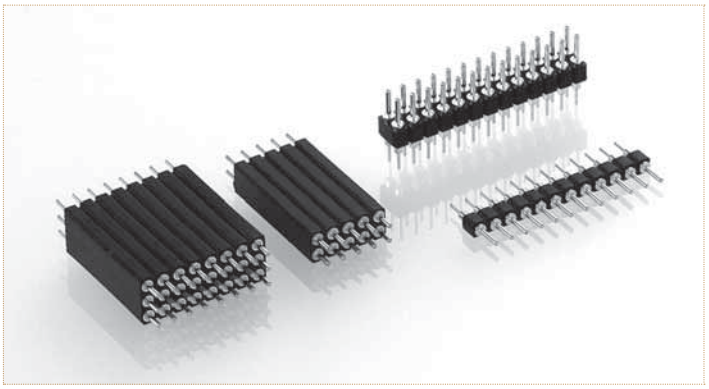


Pin connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.76 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 85-99.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3* | Tin | 0.75 µm gold |

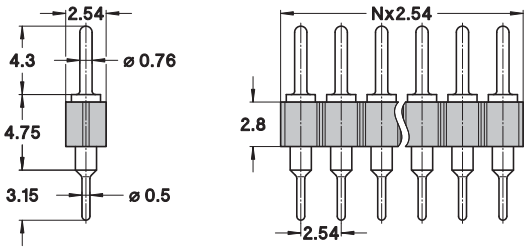
*only for 802/804...10-193101 series

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 802-10-**NNN**-10-193101 for a double row version with 16 pins becomes 802-10-**016**-10-193101.

### 350-**PP**-1**NN**-00-018101

Straight pin connector, height 4.75 mm, solder tail, single row

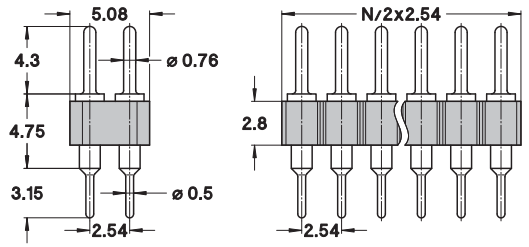
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 450-**PP**-2**NN**-00-018101

Straight pin connector, height 4.75 mm, solder tail, double row

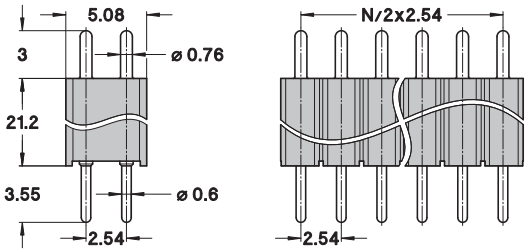
**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)




### 802-**V3**-**NNN**-10-193101

Straight pin connector, height 21.2 mm, solder tail, double row

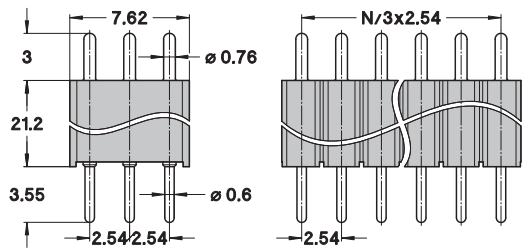
**AVAILABILITY FROM** 4 to 64 contacts
(standard number of contacts: 64)




### 804-**V3**-**NNN**-10-193101

Straight pin connector, height 21.2 mm, solder tail, triple row

**AVAILABILITY FROM** 9 to 96 contacts
(standard number of contacts: 96)



# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW SOLDER TAIL**

Shrouded pin connectors, solder tail.

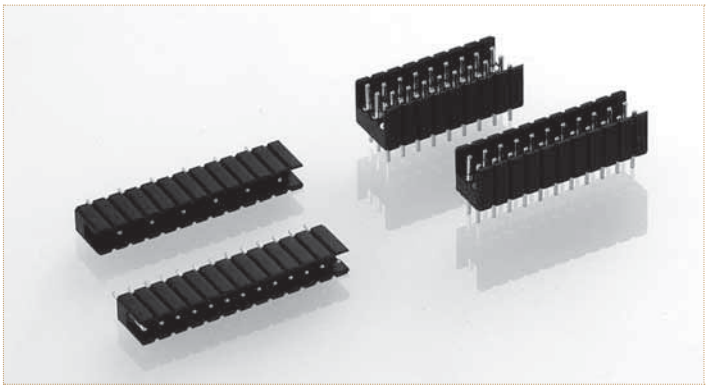
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **CONTACT** | Brass CuZn36Pb3 (C36000) |
| **CONNECTING PIN Ø** | 0.76 mm |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 3 A |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 85-99.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| V3 | Tin | 0.75 µm gold |

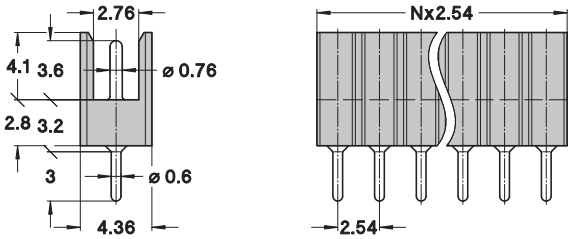


Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 800-V3-**NNN**-12-002101 for a single row version with 8 pins becomes 800-V3-**008**-12-002101.

### 800-V3-**NNN**-12-002101

Straight shrouded pin connector, solder tail, single row

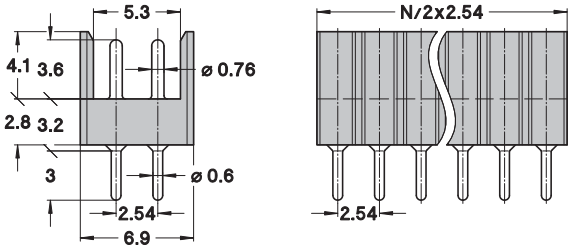
**AVAILABILITY FROM** 2 to 32 contacts
(standard number of contacts: 32)




### 802-V3-**NNN**-12-002101

Straight shrouded pin connector, solder tail, double row

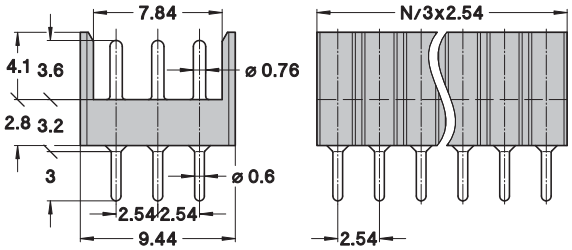
**AVAILABILITY FROM** 4 to 64 contacts
(standard number of contacts: 64)




### 804-V3-**NNN**-12-002101

Straight shrouded pin connector, solder tail, triple row

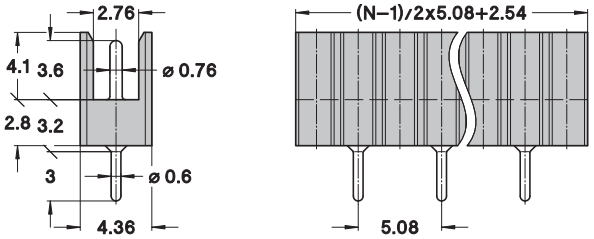
**AVAILABILITY FROM** 9 to 96 contacts
(standard number of contacts: 96)




### 800-V3-**YYY**-12-422101

Straight shrouded pin connector, solder tail, single row, partially equipped 5.08 mm

**AVAILABILITY FROM** 2 to 16 contacts
**YYY number of poles:**
please consult for ordering code






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW**
**SOLDER TAIL / RIGHT ANGLE**

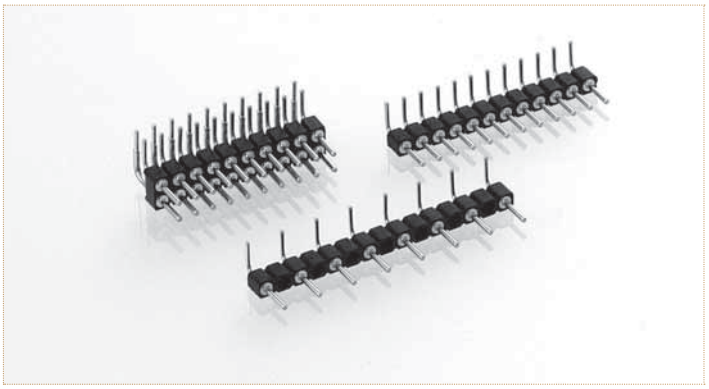


Right angle pin connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.76 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 85-99.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

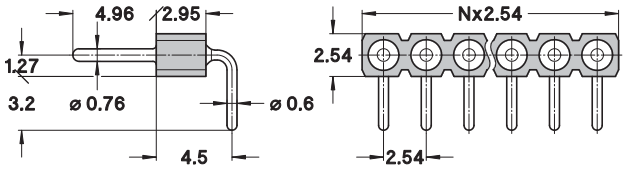
| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 800-10-**NNN**-20-001101 for a single row version with 8 pins becomes 800-10-**008**-20-001101.

### 800-**PP**-**NNN**-20-001101

Right angle pin connector, solder tail, single row

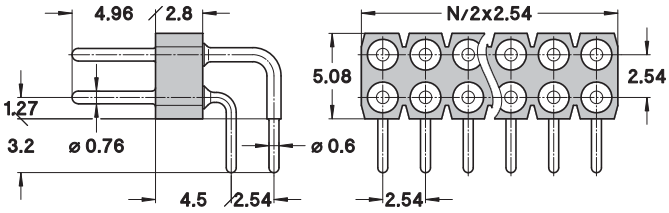
**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)




### 802-**PP**-**NNN**-20-001101

Right angle pin connector, solder tail, double row

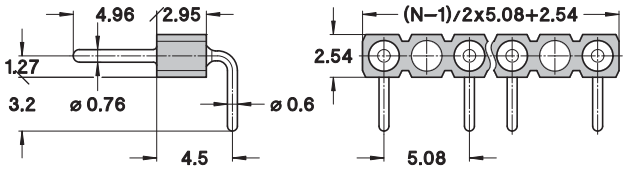
**AVAILABILITY FROM** 4 to 72 contacts
(standard number of contacts: 72)




### 800-**PP**-**YYY**-20-101101

Right angle pin connector, solder tail, single row, partially equipped 5.08 mm

**AVAILABILITY FROM** 2 to 32 contacts
**YYY number of poles:**
please consult for ordering code



# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.76 / 1 mm / SINGLE ROW / DOUBLE ROW TRIPLE ROW / SOLDER TAIL / RIGHT ANGLE**

Right angle pin connectors, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

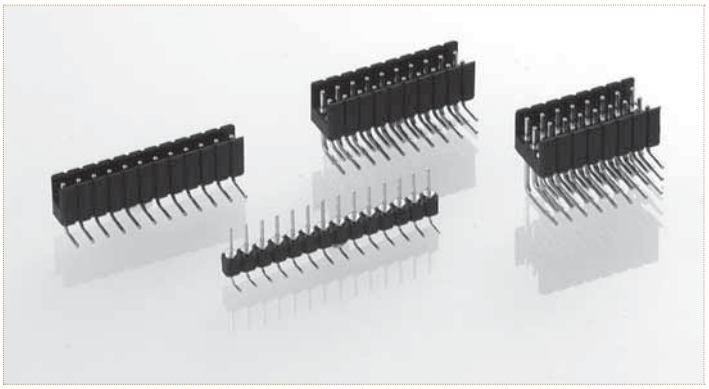
| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.76 mm / 1 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 85-100.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10* | 0.25 µm gold | 0.25 µm gold |
| 80* | Tin | Tin |
| V3 | Tin | 0.75 µm gold |

*only for 800...-20-004101 series

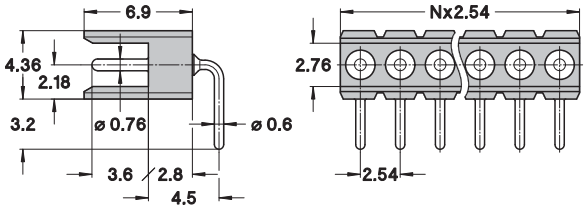


Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 800-V3-**NNN**-22-002101 for a single row version with 8 pins becomes 800-V3-**008**-22-002101.

### 800-V3-**NNN**-22-002101

Right angle shrouded pin connector, solder tail, single row

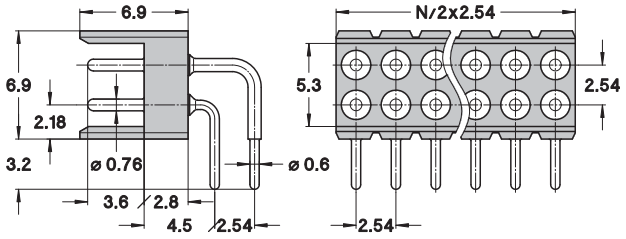
**AVAILABILITY FROM** 2 to 32 contacts
(standard number of contacts: 32)




### 802-V3-**NNN**-22-002101

Right angle shrouded pin connector, solder tail, double row

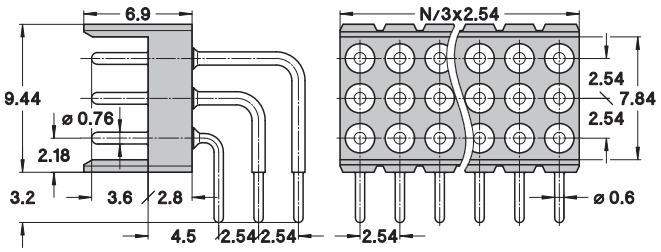
**AVAILABILITY FROM** 4 to 64 contacts
(standard number of contacts: 64)




### 804-V3-**NNN**-22-002101

Right angle shrouded pin connector, solder tail, triple row

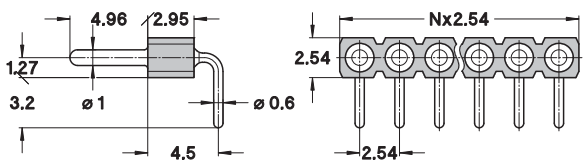
**AVAILABILITY FROM** 9 to 96 contacts
(standard number of contacts: 96)




### 800-**PP**-**NNN**-20-004101

Right angle pin connector Ø 1 mm, solder tail, single row

**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW SURFACE MOUNT**

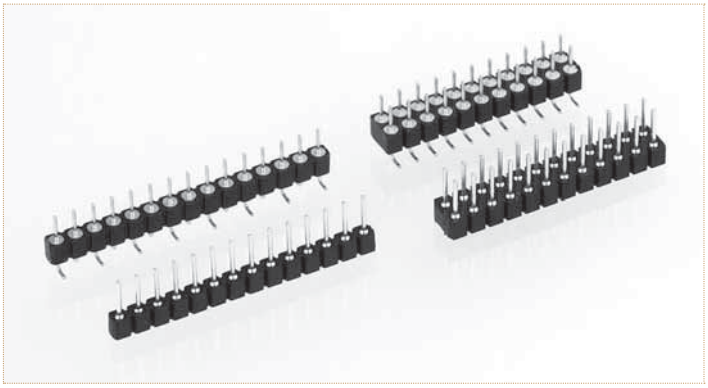


Pin connectors, SMD.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.76 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding socket connectors, see pages 85-99.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3* | Tin | 0.75 µm gold |

*only for 800/802...30-001101 series

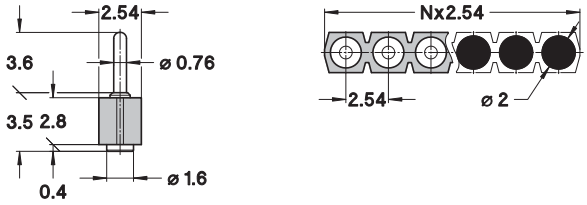
Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 800-10-**NNN**-30-001101 for a single row version with 8 pins becomes 800-10-**008**-30-001101.

**Bulk:** 800-**PP**-**NNN**-30-480101
**T & R Packaging with pick & place cap*:** 800-**PP**-**NNN**-30-480191

SMD pin connector, low profile, single row, perpendicular mount with self-levelling floating contacts

AVAILABILITY FROM: 2 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

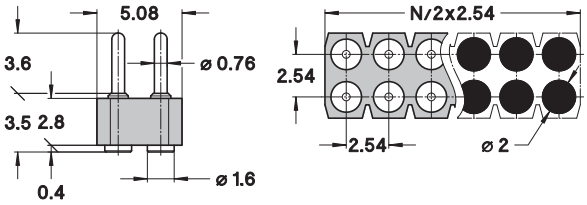



**Bulk:** 802-**PP**-**NNN**-30-480101
**T & R Packaging with pick & place cap*:** 802-**PP**-**NNN**-30-480191

SMD pin connector, low profile, double row, perpendicular mount with self-levelling floating contacts

AVAILABILITY FROM: 4 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

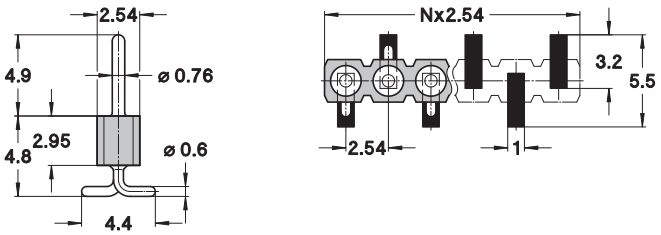



**Bulk:** 800-**PP**-**NNN**-30-001101
**T & R Packaging with pick & place cap*:** 800-**PP**-**NNN**-30-001191

SMD pin connector, single row, perpendicular mount with gull-wing terminations

AVAILABILITY FROM: 3 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

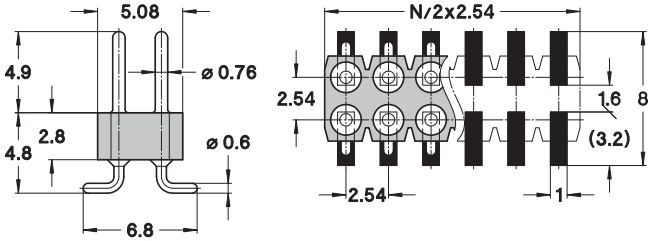



**Bulk:** 802-**PP**-**NNN**-30-001101
**T & R Packaging with pick & place cap*:** 802-**PP**-**NNN**-30-001191

SMD pin connector, double row, perpendicular mount with gull-wing terminations

AVAILABILITY FROM: 4 to 72 contacts
(standard number of contacts: 72)
For connectors having more than 9 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.




Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

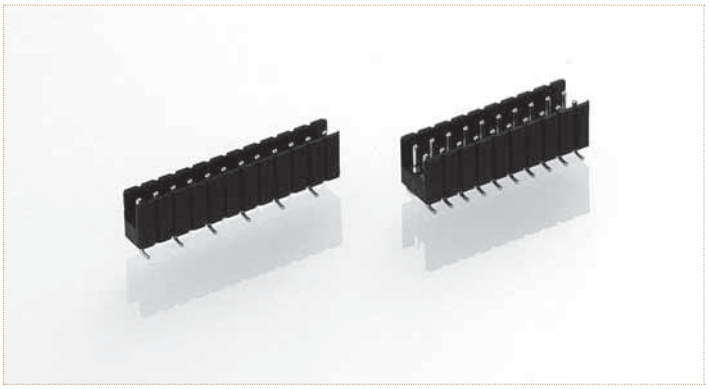
**CONNECTING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW SURFACE MOUNT**

Pin connectors, SMD.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.76 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding socket connectors, see pages 85-99.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| V3 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 800-V3-**NNN**-32-002101 for a single row version with 8 pins becomes 800-V3-**008**-32-002101.

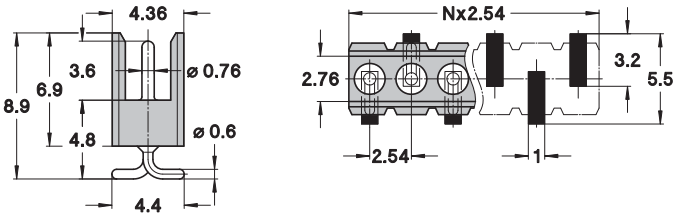
**Bulk:** 800-V3-**NNN**-32-002101

**T & R Packaging with pick & place cap*:** 800-V3-**NNN**-32-002191

SMD shrouded pin connector, single row, perpendicular mount with gull-wing terminations

AVAILABILITY FROM: 3 to 32 contacts
(standard number of contacts: 32)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



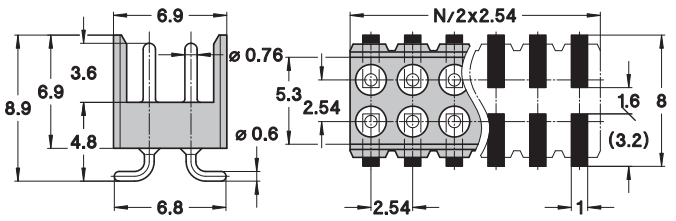

**Bulk:** 802-V3-**NNN**-32-002101

**T & R Packaging with pick & place cap*:** 802-V3-**NNN**-32-002191

SMD shrouded pin connector, double row, perpendicular mount with gull-wing terminations

AVAILABILITY FROM: 4 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts per row, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.76 mm / SINGLE ROW / SURFACE MOUNT**

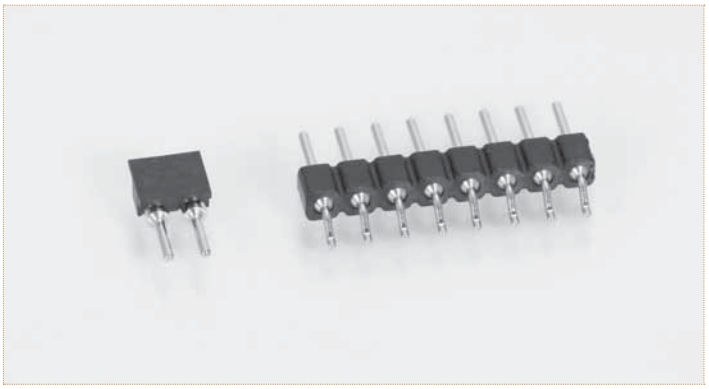


Pin connectors, SMD.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| **INSULATOR** | Black glass filled polyester PCT-GF30-FR |
| **FLAMMABILITY** | UL 94V-0 |
| **CONTACT** | Brass CuZn36Pb3 (C36000) |
| **CONNECTING PIN Ø** | 0.76 mm |
| **MECHANICAL LIFE** | Min. 500 cycles |
| **RATED CURRENT** | 3 A |
| **DIELECTRIC STRENGTH** | Min. 1'000 VRMS |
| **COPLANARITY SMD TERMINATIONS** | Max. 0.1 mm (measured on 25 mm long connectors) |

For corresponding socket connectors, see pages 85-99.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 11 | 0.25 µm gold | 0.25 µm gold |
| 10* | 0.25 µm gold | 0.25 µm gold |
| 80* | Tin | Tin |

*only for 800...40-001101 series

Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 800-10-**NNN**-40-001101 for a single row version with 8 pins becomes 800-10-**008**-40-001101.

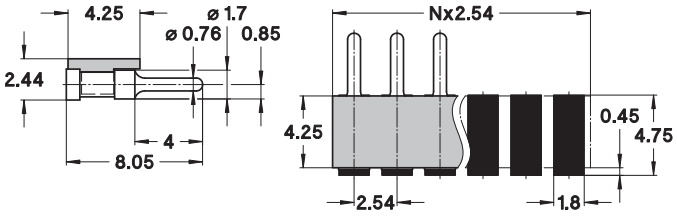
**Bulk:** 8MM-11-**ONNN**-02-279

**T & R Packaging with pick & place cap*:** 8MM-11-**ONNN**-02-279191

SMD pin connector, single row, parallel mount low profile minimum PCB space requirement

**AVAILABILITY FROM** 2 to 10 contacts
(standard number of contacts: 10)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



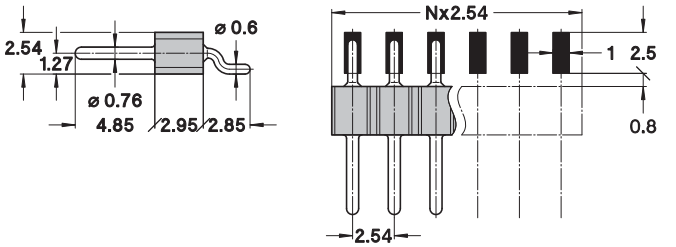

**Bulk:** 800-**PP**-**NNN**-40-001101

**T & R Packaging*:** 800-**PP**-**NNN**-40-001191

SMD pin connector, single row, parallel mount

**AVAILABILITY FROM** 2 to 64 contacts
(standard number of contacts: 64)
For connectors having more than 9 contacts, the coplanarity issue is to be addressed specifically

*Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.



# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / PRESS-FIT**

Pin connectors, press-fit with compliant pin for solderless mount in PCB plated through holes.

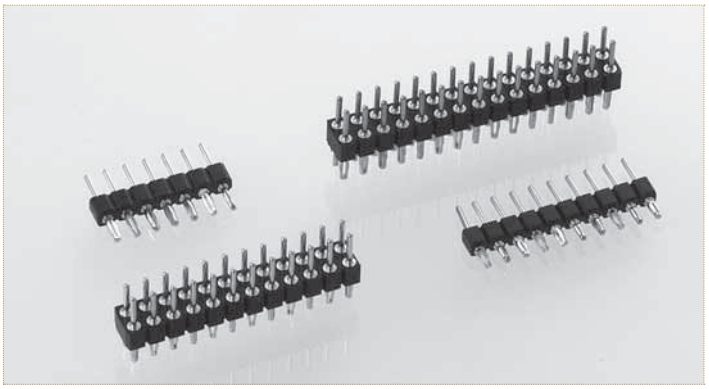
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Bronze CuSn4Pb4Zn4 (C54400) |
| CONNECTING PIN Ø | 0.76 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| PCB HOLE Ø | 1 mm +0.09/-0.06 mm finished (1.15 ±0.025 mm drill) |

For corresponding socket connectors, see pages 85-99.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

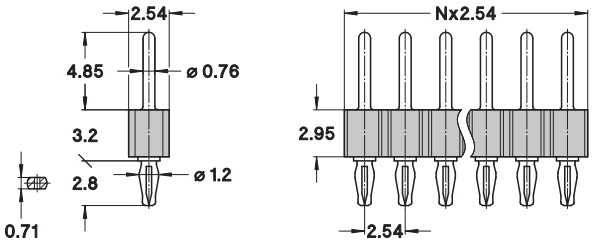


Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 800-10-**NNN**-65-001101 for a single row version with 8 pins becomes 800-10-**008**-65-001101.

### 800-**PP**-**NNN**-65-001101

Press-fit pin connector, single row, compliant pin for PCB thickness 1.5 to 2.5 mm

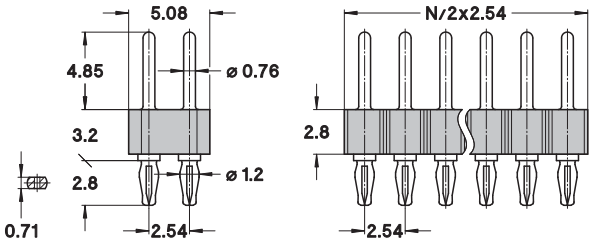
**AVAILABILITY FROM** 2 to 64 contacts (standard number of contacts: 64)




### 802-**PP**-**NNN**-65-001101

Press-fit pin connector, double row, compliant pin for PCB thickness 1.5 to 2.5 mm

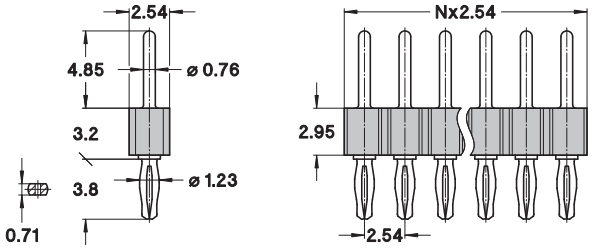
**AVAILABILITY FROM** 4 to 72 contacts (standard number of contacts: 72)




### 800-**PP**-**NNN**-66-001101

Press-fit pin connector, single row, compliant pin for PCB thickness 2.1 to 3.2 mm

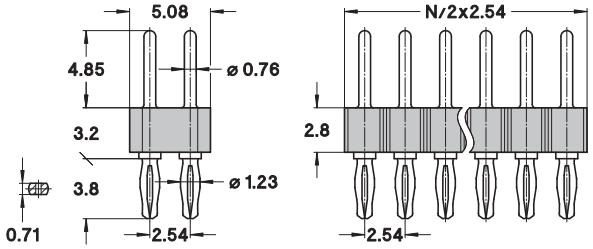
**AVAILABILITY FROM** 2 to 64 contacts (standard number of contacts: 64)




### 802-**PP**-**NNN**-66-001101

Press-fit pin connector, double row, compliant pin for PCB thickness 2.1 to 3.2 mm

**AVAILABILITY FROM** 4 to 72 contacts (standard number of contacts: 72)






Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**CONNECTING PIN Ø 0.76 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW PRESS-FIT**



Pin connectors, press-fit with compliant pin for solderless mount in PCB plated through holes.

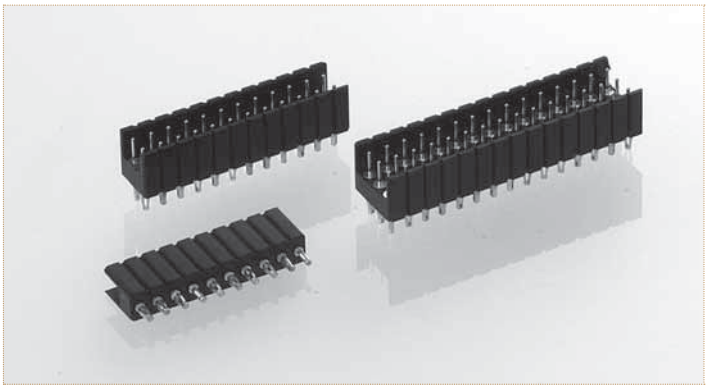
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Bronze CuSn4Pb4Zn4 (C54400) |
| CONNECTING PIN Ø | 0.76 mm |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| PCB HOLE Ø | 1 mm +0.09/-0.06 mm finished<br>(1.15 ±0.025 mm drill) |

For corresponding socket connectors, see pages 85-99.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| V3 | Tin | 0.75 µm gold |

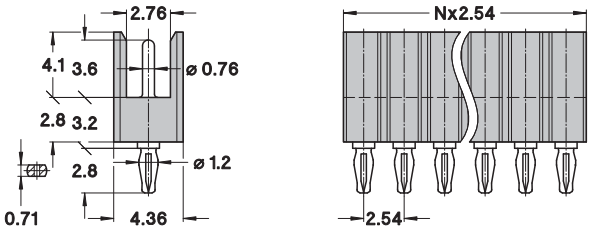


Other plating on request (see page 178 for plating specs).
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 800-V3-**NNN**-6B-002101 for a single row version with 8 pins becomes 800-V3-**008**-6B-002101.

### 800-V3-**NNN**-6B-002101

Press-fit shrouded pin connector, single row, compliant pin for PCB thickness 1.5 to 2.5 mm

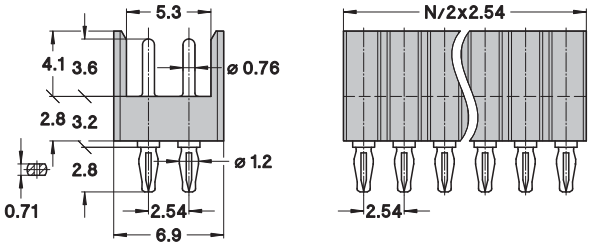
**AVAILABILITY FROM** 2 to 32 contacts
(standard number of contacts: 32)




### 802-V3-**NNN**-6B-002101

Press-fit shrouded pin connector, double row, compliant pin for PCB thickness 1.5 to 2.5 mm

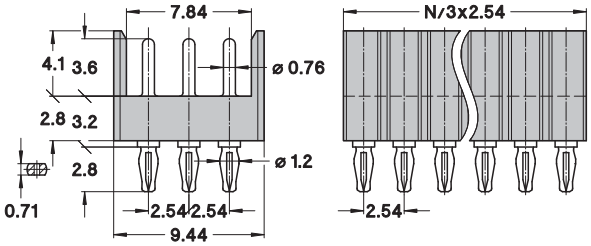
**AVAILABILITY FROM** 4 to 64 contacts
(standard number of contacts: 64)




### 804-V3-**NNN**-6B-002101

Press-fit shrouded pin connector, triple row, compliant pin for PCB thickness 1.5 to 2.5 mm

**AVAILABILITY FROM** 9 to 96 contacts
(standard number of contacts: 96)



# PIN CONNECTORS 2.54 mm

**SQUARE PIN ⍁ 0.635 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW SOLDER TAIL**

Square pin headers, solder tail.

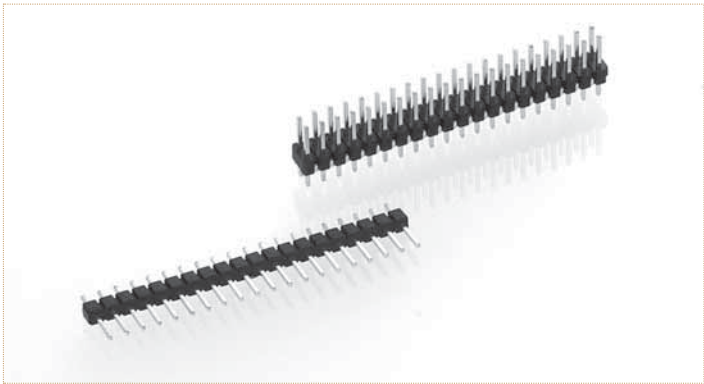
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyamide PA-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass |
| CONNECTING PIN | ⍁ 0.635 mm |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 85-99.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 70 | Flash gold | Flash gold |
| 80 | Tin | Tin |
| 18 | Tin | 0.25 µm gold |



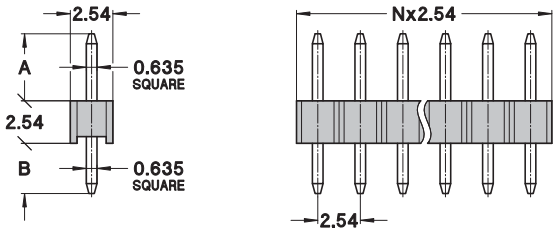
See page 178 for plating specs.

**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 890-70-**NNN**-10-001101 for a single row version with 8 pins becomes 890-70-**008**-10-001101.

### 890-**PP**-**NNN**-10-**XXX**101

Straight square pin header, solder tail, single row

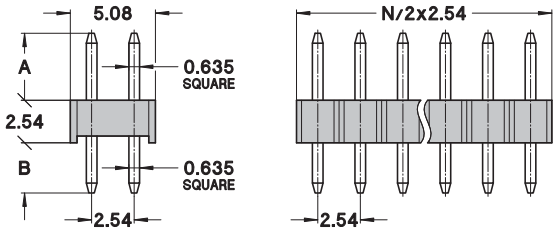
**AVAILABILITY FROM** 2 to 40 contacts (standard number of contacts: 40)




### 892-**PP**-**NNN**-10-**XXX**101

Straight square pin header, solder tail, double row

**AVAILABILITY FROM** 4 to 80 contacts (standard number of contacts: 80)

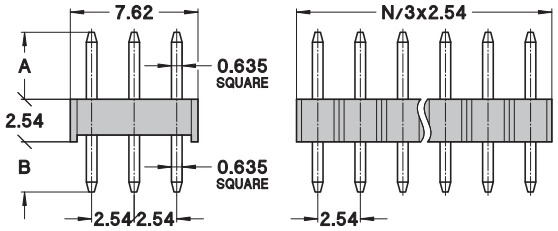



### 894-**PP**-**NNN**-10-001101

Straight square pin header, solder tail, triple row

Only contact length code 001 available

**AVAILABILITY FROM** 9 to 120 contacts (standard number of contacts: 120)




## AVAILABLE CONTACT LENGTHS

| CONNECTING PIN A (mm) | SOLDER PIN B (mm) | XXX CODE |
|---|---|---|
| 6 | 3.1 | 001 |
| 7 | 3 | 002 |
| 8.5 | 3 | 003 |
| 14.9 | 3 | 004 |



Due to technical progress, all information provided is subject to change without prior notice.

# PIN CONNECTORS 2.54 mm

**SQUARE PIN ⍁ 0.635 mm / SINGLE ROW / DOUBLE ROW / TRIPLE ROW**
**SOLDER TAIL / RIGHT ANGLE**



Right angle square pin headers, solder tail.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyamide PA-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass |
| CONNECTING PIN | ⍁ 0.635 mm |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 3 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 85-99.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 70 | Flash gold | Flash gold |
| 80 | Tin | Tin |
| 18 | Tin | 0.25 µm gold |



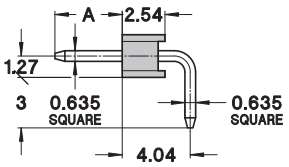
See page 178 for plating specs.

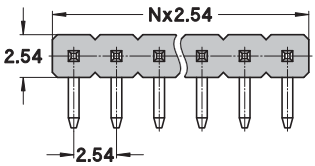
**NNN number of poles.** Replace **NNN** with the requested number of poles, e.g. 890-70-**NNN**-20-006101 for a single row version with 8 pins becomes 890-70-**008**-20-006101.

### 890-**PP**-**NNN**-20-**XXX**101

Right angle square pin header, solder tail, single row

**AVAILABILITY FROM** 2 to 40 contacts
(standard number of contacts: 40)

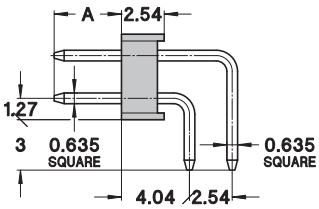


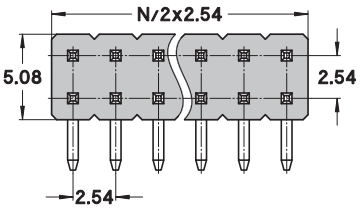




### 892-**PP**-**NNN**-20-**XXX**101

Right angle square pin header, solder tail, double row

**AVAILABILITY FROM** 4 to 80 contacts
(standard number of contacts: 80)

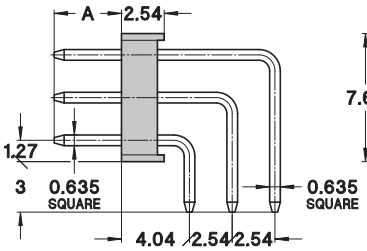


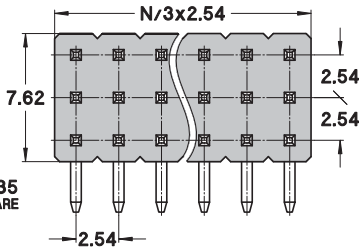




### 894-**PP**-**NNN**-20-001101

Right angle square pin header, solder tail, triple row
Only contact length code 001 available

**AVAILABILITY FROM** 9 to 120 contacts
(standard number of contacts: 120)




## AVAILABLE CONTACT LENGTHS

| CONNECTING PIN A (mm) | XXX CODE |
|---|---|
| 6 | 001 |
| 7 | 002 |

# PCB HEADER STRIPS 2.54 mm

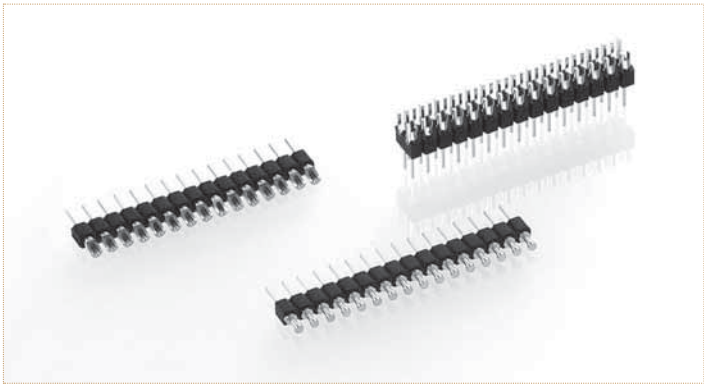
**SINGLE ROW / DOUBLE ROW / SOLDER TAIL**

PCB header strips for wiring application with solder tail / connecting pin.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.5 mm |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 69-84.



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 460-10-2**NN**-00-001101 for a double row version with 16 pins becomes 460-10-2**16**-00-001101.

### 360-**PP**-1**NN**-00-001101

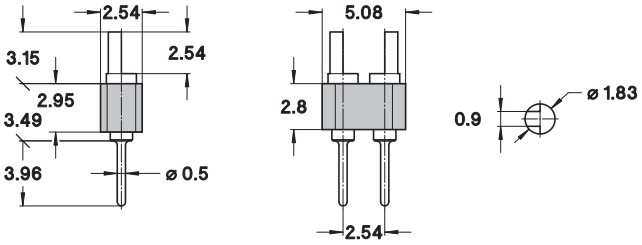
Slotted head strip with solder tail / connecting pin, single row

**AVAILABILITY FROM** 2 to 64 contacts (standard number of contacts: 64)

### 460-**PP**-2**NN**-00-001101

Slotted head strip with solder tail / connecting pin, double row

**AVAILABILITY FROM** 4 to 72 contacts (standard number of contacts: 72)




### 370-**PP**-1**NN**-00-001101

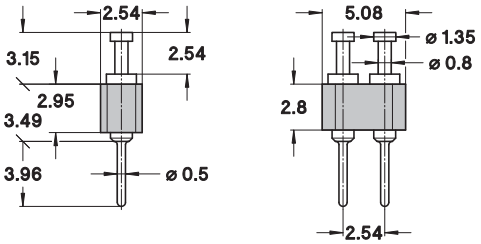
Turret head strip with solder tail / connecting pin, single row

**AVAILABILITY FROM** 2 to 64 contacts (standard number of contacts: 64)

### 470-**PP**-2**NN**-00-001101

Turret head strip with solder tail / connecting pin, double row

**AVAILABILITY FROM** 4 to 72 contacts (standard number of contacts: 72)




### 380-**PP**-1**NN**-00-001101

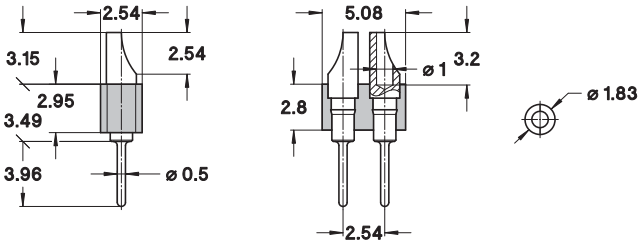
Solder cup strip with solder tail / connecting pin, single row

**AVAILABILITY FROM** 2 to 64 contacts (standard number of contacts: 64)

### 480-**PP**-2**NN**-00-001101

Solder cup strip with solder tail / connecting pin, double row

**AVAILABILITY FROM** 4 to 72 contacts (standard number of contacts: 72)






Due to technical progress, all information provided is subject to change without prior notice.

# PCB HEADER STRIPS 2.54 mm

SINGLE ROW / DOUBLE ROW / WIRE-WRAP



PCB header strips for wiring application, wire-wrap.

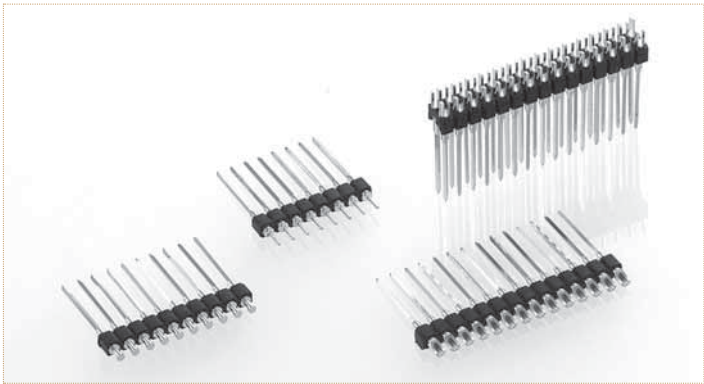
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| WIRE-WRAP TERMINAL | ⊠ 0.635 mm, 3-level |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

For corresponding socket connectors, see pages 69-84.

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |



Other plating on request (see page 178 for plating specs).
**NN number of poles.** Replace **NN** with the requested number of poles, e.g. 453-10-2**NN**-00-001101 for a double row version with 16 pins becomes 453-10-2**16**-00-001101.

### 353-10-1**NN**-00-001101

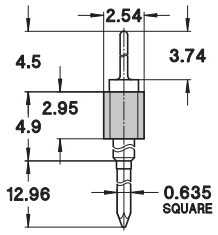
Pin header strip with wire-wrap termination, single row

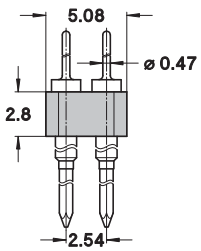
AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)

### 453-10-2**NN**-00-001101

Pin header strip with wire-wrap termination, double row

AVAILABILITY FROM 4 to 72 contacts
(standard number of contacts: 72)




### 363-10-1**NN**-00-001101

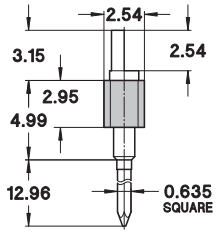
Slotted head strip with wire-wrap termination, single row

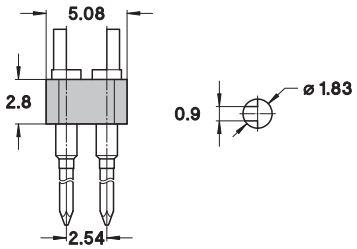
AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)

### 463-10-2**NN**-00-001101

Slotted head strip with wire-wrap termination, double row

AVAILABILITY FROM 4 to 72 contacts
(standard number of contacts: 72)




### 373-10-1**NN**-00-001101

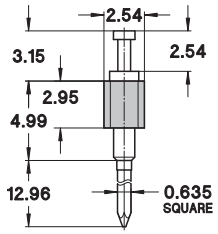
Turret head strip with wire-wrap termination, single row

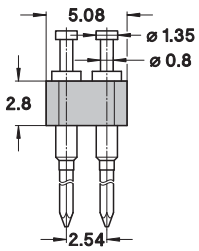
AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)

### 473-10-2**NN**-00-001101

Turret head strip with wire-wrap termination, double row

AVAILABILITY FROM 4 to 72 contacts
(standard number of contacts: 72)




### 383-10-1**NN**-00-001101

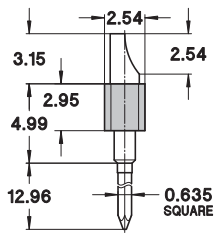
Solder cup strip with wire-wrap termination, single row

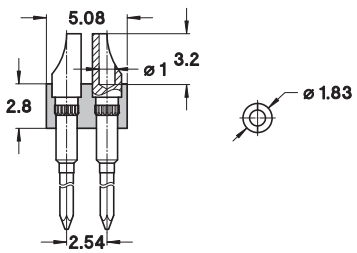
AVAILABILITY FROM 2 to 64 contacts
(standard number of contacts: 64)

### 483-10-2**NN**-00-001101

Solder cup strip with wire-wrap termination, double row

AVAILABILITY FROM 4 to 72 contacts
(standard number of contacts: 72)



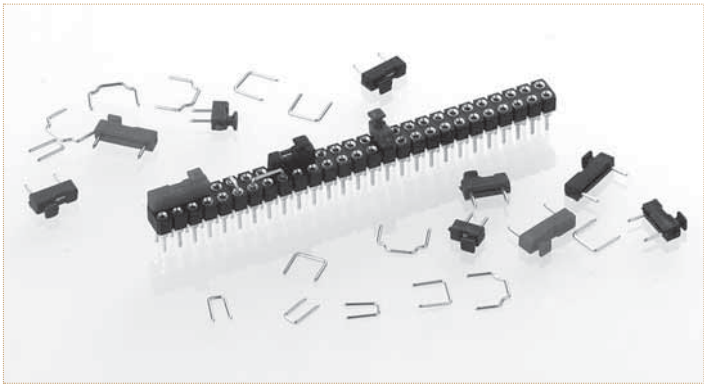
# MALE JUMPERS

**2.54 mm GRID**

Available with or without insulator and with 2.54, 5.08 or 7.62 mm pitch. For use with standard socket connectors.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PBT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.56 mm |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 3 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| P PLATING CODE | TERMINATION |
|---|---|
| 1 | 0.15 µm gold |

Jumpers for socket connectors, B = 2.54 mm, not insulated (Fig. 1)

999-11-110-10

Jumpers for socket connectors, B = 2.54 mm (Fig. 2):

999-11-210-10

Black insulator

999-11-210-11

Red insulator

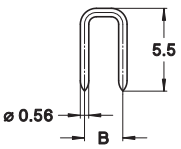



Fig. 1

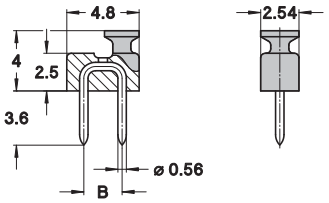



Fig. 2

Jumpers for socket connectors, B = 5.08 mm, not insulated (Fig. 3)

999-11-112-10

Jumpers for socket connectors, B = 5.08 mm (Fig. 4):

999-11-220-10

Black insulator

999-11-220-11

Red insulator

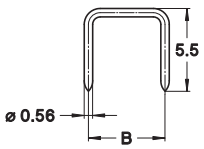



Fig. 3

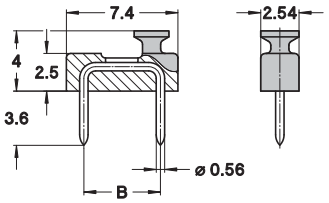



Fig. 4

Jumpers for socket connectors, B = 7.62 mm, not insulated (Fig. 5)

999-11-113-10

Jumpers for socket connectors, B = 7.62 mm (Fig. 6):

999-11-230-10

Black insulator

999-11-230-11

Red insulator

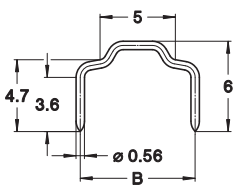



Fig. 5

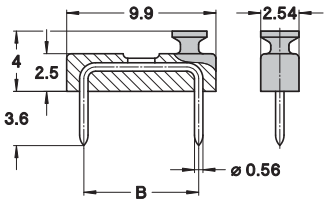



Fig. 6

## OPTION

Jumpers without insulator with wire Ø 0.50 mm instead of 0.56 mm.

| WIDTH B (MM) | PART NUMBER |
|---|---|
| 2.54 | 999-51-110-10 |
| 5.08 | 999-51-112-10 |
| 7.62 | 999-51-113-10 |



Due to technical progress, all information provided is subject to change without prior notice.

# FEMALE JUMPERS

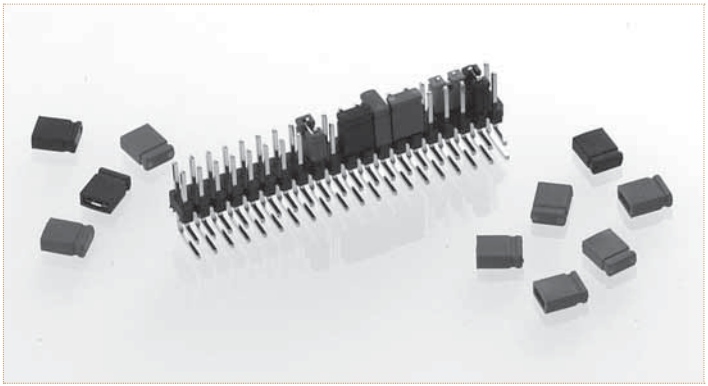
**2 mm / 2.54 mm GRID**



Female jumpers, colour coded, closed or open top of insulator body.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 43)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PBT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Phosphor bronze |
| MATING PIN | ⍁ 0.635 mm |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A (2 mm) / 3 A (2.54 mm) |
| CONTACT RESISTANCE | Max. 20 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |

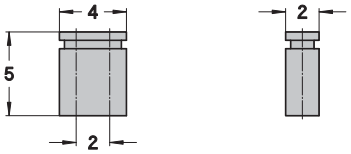


## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION |
|---|---|
| 19 | Flash gold |

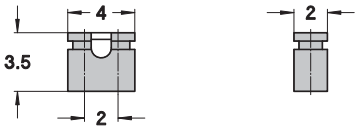
2 mm jumpers for ⍁ 0.5 mm pin headers, closed body:

999-19-220-00
Black insulator



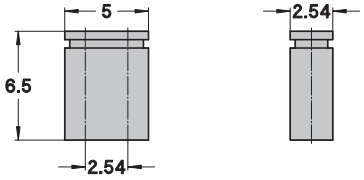

2 mm jumpers for ⍁ 0.5 mm pin headers, stackable open body:

999-19-320-00
Black insulator



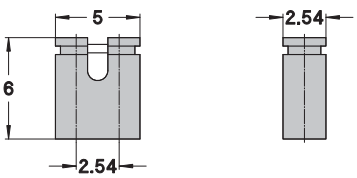

2.54 mm jumpers for ⍁ 0.635 mm pin headers, closed body:

999-19-210-00
Black insulator
999-19-210-02
Red insulator
999-19-210-06
Blue insulator

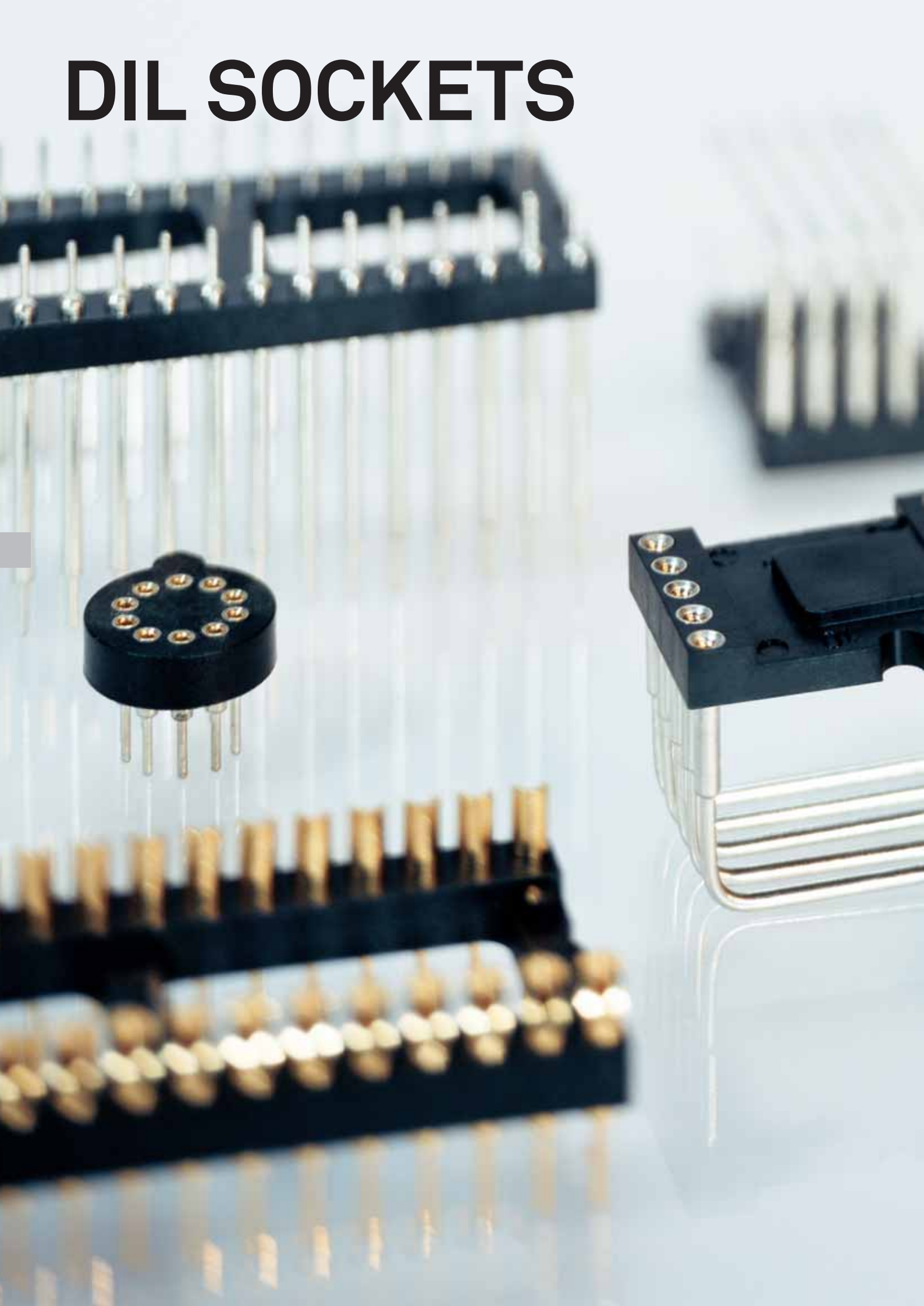


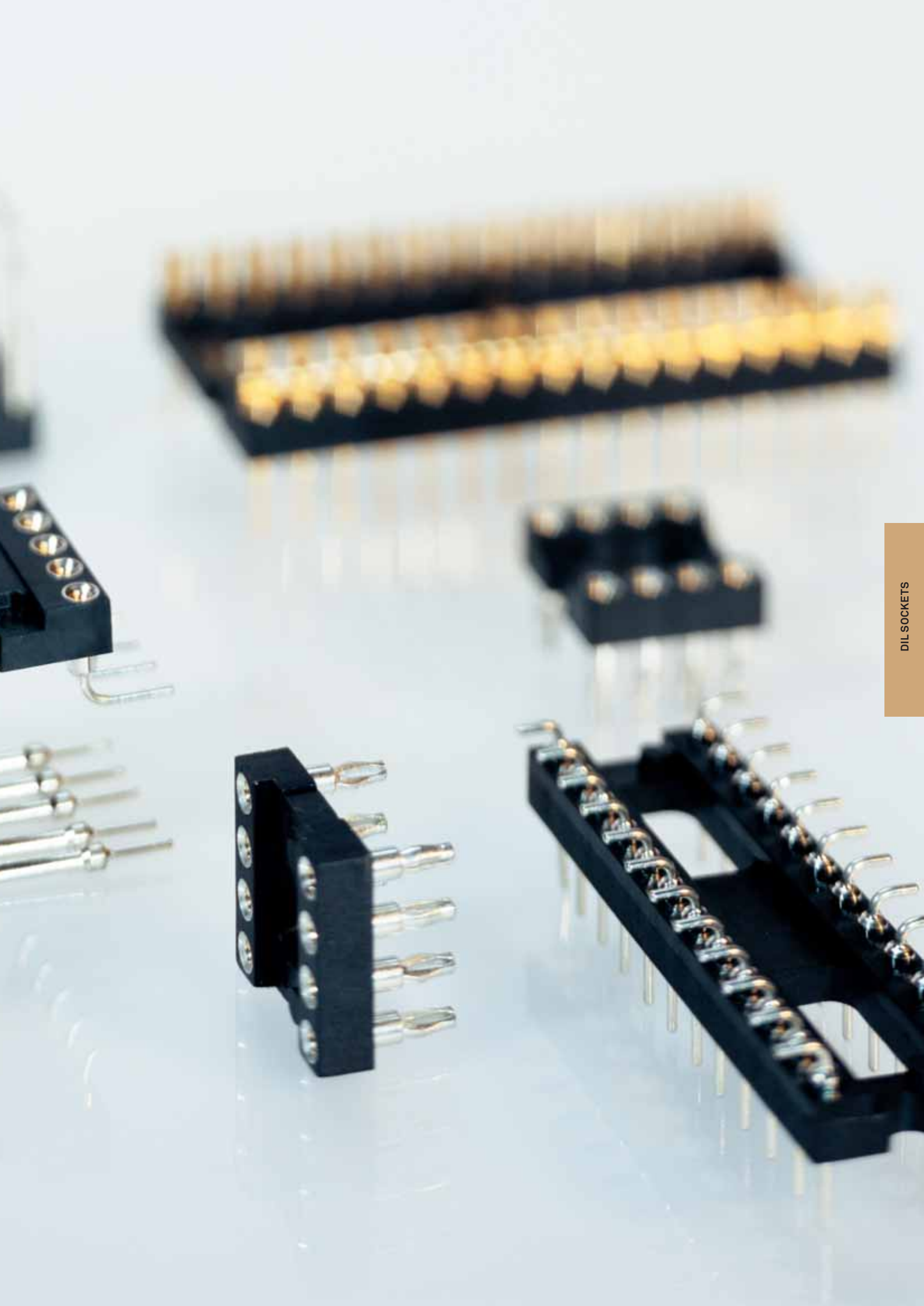

2.54 mm jumpers for ⍁ 0.635 mm pin headers, stackable open body:

999-19-310-00
Black insulator
999-19-310-02
Red insulator
999-19-310-06
Blue insulator



# DIL SOCKETS





# QUICK SELECTOR CHART

DIL / SIL / TO SOCKETS

| GRID | | DIL | | | SIL | TO |
|---|---|---|---|---|---|---|
| | | 2.54 mm | 1.778 mm | STAGGERED 2.54 mm | STAGGERED 2.54 mm | |
| **SOCKETS** | | SEE PAGE | | | | |
| Solder tail |  | 129 | 141 | 150 | 150 | 149 |
| Solder tail automatic insertion |  | 130 | | | | |
| Solder tail with decoupling capacitor |  | 131 | | | | |
| Surface mount |  | 132, 134 | 141 | | | |
| Surface mount pick and place |  | 133, 135 | | | | 149 |
| Solder tail ultralow profile |  | 137 | | | | |
| Solder tail interconnect |  | 138 | | | | |
| Wire-wrap |  | 139 | | | | |
| Solderless press-fit mount |  | 142 | | | | |
| Carrier |  | 143 | | | | |
| Display right angle solder tail |  | 144 | | | | |
| Crystal, relay and display, partially equipped solder tail |  | 151 | | | | |
| **HEADERS** | | | | | | |
| Solder tail |  | 145 | 141 | | | |
| Solder tail interconnect |  | 145 | | | | |
| Surface mount |  | 146 | | | | |
| Surface mount pick and place |  | 147 | | | | |
| Solder tail wiring slotted head |  | 148 | | | | |
| Solder tail wiring turret head |  | 148 | | | | |
| Solder tail wiring solder cup |  | 148 | | | | |



Due to technical progress, all information provided is subject to change without prior notice.

# DIL SOCKETS

## GENERAL SPECIFICATIONS

The values listed below are general specs applying for PRECI-DIP DIL sockets. Please see individual catalog page for additional and product specific technical data.

| | |
|---|---|
| **OPERATING TEMPERATURE RANGE** | -55 ... +125 °C |
| **CLIMATIC CATEGORY (IEC)** | 55/125/21 |
| **OPERATING HUMIDITY RANGE** | Annual mean 75% |
| **MAX. WORKING VOLTAGE** | 100 VRMS/150 VDC |

PRECI-DIP connectors designated « Series Preci-Dip Connector » are recognized by UL LLC and listed under « Connectors for Use in Data, Signal, Control and Power Applications », File Nr. E174442.

## MECHANICAL CHARACTERISTICS

| | |
|---|---|
| **CLIP RETENTION** | Min. 40 N (no displacement under axial force applied) |
| **CONTACT (SLEEVE / CLIP) RETENTION** | Min. 3.3 N acc. to MIL-DTL-83734, pt 4.6.4.2 |

## ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **INSULATION RESISTANCE AT 500 V AC BETWEEN ANY TWO ADJACENT CONTACTS** | Min. 10'000 MΩ |
| **CAPACITANCE BETWEEN ANY TWO ADJACENT CONTACTS** | Max. 1 pF |
| **AIR AND CREEPAGE DISTANCES BETWEEN ANY TWO ADJACENT CONTACTS (Min. 0.2 mm FOR SHRINK-DIP SOCKETS)** | Min. 0.6 mm |

## ENVIRONMENTAL CHARACTERISTICS

The sockets withstand the following environmental tests without mechanical and electrical defects:

- Dry heat steady state IEC 60512-11-9.11i / 60068-2-2.Bb: 125 °C, 16 h
- Damp heat cyclic IEC 60512-11-12.11m / 60068-2-30.Db: 25/55 °C, 90 – 100 %rH, 1 cycle of 24 h
- Cold steady state IEC 60512-11-10.11j / 60068-2-1.A: -55 °C, 2 h
- Thermal shock IEC 60512-11-4.11d / 60068-2-14.Na: -55/125 °C, 5 cycles 30 min.
- Sinusoidal vibrations IEC 60512-6-4.6d / 60068-2-6.Fc: 10 to 500 Hz, 10 g, 1 octave/min, 10 cycles for each axis
- Shock IEC 60512-6-3.6c / 60068-2-27.Ea: 50 g, 11 ms, 3 shocks in three axis

During the above two tests, no contact interruption >50 ns does appear.

- Solderability J-STD-002A, Test A, 245 °C, 5 s, solder alloy SnAg3.8Cu0.7
- Resistance to soldering heat J-STD-020C, 260 °C, 20 s
- Moisture sensitivity J-STD-020C level 1

## SOLDERLESS COMPLIANT PRESS-FIT CHARACTERISTICS

**PRESS-FIT CHARACTERISTICS MEASURED ACC. TO IEC 60352-5**

| | |
|---|---|
| • Press-in force: | 90 N max. (at min. hole dia.) / 65 N typ. |
| • Push-out force: | 30 N min. (at max. hole dia.) / 50 N typ. |
| • Push-out 3rd cycle: | 20 N min. (at max. hole dia.) |

**PCB HOLE DIMENSIONS**

| | |
|---|---|
| • 2.54 mm grid | Finished hole Ø: 1 + 0.09/-0.06 mm<br>Drilled hole Ø: 1.15 ± 0.025 mm |

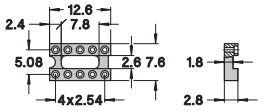
**PCB HOLE PLATING**

| PCB surface finish | Hole plating |
|---|---|
| • Tin | 5-15 µm tin over min. 25 µm copper |
| • Copper | min. 25 µm copper |
| • Gold over nickel | 0.05-0.2 µm gold over 2.5-5 µm nickel over min. 25 µm copper |

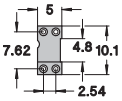
# DUAL-IN-LINE SOCKETS

## INSULATOR BODIES / STANDARD, OPEN FRAME

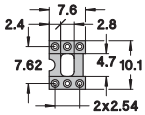
**210**
Fig. 1



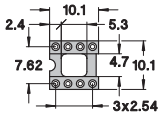

**304**
Fig. 2



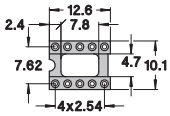

**306**
Fig. 3



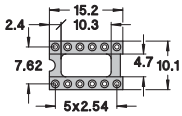

**308**
Fig. 4



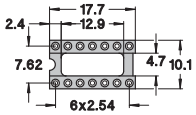

**310**
Fig. 5



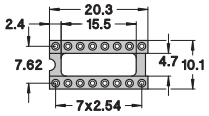

**312**
Fig. 6



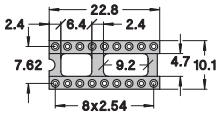

**314**
Fig. 7



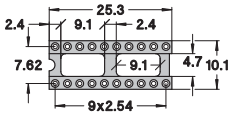

**316**
Fig. 8



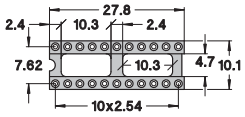

**318**
Fig. 9



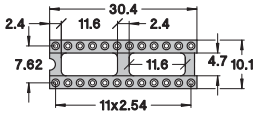

**320**
Fig. 10



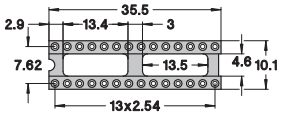

**322**
Fig. 11



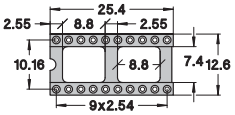

**324**
Fig. 12



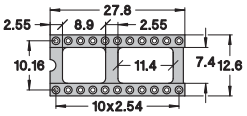

**328**
Fig. 13



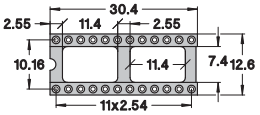

**420**
Fig. 14



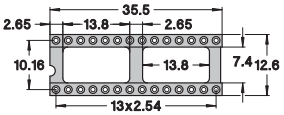

**422**
Fig. 15



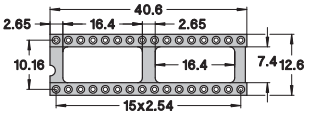

**424**
Fig. 16



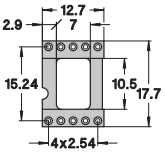

**428**
Fig. 17



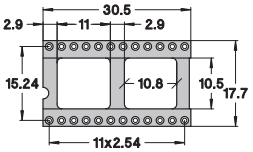

**432**
Fig. 18



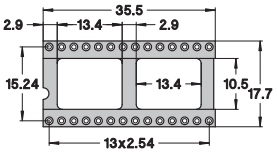

**610**
Fig. 19



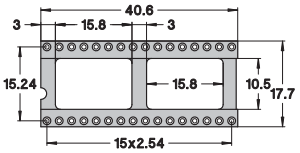

**624**
Fig. 20



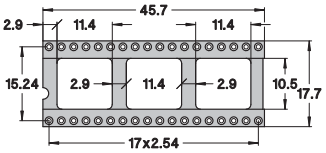

**628**
Fig. 21



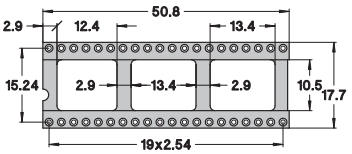

**632**
Fig. 22



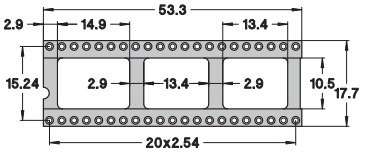

**636**
Fig. 23



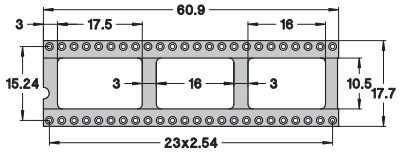

**640**
Fig. 24



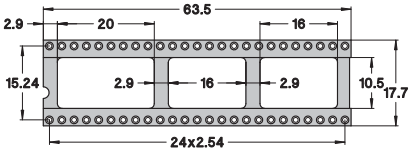

**642**
Fig. 25



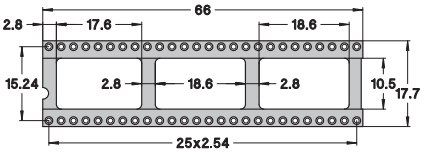

**648**
Fig. 26



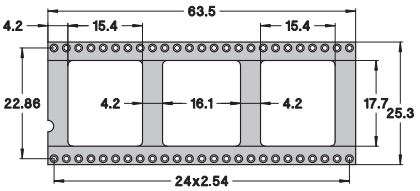

**650**
Fig. 27



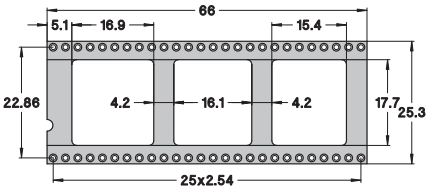

**652**
Fig. 28



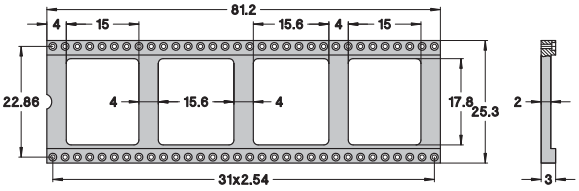

**950**
Fig. 29




**952**
Fig. 30

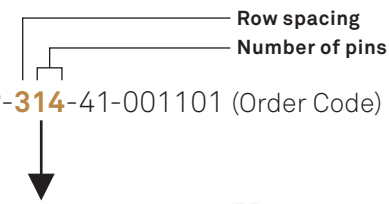



**964**
Fig. 31

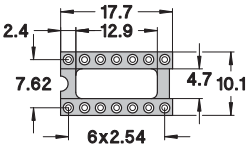



## ORDERING INFORMATION

**Example:**




**314**
Fig. 7






Due to technical progress, all information provided is subject to change without prior notice.

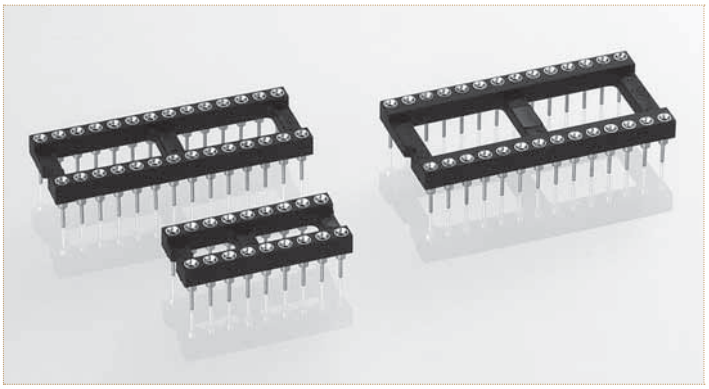
# DUAL-IN-LINE SOCKETS

## OPEN FRAME / SOLDER TAIL

Open frame standard low profile DIL Sockets.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

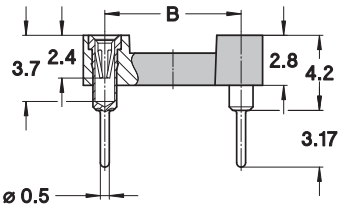
| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

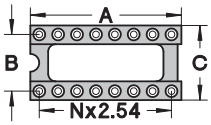


## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).




| NO. OF POLES | A | B | C | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | Fig. 1 | 110-**PP**-210-41-001101 |
| 4 | 5.0 | 7.62 | 10.1 | Fig. 2 | 110-**PP**-304-41-001101 |
| 6 | 7.6 | 7.62 | 10.1 | Fig. 3 | 110-**PP**-306-41-001101 |
| 8 | 10.1 | 7.62 | 10.1 | Fig. 4 | 110-**PP**-308-41-001101 |
| 10 | 12.6 | 7.62 | 10.1 | Fig. 5 | 110-**PP**-310-41-001101 |
| 12 | 15.2 | 7.62 | 10.1 | Fig. 6 | 110-**PP**-312-41-001101 |
| 14 | 17.7 | 7.62 | 10.1 | Fig. 7 | 110-**PP**-314-41-001101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 8 | 110-**PP**-316-41-001101 |
| 18* | 22.8 | 7.62 | 10.1 | Fig. 9 | 110-**PP**-318-41-001101 |
| 20* | 25.3 | 7.62 | 10.1 | Fig. 10 | 110-**PP**-320-41-001101 |
| 22* | 27.8 | 7.62 | 10.1 | Fig. 11 | 110-**PP**-322-41-001101 |
| 24* | 30.4 | 7.62 | 10.1 | Fig. 12 | 110-**PP**-324-41-001101 |
| 28 | 35.5 | 7.62 | 10.1 | Fig. 13 | 110-**PP**-328-41-001101 |
| 20 | 25.4 | 10.16 | 12.6 | Fig. 14 | 110-**PP**-420-41-001101 |
| 22 | 27.8 | 10.16 | 12.6 | Fig. 15 | 110-**PP**-422-41-001101 |
| 24 | 30.4 | 10.16 | 12.6 | Fig. 16 | 110-**PP**-424-41-001101 |
| 28 | 35.5 | 10.16 | 12.6 | Fig. 17 | 110-**PP**-428-41-001101 |
| 32 | 40.6 | 10.16 | 12.6 | Fig. 18 | 110-**PP**-432-41-001101 |
| 10 | 12.7 | 15.24 | 17.7 | Fig. 19 | 110-**PP**-610-41-001101 |
| 24* | 30.5 | 15.24 | 17.7 | Fig. 20 | 110-**PP**-624-41-001101 |
| 28* | 35.5 | 15.24 | 17.7 | Fig. 21 | 110-**PP**-628-41-001101 |
| 32* | 40.6 | 15.24 | 17.7 | Fig. 22 | 110-**PP**-632-41-001101 |
| 36 | 45.7 | 15.24 | 17.7 | Fig. 23 | 110-**PP**-636-41-001101 |
| 40* | 50.8 | 15.24 | 17.7 | Fig. 24 | 110-**PP**-640-41-001101 |
| 42 | 53.3 | 15.24 | 17.7 | Fig. 25 | 110-**PP**-642-41-001101 |
| 48* | 60.9 | 15.24 | 17.7 | Fig. 26 | 110-**PP**-648-41-001101 |
| 50 | 63.5 | 15.24 | 17.7 | Fig. 27 | 110-**PP**-650-41-001101 |
| 52 | 66.0 | 15.24 | 17.7 | Fig. 28 | 110-**PP**-652-41-001101 |
| 50 | 63.5 | 22.86 | 25.3 | Fig. 29 | 110-**PP**-950-41-001101 |
| 52 | 66.0 | 22.86 | 25.3 | Fig. 30 | 110-**PP**-952-41-001101 |
| 64 | 81.2 | 22.86 | 25.3 | Fig. 31 | 110-**PP**-964-41-001101 |

## OPTIONS

1 **Insulators without center bar** *
Open frame insulators 318, 320, 322, 324, 624, 628, 632, 640 and 648 available on special request without center bars; add suffix 151 to the part number. Example 110-83-628-41-001101 becomes 110-83-628-41-001**151**

2 **Sockets with increased solder tail length of 4.2 mm** allowing application on multilayer PCBs up to 3.4 mm thickness replace **110**-..-...-..-..... by **111**-..-...-..-.....

3 **Sockets with soft brass pin series** 110-..-...-..-**005101**, please consult

4 **For DIL Sockets with closed frame insulators** replace **110**-... by **210**-... Please consult for available pin numbers

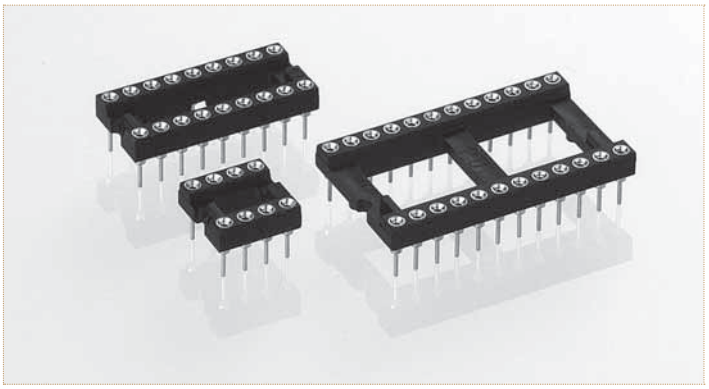
# DUAL-IN-LINE SOCKETS

## AUTOMATIC INSERTION / OPEN FRAME / SOLDER TAIL

DIL sockets with ribbed insulator body and soft copper alloy contacts compatible with automatic insertion equipment.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

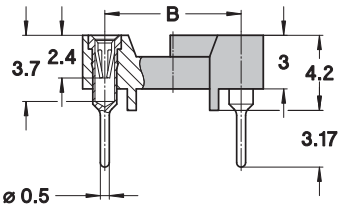
| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

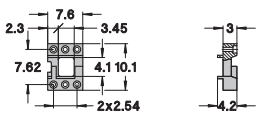
Other plating on request (see page 178 for plating specs).
Other pin count please consult.



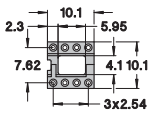

| NO. OF POLES | B | SEE BELOW | ORDER CODES |
|---|---|---|---|
| 6 | 7.62 | Fig. 1 | 110-**PP**-306-41-605101 |
| 8 | 7.62 | Fig. 2 | 110-**PP**-308-41-605101 |
| 14 | 7.62 | Fig. 3 | 110-**PP**-314-41-605101 |
| 16 | 7.62 | Fig. 4 | 110-**PP**-316-41-605101 |
| 18 | 7.62 | Fig. 5 | 110-**PP**-318-41-605101 |
| 20 | 7.62 | Fig. 6 | 110-**PP**-320-41-605101 |
| 24 | 7.62 | Fig. 7 | 110-**PP**-324-41-605101 |
| 28 | 7.62 | Fig. 7a | 110-**PP**-328-41-605101 |
| 22 | 10.16 | Fig. 8 | 110-**PP**-422-41-605101 |
| 24 | 15.24 | Fig. 9 | 110-**PP**-624-41-605101 |
| 28 | 15.24 | Fig. 10 | 110-**PP**-628-41-605101 |
| 32 | 15.24 | Fig. 11 | 110-**PP**-632-41-605101 |
| 40 | 15.24 | Fig. 12 | 110-**PP**-640-41-605101 |

## INSULATOR BODIES

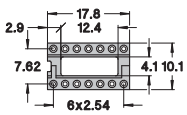
**306** Fig. 1



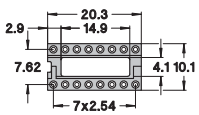

**308** Fig. 2



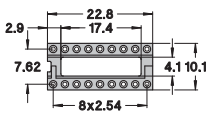

**314** Fig. 3



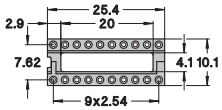

**316** Fig. 4



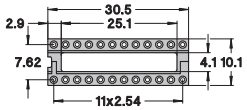

**318** Fig. 5



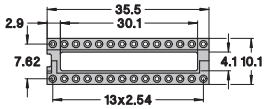

**320** Fig. 6



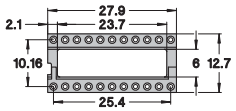

**324** Fig. 7



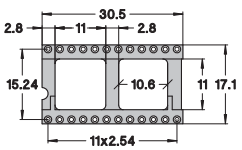

**328** Fig. 7a



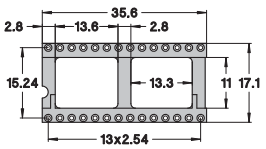

**422** Fig. 8



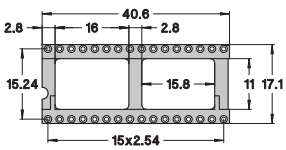

**624** Fig. 9



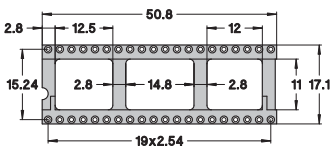

**628** Fig. 10




**632** Fig. 11




**640** Fig. 12






Due to technical progress, all information provided is subject to change without prior notice.

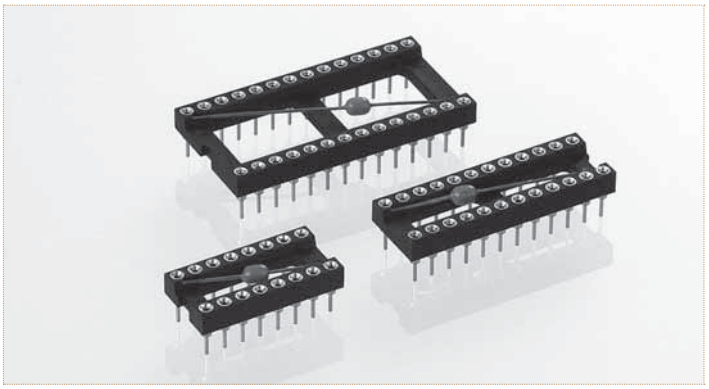
# DUAL-IN-LINE CAPACITOR SOCKETS

**OPEN FRAME / SOLDER TAIL**

With ceramic multilayer decoupling capacitor 100 nF +80% -20% / 50 V, epoxy encapsulated.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

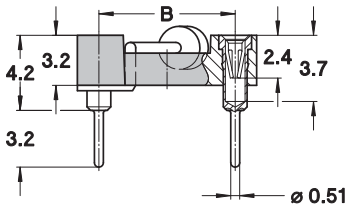
| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| TEMPERATURE RANGE | -25°C to +85°C |

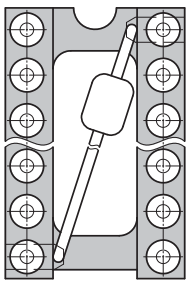


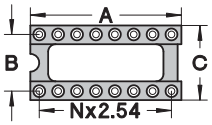
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).






| NO. OF POLES | A | B | C | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|
| 14 | 17.7 | 7.62 | 10.1 | Fig. 7 | 110-**PP**-314-41-801101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 8 | 110-**PP**-316-41-801101 |
| 18 | 22.8 | 7.62 | 10.1 | Fig. 9 | 110-**PP**-318-41-801101 |
| 20 | 25.3 | 7.62 | 10.1 | Fig. 10 | 110-**PP**-320-41-801101 |
| 24 | 30.4 | 15.24 | 17.7 | Fig. 20 | 110-**PP**-624-41-801101 |
| 28 | 35.5 | 15.24 | 17.7 | Fig. 21 | 110-**PP**-628-41-801101 |
| 32 | 40.6 | 15.24 | 17.7 | Fig. 22 | 110-**PP**-632-41-801101 |
| 40 | 50.8 | 15.24 | 17.7 | Fig. 24 | 110-**PP**-640-41-801101 |



Due to technical progress, all information provided is subject to change without prior notice.

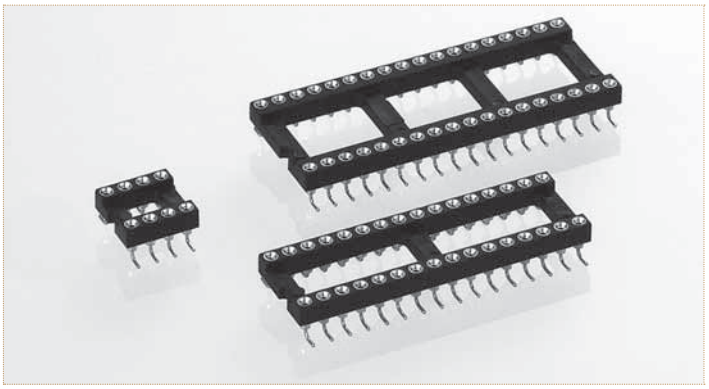
# DUAL-IN-LINE SOCKETS

## OPEN FRAME / SURFACE MOUNT

Specially designed for reflow soldering including vapor phase with gull wing terminations for maximum strength and easy in-circuit test.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

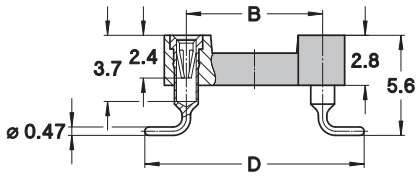
| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.10 mm |

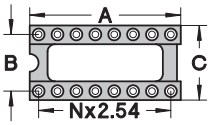


## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

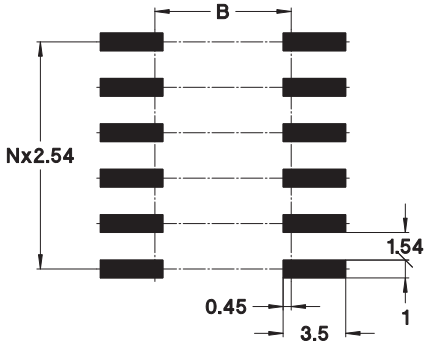
Other plating on request (see page 178 for plating specs).




| NO. OF POLES | A | B | C | D | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | 9.72 | Fig. 1 | 110-**PP**-210-41-105101 |
| 4 | 5.0 | 7.62 | 10.1 | 12.26 | Fig. 2 | 110-**PP**-304-41-105101 |
| 6 | 7.6 | 7.62 | 10.1 | 12.26 | Fig. 3 | 110-**PP**-306-41-105101 |
| 8 | 10.1 | 7.62 | 10.1 | 12.26 | Fig. 4 | 110-**PP**-308-41-105101 |
| 10 | 12.6 | 7.62 | 10.1 | 12.26 | Fig. 5 | 110-**PP**-310-41-105101 |
| 12 | 15.2 | 7.62 | 10.1 | 12.26 | Fig. 6 | 110-**PP**-312-41-105101 |
| 14 | 17.7 | 7.62 | 10.1 | 12.26 | Fig. 7 | 110-**PP**-314-41-105101 |
| 16 | 20.3 | 7.62 | 10.1 | 12.26 | Fig. 8 | 110-**PP**-316-41-105101 |
| 18 | 22.8 | 7.62 | 10.1 | 12.26 | Fig. 9 | 110-**PP**-318-41-105101 |
| 20 | 25.3 | 7.62 | 10.1 | 12.26 | Fig. 10 | 110-**PP**-320-41-105101 |
| 22 | 27.8 | 7.62 | 10.1 | 12.26 | Fig. 11 | 110-**PP**-322-41-105101 |
| 24 | 30.4 | 7.62 | 10.1 | 12.26 | Fig. 12 | 110-**PP**-324-41-105101 |
| 28 | 35.5 | 7.62 | 10.1 | 12.26 | Fig. 13 | 110-**PP**-328-41-105101 |
| 20 | 25.4 | 10.16 | 12.6 | 14.80 | Fig. 14 | 110-**PP**-420-41-105101 |
| 22 | 27.8 | 10.16 | 12.6 | 14.80 | Fig. 15 | 110-**PP**-422-41-105101 |
| 24 | 30.4 | 10.16 | 12.6 | 14.80 | Fig. 16 | 110-**PP**-424-41-105101 |
| 28 | 35.5 | 10.16 | 12.6 | 14.80 | Fig. 17 | 110-**PP**-428-41-105101 |
| 32 | 40.6 | 10.16 | 12.6 | 14.80 | Fig. 18 | 110-**PP**-432-41-105101 |
| 24 | 30.5 | 15.24 | 17.7 | 19.88 | Fig. 20 | 110-**PP**-624-41-105101 |
| 28 | 35.5 | 15.24 | 17.7 | 19.88 | Fig. 21 | 110-**PP**-628-41-105101 |
| 32 | 40.6 | 15.24 | 17.7 | 19.88 | Fig. 22 | 110-**PP**-632-41-105101 |
| 36 | 45.7 | 15.24 | 17.7 | 19.88 | Fig. 23 | 110-**PP**-636-41-105101 |
| 40 | 50.8 | 15.24 | 17.7 | 19.88 | Fig. 24 | 110-**PP**-640-41-105101 |
| 42 | 53.3 | 15.24 | 17.7 | 19.88 | Fig. 25 | 110-**PP**-642-41-105101 |
| 48 | 60.9 | 15.24 | 17.7 | 19.88 | Fig. 26 | 110-**PP**-648-41-105101 |

## PCB LAYOUT






Due to technical progress, all information provided is subject to change without prior notice.

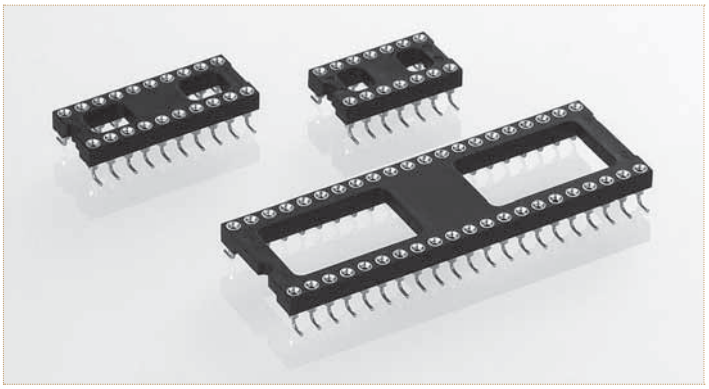
# DUAL-IN-LINE SOCKETS

**OPEN FRAME / SURFACE MOUNT, PICK AND PLACE**

Specially designed for reflow soldering including vapor phase with gull wing terminations for maximum strength and easy in-circuit test.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.10 mm |



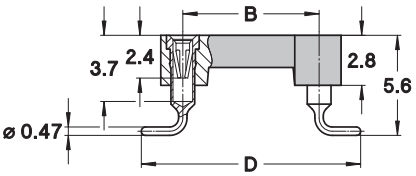
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).

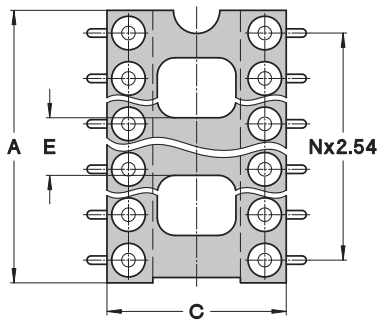
**Tape & Reel packaging:**

replace 161 by suffix 191 to part number. Other pin counts please consult. Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel, packing units and part numbers.

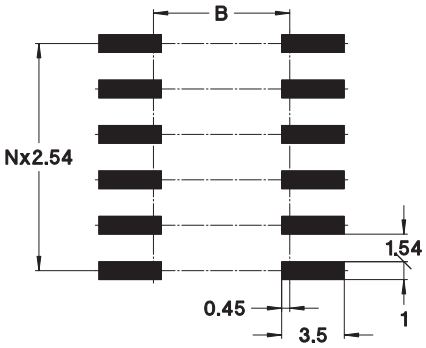



| NO. OF POLES | A | B | C | D | E | ORDER CODES |
|---|---|---|---|---|---|---|
| 6 | 7.6 | 7.62 | 10.1 | 12.26 | 7.6 | 110-**PP**-306-41-105161 |
| 8 | 10.1 | 7.62 | 10.1 | 12.26 | 10.1 | 110-**PP**-308-41-105161 |
| 10 | 12.6 | 7.62 | 10.1 | 12.26 | 12.6 | 110-**PP**-310-41-105161 |
| 14 | 17.8 | 7.62 | 10.1 | 12.26 | 5.3 | 110-**PP**-314-41-105161 |
| 16 | 20.3 | 7.62 | 10.1 | 12.26 | 5.3 | 110-**PP**-316-41-105161 |
| 18 | 22.9 | 7.62 | 10.1 | 12.26 | 5.3 | 110-**PP**-318-41-105161 |
| 20 | 25.4 | 7.62 | 10.1 | 12.26 | 8.3 | 110-**PP**-320-41-105161 |
| 24 | 30.4 | 7.62 | 10.1 | 12.26 | 8.3 | 110-**PP**-324-41-105161 |
| 28 | 35.6 | 7.62 | 10.1 | 12.26 | 8.3 | 110-**PP**-328-41-105161 |
| 28 | 35.5 | 15.24 | 17.7 | 19.88 | 10.0 | 110-**PP**-628-41-105161 |
| 32 | 40.6 | 15.24 | 17.7 | 19.88 | 10.0 | 110-**PP**-632-41-105161 |
| 40 | 50.8 | 15.24 | 17.7 | 19.88 | 10.0 | 110-**PP**-640-41-105161 |
| 42 | 53.4 | 15.24 | 17.7 | 19.88 | 10.0 | 110-**PP**-642-41-105161 |

## INSULATOR




## PCB LAYOUT



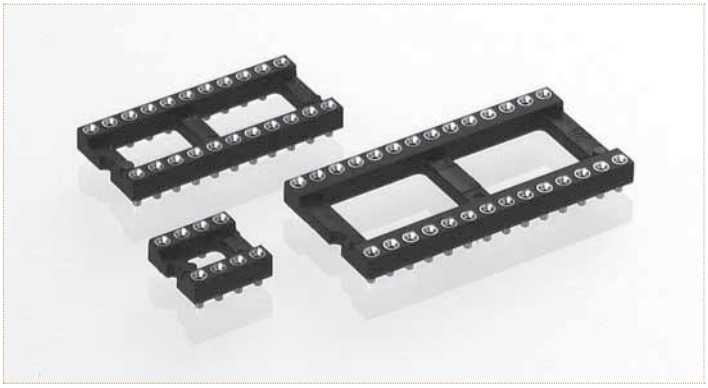
# DUAL-IN-LINE SOCKETS

## OPEN FRAME / SURFACE MOUNT

Specially designed for reflow soldering including vapor phase with unique self-aligning floating contacts.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

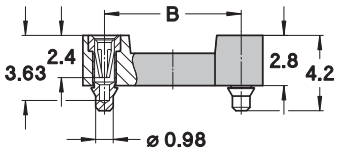
| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.10 mm |

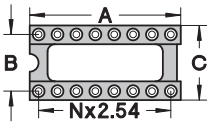


## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

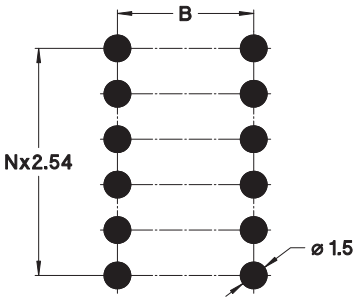
Other plating on request (see page 178 for plating specs).




| NO. OF POLES | A | B | C | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | Fig. 1 | 114-**PP**-210-41-117101 |
| 4 | 5.0 | 7.62 | 10.1 | Fig. 2 | 114-**PP**-304-41-117101 |
| 6 | 7.6 | 7.62 | 10.1 | Fig. 3 | 114-**PP**-306-41-117101 |
| 8 | 10.1 | 7.62 | 10.1 | Fig. 4 | 114-**PP**-308-41-117101 |
| 10 | 12.6 | 7.62 | 10.1 | Fig. 5 | 114-**PP**-310-41-117101 |
| 12 | 15.2 | 7.62 | 10.1 | Fig. 6 | 114-**PP**-312-41-117101 |
| 14 | 17.7 | 7.62 | 10.1 | Fig. 7 | 114-**PP**-314-41-117101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 8 | 114-**PP**-316-41-117101 |
| 18 | 22.8 | 7.62 | 10.1 | Fig. 9 | 114-**PP**-318-41-117101 |
| 20 | 25.3 | 7.62 | 10.1 | Fig. 10 | 114-**PP**-320-41-117101 |
| 22 | 27.8 | 7.62 | 10.1 | Fig. 11 | 114-**PP**-322-41-117101 |
| 24 | 30.4 | 7.62 | 10.1 | Fig. 12 | 114-**PP**-324-41-117101 |
| 28 | 35.5 | 7.62 | 10.1 | Fig. 13 | 114-**PP**-328-41-117101 |
| 20 | 25.4 | 10.16 | 12.6 | Fig. 14 | 114-**PP**-420-41-117101 |
| 22 | 27.8 | 10.16 | 12.6 | Fig. 15 | 114-**PP**-422-41-117101 |
| 24 | 30.4 | 10.16 | 12.6 | Fig. 16 | 114-**PP**-424-41-117101 |
| 28 | 35.5 | 10.16 | 12.6 | Fig. 17 | 114-**PP**-428-41-117101 |
| 32 | 40.6 | 10.16 | 12.6 | Fig. 18 | 114-**PP**-432-41-117101 |
| 24 | 30.5 | 15.24 | 17.7 | Fig. 20 | 114-**PP**-624-41-117101 |
| 28 | 35.5 | 15.24 | 17.7 | Fig. 21 | 114-**PP**-628-41-117101 |
| 32 | 40.6 | 15.24 | 17.7 | Fig. 22 | 114-**PP**-632-41-117101 |
| 36 | 45.7 | 15.24 | 17.7 | Fig. 23 | 114-**PP**-636-41-117101 |
| 40 | 50.8 | 15.24 | 17.7 | Fig. 24 | 114-**PP**-640-41-117101 |
| 42 | 53.3 | 15.24 | 17.7 | Fig. 25 | 114-**PP**-642-41-117101 |
| 48 | 60.9 | 15.24 | 17.7 | Fig. 26 | 114-**PP**-648-41-117101 |

## PCB LAYOUT






Due to technical progress, all information provided is subject to change without prior notice.

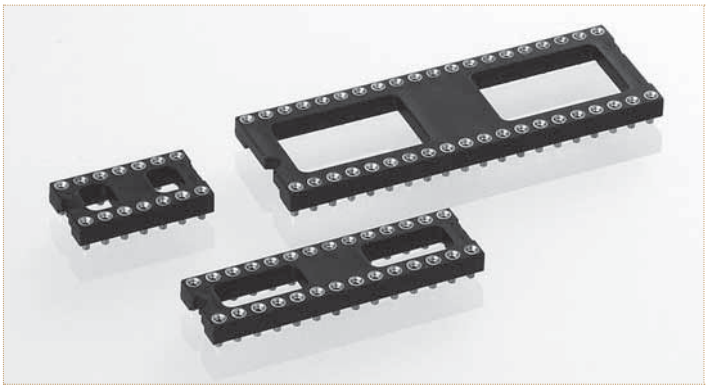
# DUAL-IN-LINE SOCKETS

## OPEN FRAME / SURFACE MOUNT PICK AND PLACE

Specially designed for reflow soldering including vapor phase with unique self-aligning floating contacts.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.10 mm |

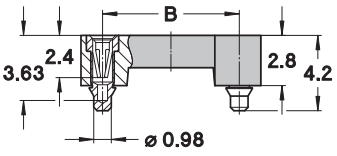


## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

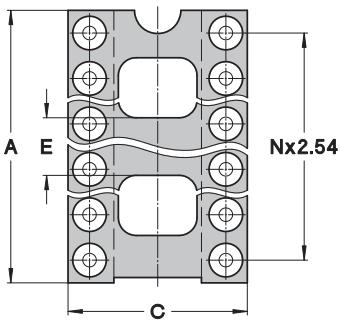
Other plating on request (see page 178 for plating specs).

**Tape & Reel packaging:**
replace 161 by suffix 191 to part number. Other pin counts please consult. Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel, packing units and part numbers.

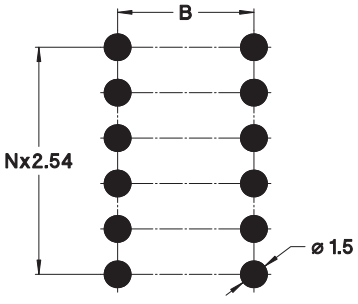



| NO. OF POLES | A | B | C | E | ORDER CODES |
|---|---|---|---|---|---|
| 6 | 7.6 | 7.62 | 10.1 | 7.6 | 114-**PP**-306-41-134161 |
| 8 | 10.1 | 7.62 | 10.1 | 10.1 | 114-**PP**-308-41-134161 |
| 10 | 12.6 | 7.62 | 10.1 | 12.6 | 114-**PP**-310-41-134161 |
| 12 | 15.2 | 7.62 | 10.1 | 5.3 | 114-**PP**-312-41-134161 |
| 14 | 17.8 | 7.62 | 10.1 | 5.3 | 114-**PP**-314-41-134161 |
| 16 | 20.3 | 7.62 | 10.1 | 5.3 | 114-**PP**-316-41-134161 |
| 18 | 22.9 | 7.62 | 10.1 | 5.3 | 114-**PP**-318-41-134161 |
| 20 | 25.4 | 7.62 | 10.1 | 8.3 | 114-**PP**-320-41-134161 |
| 24 | 30.4 | 7.62 | 10.1 | 8.3 | 114-**PP**-324-41-134161 |
| 28 | 35.6 | 7.62 | 10.1 | 8.3 | 114-**PP**-328-41-134161 |
| 28 | 35.5 | 15.24 | 17.7 | 10.0 | 114-**PP**-628-41-134161 |
| 32 | 40.6 | 15.24 | 17.7 | 10.0 | 114-**PP**-632-41-134161 |
| 40 | 50.8 | 15.24 | 17.7 | 10.0 | 114-**PP**-640-41-134161 |
| 42 | 53.4 | 15.24 | 17.7 | 10.0 | 114-**PP**-642-41-134161 |

## INSULATOR



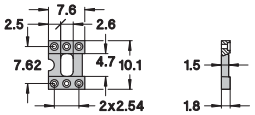

## PCB LAYOUT



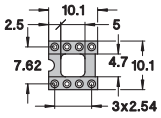
# DUAL-IN-LINE SOCKETS

## INSULATOR BODIES / ULTRALOW, OPEN FRAME

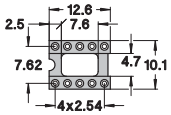
**306**
Fig. 1



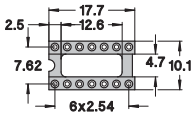

**308**
Fig. 2



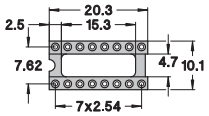

**310**
Fig. 3



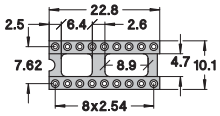

**314**
Fig. 4



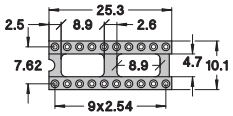

**316**
Fig. 5



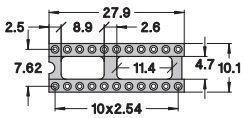

**318**
Fig. 6



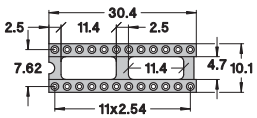

**320**
Fig. 7



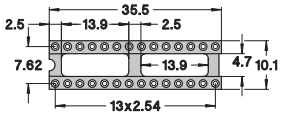

**322**
Fig. 8



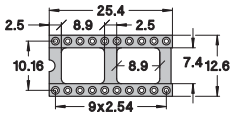

**324**
Fig. 9



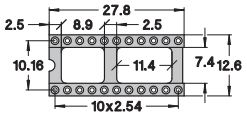

**328**
Fig. 10



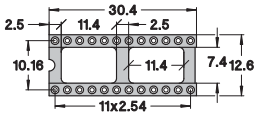

**420**
Fig. 11



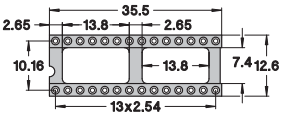

**422**
Fig. 12



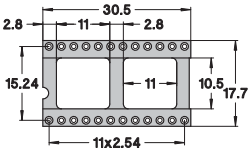

**424**
Fig. 13



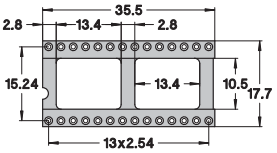

**428**
Fig. 14



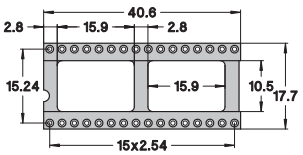

**624**
Fig. 15



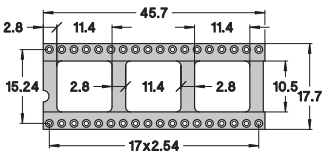

**628**
Fig. 16



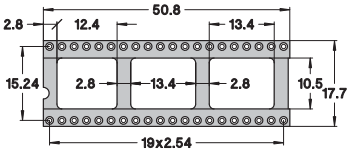

**632**
Fig. 17



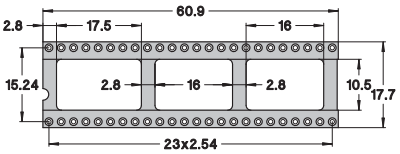

**636**
Fig. 18



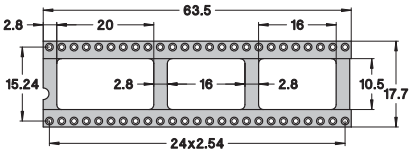

**640**
Fig. 19




**648**
Fig. 20

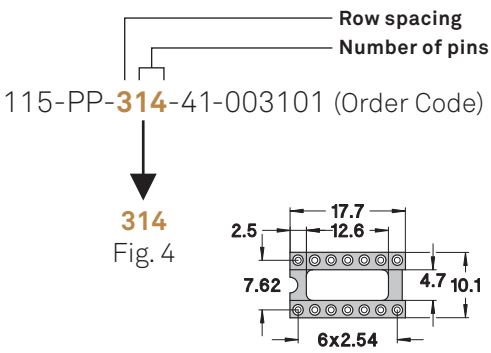



**650**
Fig. 21




## ORDERING INFORMATION

**Example:**






Due to technical progress, all information provided is subject to change without prior notice.

# DUAL-IN-LINE SOCKETS

## ULTRALOW AND VERY LOW PROFILE / OPEN FRAME / SOLDER TAIL

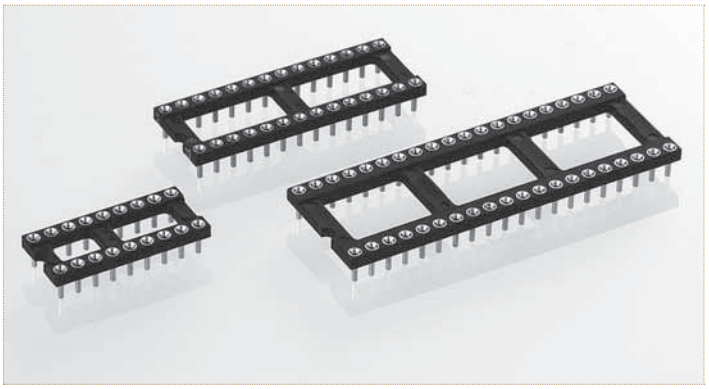
"Ultralow" sockets have specially designed contacts for reduced socket height above PCB.

### TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.52 mm |
| FORCES | 3 N typ. insertion 1.5 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

### ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |



Other plating on request (see page 178 for plating specs).

### ULTRALOW SOCKET

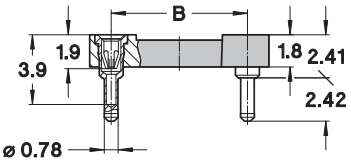
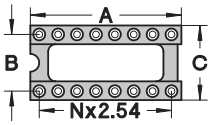



Fig. 1




| NO. OF POLES | A | B | C | SEE PAGE 136 | ORDER CODES |
|---|---|---|---|---|---|
| 6 | 7.6 | 7.62 | 10.1 | Fig. 1 | 115-**PP**-306-41-003101 |
| 8 | 10.1 | 7.62 | 10.1 | Fig. 2 | 115-**PP**-308-41-003101 |
| 10 | 12.6 | 7.62 | 10.1 | Fig. 3 | 115-**PP**-310-41-003101 |
| 14 | 17.7 | 7.62 | 10.1 | Fig. 4 | 115-**PP**-314-41-003101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 5 | 115-**PP**-316-41-003101 |
| 18 | 22.8 | 7.62 | 10.1 | Fig. 6 | 115-**PP**-318-41-003101 |
| 20 | 25.3 | 7.62 | 10.1 | Fig. 7 | 115-**PP**-320-41-003101 |
| 22 | 27.9 | 7.62 | 10.1 | Fig. 8 | 115-**PP**-322-41-003101 |
| 24 | 30.4 | 7.62 | 10.1 | Fig. 9 | 115-**PP**-324-41-003101 |
| 28 | 35.5 | 7.62 | 10.1 | Fig. 10 | 115-**PP**-328-41-003101 |
| 20 | 25.4 | 10.16 | 12.6 | Fig. 11 | 115-**PP**-420-41-003101 |
| 22 | 27.8 | 10.16 | 12.6 | Fig. 12 | 115-**PP**-422-41-003101 |
| 24 | 30.4 | 10.16 | 12.6 | Fig. 13 | 115-**PP**-424-41-003101 |
| 28 | 35.5 | 10.16 | 12.6 | Fig. 14 | 115-**PP**-428-41-003101 |
| 24 | 30.5 | 15.24 | 17.7 | Fig. 15 | 115-**PP**-624-41-003101 |
| 28 | 35.5 | 15.24 | 17.7 | Fig. 16 | 115-**PP**-628-41-003101 |
| 32 | 40.6 | 15.24 | 17.7 | Fig. 17 | 115-**PP**-632-41-003101 |
| 36 | 45.7 | 15.24 | 17.7 | Fig. 18 | 115-**PP**-636-41-003101 |
| 40 | 50.8 | 15.24 | 17.7 | Fig. 19 | 115-**PP**-640-41-003101 |
| 48 | 60.9 | 15.24 | 17.7 | Fig. 20 | 115-**PP**-648-41-003101 |
| 50 | 63.5 | 15.24 | 17.7 | Fig. 21 | 115-**PP**-650-41-003101 |

### OPTIONS: VERY LOW VERSION

Very low version (Fig. 2) is optional; change suffix 003101 to 001101. Insulator body dimensions see page 128 Fig. 1 to 31. Same number of poles as standard series 110.

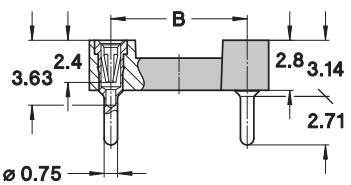



Fig. 2

# DUAL-IN-LINE SOCKETS

**INTERCONNECT / OPEN FRAME / SOLDER TAIL**

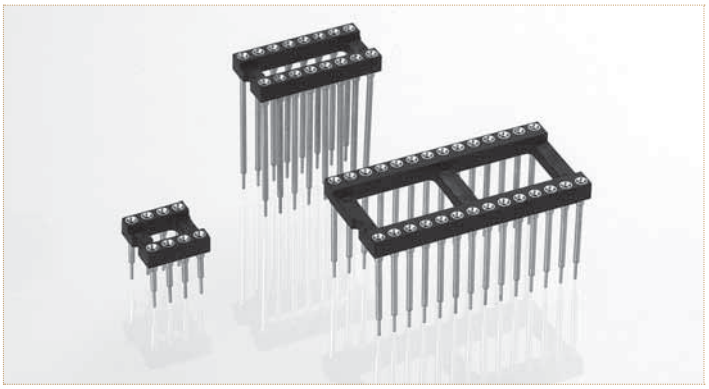
For mechanical and electrical interconnection, PCB stacking or elevated positioning of display modules.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

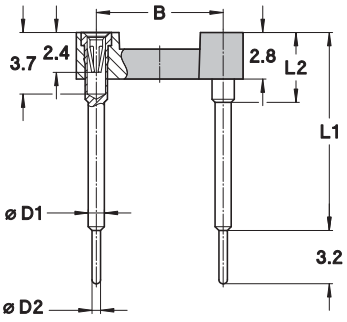
| | |
|---|---|
| INSULATOR | Black glass filled polyester PA-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

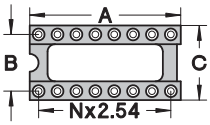
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |



Other plating on request (see page 178 for plating specs).
For complete part number replace **XXX** with the code given below left for the required contact length **L**.




| NO. OF POLES | A | B | C | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | Fig. 1 | 116-**PP**-210-41-**XXX**101 |
| 4 | 5.0 | 7.62 | 10.1 | Fig. 2 | 116-**PP**-304-41-**XXX**101 |
| 6 | 7.6 | 7.62 | 10.1 | Fig. 3 | 116-**PP**-306-41-**XXX**101 |
| 8 | 10.1 | 7.62 | 10.1 | Fig. 4 | 116-**PP**-308-41-**XXX**101 |
| 10 | 12.6 | 7.62 | 10.1 | Fig. 5 | 116-**PP**-310-41-**XXX**101 |
| 12 | 15.2 | 7.62 | 10.1 | Fig. 6 | 116-**PP**-312-41-**XXX**101 |
| 14 | 17.7 | 7.62 | 10.1 | Fig. 7 | 116-**PP**-314-41-**XXX**101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 8 | 116-**PP**-316-41-**XXX**101 |
| 18 | 22.8 | 7.62 | 10.1 | Fig. 9 | 116-**PP**-318-41-**XXX**101 |
| 20 | 25.3 | 7.62 | 10.1 | Fig. 10 | 116-**PP**-320-41-**XXX**101 |
| 22 | 27.8 | 7.62 | 10.1 | Fig. 11 | 116-**PP**-322-41-**XXX**101 |
| 24 | 30.4 | 7.62 | 10.1 | Fig. 12 | 116-**PP**-324-41-**XXX**101 |
| 28 | 35.5 | 7.62 | 10.1 | Fig. 13 | 116-**PP**-328-41-**XXX**101 |
| 20 | 25.4 | 10.16 | 12.6 | Fig. 14 | 116-**PP**-420-41-**XXX**101 |
| 22 | 27.8 | 10.16 | 12.6 | Fig. 15 | 116-**PP**-422-41-**XXX**101 |
| 24 | 30.4 | 10.16 | 12.6 | Fig. 16 | 116-**PP**-424-41-**XXX**101 |
| 28 | 35.5 | 10.16 | 12.6 | Fig. 17 | 116-**PP**-428-41-**XXX**101 |
| 32 | 40.6 | 10.16 | 12.6 | Fig. 18 | 116-**PP**-432-41-**XXX**101 |
| 10 | 12.7 | 15.24 | 17.7 | Fig. 19 | 116-**PP**-610-41-**XXX**101 |
| 24 | 30.5 | 15.24 | 17.7 | Fig. 20 | 116-**PP**-624-41-**XXX**101 |
| 28 | 35.5 | 15.24 | 17.7 | Fig. 21 | 116-**PP**-628-41-**XXX**101 |
| 32 | 40.6 | 15.24 | 17.7 | Fig. 22 | 116-**PP**-632-41-**XXX**101 |
| 36 | 45.7 | 15.24 | 17.7 | Fig. 23 | 116-**PP**-636-41-**XXX**101 |
| 40 | 50.8 | 15.24 | 17.7 | Fig. 24 | 116-**PP**-640-41-**XXX**101 |
| 42 | 53.3 | 15.24 | 17.7 | Fig. 25 | 116-**PP**-642-41-**XXX**101 |
| 48 | 60.9 | 15.24 | 17.7 | Fig. 26 | 116-**PP**-648-41-**XXX**101 |
| 50 | 63.5 | 15.24 | 17.7 | Fig. 27 | 116-**PP**-650-41-**XXX**101 |
| 52 | 66.0 | 15.24 | 17.7 | Fig. 28 | 116-**PP**-652-41-**XXX**101 |
| 50 | 63.5 | 22.86 | 25.3 | Fig. 29 | 116-**PP**-950-41-**XXX**101 |
| 52 | 66.0 | 22.86 | 25.3 | Fig. 30 | 116-**PP**-952-41-**XXX**101 |
| 64 | 81.2 | 22.86 | 25.3 | Fig. 31 | 116-**PP**-964-41-**XXX**101 |

## AVAILABLE CONTACT LENGTHS

| CONTACT LENGTH L1 (mm) | L2 (mm) | CONTACT DIAMETER D1 (mm) | D2 (mm) | XXX CODE |
|---|---|---|---|---|
| 6 | 4.2 | 1 | 0.51 | 006 |
| 7 | 4.2 | 1 | 0.51 | 018 |
| 8 | 4.2 | 1 | 0.51 | 003 |
| 9 | 4.85 | 1 | 0.46 | 012 |
| 10 | 4.2 | 1 | 0.51 | 007 |
| 11 | 4.2 | 0.85 | 0.51 | 002 |
| 12 | 4.2 | 1 | 0.51 | 008 |
| 13 | 4.2 | 1 | 0.51 | 009 |
| 15 | 4.2 | 1 | 0.51 | 001 |
| 18 | 4.2 | 1 | 0.51 | 011 |
| 22 | 4.2 | 1 | 0.51 | 004 |
| 33 | 4.2 | 1.18 | 0.51 | 013 |



Due to technical progress, all information provided is subject to change without prior notice.

# DUAL-IN-LINE SOCKETS

## OPEN FRAME / WIRE-WRAP

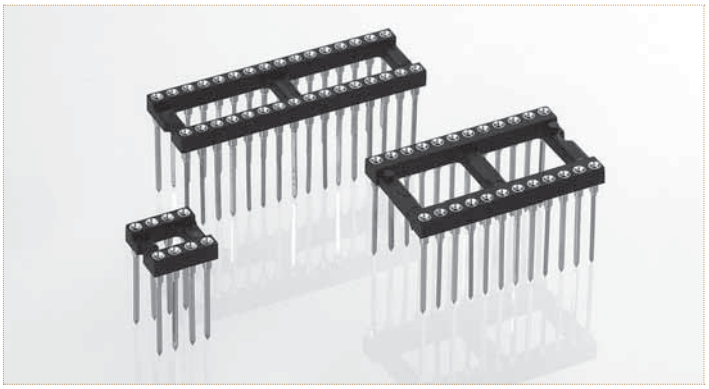
Solderless wire-wrap terminals are firmly fitted in the insulator body to withstand torque of wrapping tool.

### TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

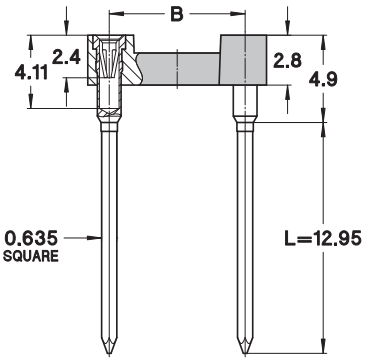
| | |
|---|---|
| INSULATOR | Black glass filled polyester PA-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

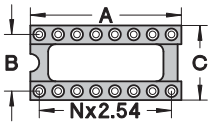
### ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |



Other plating on request (see page 178 for plating specs).




| NO. OF POLES | A | B | C | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | Fig. 1 | 123-**PP**-210-41-001101 |
| 4 | 5.0 | 7.62 | 10.1 | Fig. 2 | 123-**PP**-304-41-001101 |
| 6 | 7.6 | 7.62 | 10.1 | Fig. 3 | 123-**PP**-306-41-001101 |
| 8 | 10.1 | 7.62 | 10.1 | Fig. 4 | 123-**PP**-308-41-001101 |
| 10 | 12.6 | 7.62 | 10.1 | Fig. 5 | 123-**PP**-310-41-001101 |
| 12 | 15.2 | 7.62 | 10.1 | Fig. 6 | 123-**PP**-312-41-001101 |
| 14 | 17.7 | 7.62 | 10.1 | Fig. 7 | 123-**PP**-314-41-001101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 8 | 123-**PP**-316-41-001101 |
| 18 | 22.8 | 7.62 | 10.1 | Fig. 9 | 123-**PP**-318-41-001101 |
| 20 | 25.3 | 7.62 | 10.1 | Fig. 10 | 123-**PP**-320-41-001101 |
| 22 | 27.8 | 7.62 | 10.1 | Fig. 11 | 123-**PP**-322-41-001101 |
| 24 | 30.4 | 7.62 | 10.1 | Fig. 12 | 123-**PP**-324-41-001101 |
| 28 | 35.5 | 7.62 | 10.1 | Fig. 13 | 123-**PP**-328-41-001101 |
| 20 | 25.4 | 10.16 | 12.6 | Fig. 14 | 123-**PP**-420-41-001101 |
| 22 | 27.8 | 10.16 | 12.6 | Fig. 15 | 123-**PP**-422-41-001101 |
| 24 | 30.4 | 10.16 | 12.6 | Fig. 16 | 123-**PP**-424-41-001101 |
| 28 | 35.5 | 10.16 | 12.6 | Fig. 17 | 123-**PP**-428-41-001101 |
| 32 | 40.6 | 10.16 | 12.6 | Fig. 18 | 123-**PP**-432-41-001101 |
| 10 | 12.7 | 15.24 | 17.7 | Fig. 19 | 123-**PP**-610-41-001101 |
| 24 | 30.5 | 15.24 | 17.7 | Fig. 20 | 123-**PP**-624-41-001101 |
| 28 | 35.5 | 15.24 | 17.7 | Fig. 21 | 123-**PP**-628-41-001101 |
| 32 | 40.6 | 15.24 | 17.7 | Fig. 22 | 123-**PP**-632-41-001101 |
| 36 | 45.7 | 15.24 | 17.7 | Fig. 23 | 123-**PP**-636-41-001101 |
| 40 | 50.8 | 15.24 | 17.7 | Fig. 24 | 123-**PP**-640-41-001101 |
| 42 | 53.3 | 15.24 | 17.7 | Fig. 25 | 123-**PP**-642-41-001101 |
| 48 | 60.9 | 15.24 | 17.7 | Fig. 26 | 123-**PP**-648-41-001101 |
| 50 | 63.5 | 15.24 | 17.7 | Fig. 27 | 123-**PP**-650-41-001101 |
| 52 | 66.0 | 15.24 | 17.7 | Fig. 28 | 123-**PP**-652-41-001101 |
| 50 | 63.5 | 22.86 | 25.3 | Fig. 29 | 123-**PP**-950-41-001101 |
| 52 | 66.0 | 22.86 | 25.3 | Fig. 30 | 123-**PP**-952-41-001101 |
| 64 | 81.2 | 22.86 | 25.3 | Fig. 31 | 123-**PP**-964-41-001101 |

### OPTION

Other lengths for 1-level, 2-level or 4-level wrapping available on request

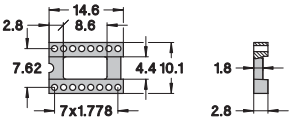
Replace **123**-... in order code by

| | | |
|---|---|---|
| - **121**-83-... | for 1-level | L = 6.6 mm |
| - **122**-... | for 2-level | L = 9.4 mm |
| - **124**-83-...-002101 | for 4-level | L = 16 mm |

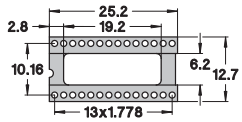
# DUAL-IN-LINE SOCKETS

## INSULATOR BODIES / SHRINKDIP, OPEN FRAME

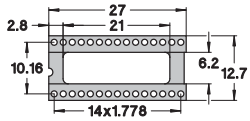
**316**
Fig. 1



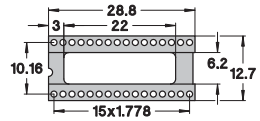

**428**
Fig. 2



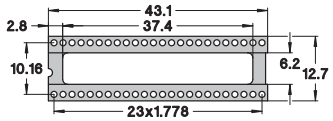

**430**
Fig. 3



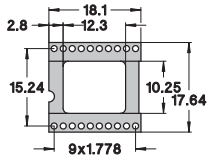

**432**
Fig. 4



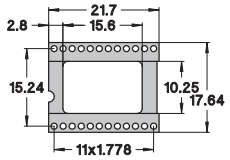

**448**
Fig. 5



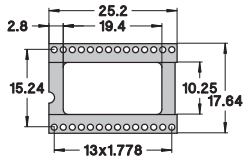

**620**
Fig. 6



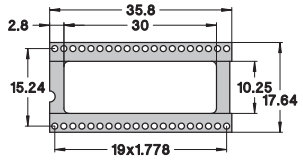

**624**
Fig. 7



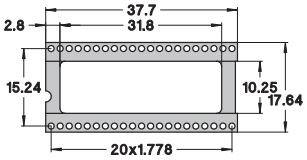

**628**
Fig. 8



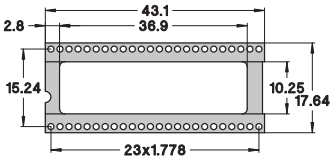

**640**
Fig. 9



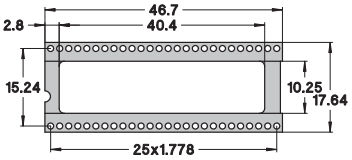

**642**
Fig. 10



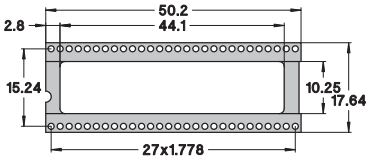

**648**
Fig. 11



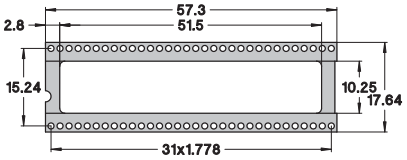

**652**
Fig. 12



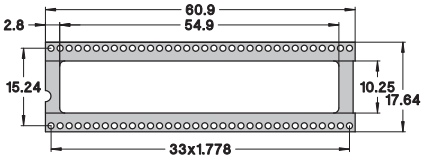

**656**
Fig. 13



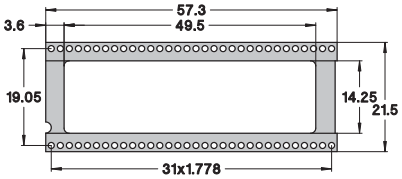

**664**
Fig. 14




**668**
Fig. 15

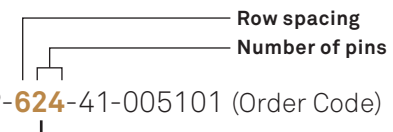



**764**
Fig. 16

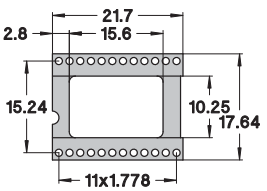



## ORDERING INFORMATION

**Example:**




**624**
Fig. 7






Due to technical progress, all information provided is subject to change without prior notice.

# SHRINKDIP SOCKETS

## OPEN FRAME / SOLDER TAIL

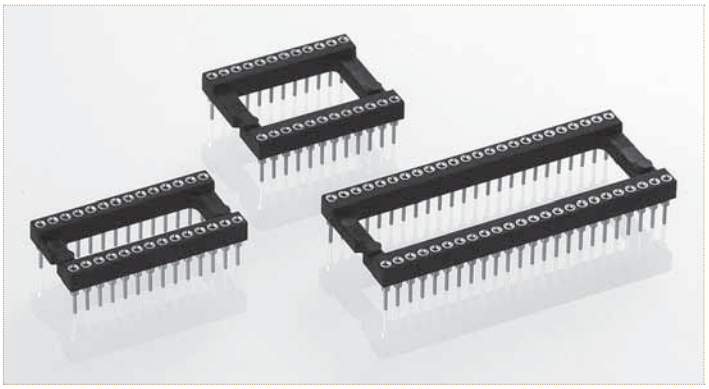
High density DIL sockets for devices featuring 0.07" (1.778 mm) lead spacing.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

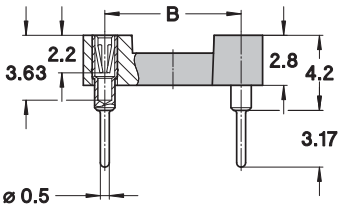
| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

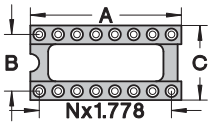
## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |



Other plating on request (see page 178 for plating specs).




| NO. OF POLES | A | B | C | SEE PAGE 140 | ORDER CODES |
|---|---|---|---|---|---|
| 16 | 14.6 | 7.62 | 10.10 | Fig. 1 | 117-**PP**-316-41-005101 |
| 28 | 25.2 | 10.16 | 12.70 | Fig. 2 | 117-**PP**-428-41-005101 |
| 30 | 27.0 | 10.16 | 12.70 | Fig. 3 | 117-**PP**-430-41-005101 |
| 32 | 28.8 | 10.16 | 12.70 | Fig. 4 | 117-**PP**-432-41-005101 |
| 48 | 43.1 | 10.16 | 12.70 | Fig. 5 | 117-**PP**-448-41-005101 |
| 20 | 18.1 | 15.24 | 17.64 | Fig. 6 | 117-**PP**-620-41-005101 |
| 24 | 21.7 | 15.24 | 17.64 | Fig. 7 | 117-**PP**-624-41-005101 |
| 28 | 25.2 | 15.24 | 17.64 | Fig. 8 | 117-**PP**-628-41-005101 |
| 40 | 35.8 | 15.24 | 17.64 | Fig. 9 | 117-**PP**-640-41-005101 |
| 42 | 37.7 | 15.24 | 17.64 | Fig. 10 | 117-**PP**-642-41-005101 |
| 48 | 43.1 | 15.24 | 17.64 | Fig. 11 | 117-**PP**-648-41-005101 |
| 52 | 46.7 | 15.24 | 17.64 | Fig. 12 | 117-**PP**-652-41-005101 |
| 56 | 50.2 | 15.24 | 17.64 | Fig. 13 | 117-**PP**-656-41-005101 |
| 64 | 57.3 | 15.24 | 17.64 | Fig. 14 | 117-**PP**-664-41-005101 |
| 68 | 60.9 | 15.24 | 17.64 | Fig. 15 | 117-**PP**-668-41-005101 |
| 64* | 57.3 | 19.05 | 21.50 | Fig. 16 | 117-**PP**-764-41-005101 |

## OPTIONS AVAILABLE ON REQUEST

- * Socket 117-PP-764-41-005101 available with closed frame insulator PN **2**17-PP-764-41-005101

- Surface mount Shrinkdip socket with gull wing terminations Series 117-...-41-105101

- Shrinkdip pin header, solder tail Series 150-10...-00-012101 or 150-80...-00-012101

Please consult

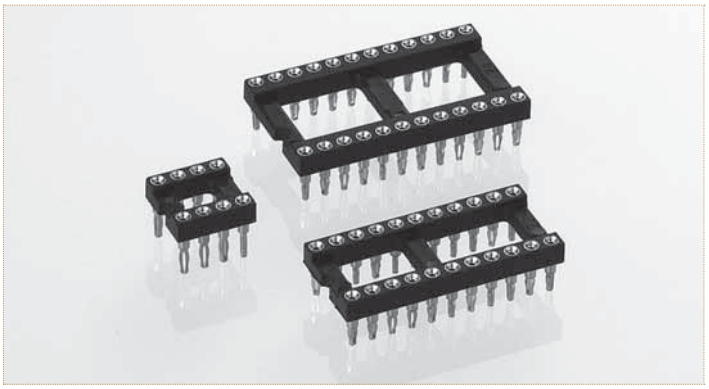
# DUAL-IN-LINE SOCKETS

## OPEN FRAME / PRESS-FIT

DIL Sockets with compliant press-fit pin for solderless mount in PCB plated through holes.

### TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

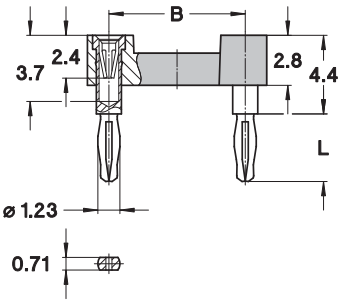
| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Bronze CuSn4Pb4Zn4 (C54400) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 500 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| PCB HOLE Ø | 1 +0.09/-0.06 mm finished (1.15 ±0.025 mm drill) |

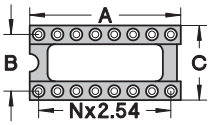


### ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
For complete part number replace **XXX** with the code given below left for the required contact length **L**.




| NO. OF POLES | A | B | C | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | Fig. 1 | 146-**PP**-210-41-**XXX**101 |
| 4 | 5.0 | 7.62 | 10.1 | Fig. 2 | 146-**PP**-304-41-**XXX**101 |
| 6 | 7.6 | 7.62 | 10.1 | Fig. 3 | 146-**PP**-306-41-**XXX**101 |
| 8 | 10.1 | 7.62 | 10.1 | Fig. 4 | 146-**PP**-308-41-**XXX**101 |
| 10 | 12.6 | 7.62 | 10.1 | Fig. 5 | 146-**PP**-310-41-**XXX**101 |
| 12 | 15.2 | 7.62 | 10.1 | Fig. 6 | 146-**PP**-312-41-**XXX**101 |
| 14 | 17.7 | 7.62 | 10.1 | Fig. 7 | 146-**PP**-314-41-**XXX**101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 8 | 146-**PP**-316-41-**XXX**101 |
| 18 | 22.8 | 7.62 | 10.1 | Fig. 9 | 146-**PP**-318-41-**XXX**101 |
| 20 | 25.3 | 7.62 | 10.1 | Fig. 10 | 146-**PP**-320-41-**XXX**101 |
| 22 | 27.8 | 7.62 | 10.1 | Fig. 11 | 146-**PP**-322-41-**XXX**101 |
| 24 | 30.4 | 7.62 | 10.1 | Fig. 12 | 146-**PP**-324-41-**XXX**101 |
| 28 | 35.5 | 7.62 | 10.1 | Fig. 13 | 146-**PP**-328-41-**XXX**101 |
| 20 | 25.4 | 10.16 | 12.6 | Fig. 14 | 146-**PP**-420-41-**XXX**101 |
| 22 | 27.8 | 10.16 | 12.6 | Fig. 15 | 146-**PP**-422-41-**XXX**101 |
| 24 | 30.4 | 10.16 | 12.6 | Fig. 16 | 146-**PP**-424-41-**XXX**101 |
| 28 | 35.5 | 10.16 | 12.6 | Fig. 17 | 146-**PP**-428-41-**XXX**101 |
| 32 | 40.6 | 10.16 | 12.6 | Fig. 18 | 146-**PP**-432-41-**XXX**101 |
| 24 | 30.5 | 15.24 | 17.7 | Fig. 20 | 146-**PP**-624-41-**XXX**101 |
| 28 | 35.5 | 15.24 | 17.7 | Fig. 21 | 146-**PP**-628-41-**XXX**101 |
| 32 | 40.6 | 15.24 | 17.7 | Fig. 22 | 146-**PP**-632-41-**XXX**101 |
| 36 | 45.7 | 15.24 | 17.7 | Fig. 23 | 146-**PP**-636-41-**XXX**101 |
| 40 | 50.8 | 15.24 | 17.7 | Fig. 24 | 146-**PP**-640-41-**XXX**101 |

### AVAILABLE CONTACT LENGTH

| CONTACT LENGTH L (mm) | PCB THICKNESS (mm) | XXX CODE |
|---|---|---|
| 2.8 | 1.5-2.0 | 036 |
| 3.8 | 2.1-3.2 | 035 |



Due to technical progress, all information provided is subject to change without prior notice.

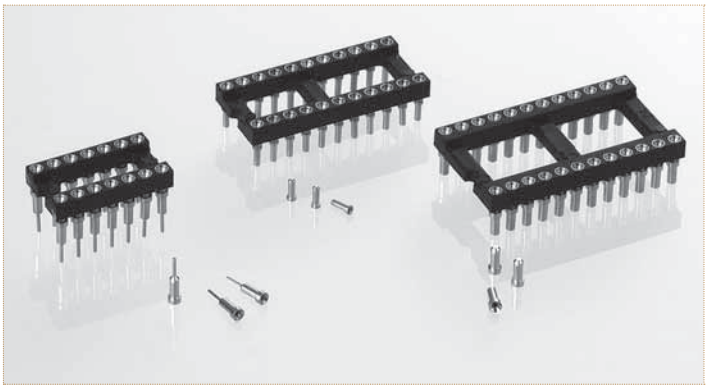
# DUAL-IN-LINE PIN CARRIER ASSEMBLIES

**LOW PROFILE / LOW PROFILE ULTRA THIN / SOLDER TAIL**

Easy mounting due to the disposable plastic carrier, no solder or flux wicking problems.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER)<br>(3 FINGER) | Beryllium copper (C17200)<br>(Series 614...012101) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. (1.0 N typ. 614...012001) insertion<br>1 N typ. (0.4 N typ. 614...012001) withdrawal<br>(polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
For complete part number replace **X**-...-**XX**-**XXX** with the code given below left.

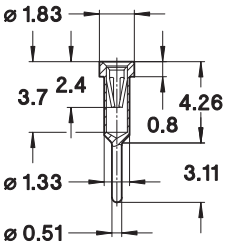
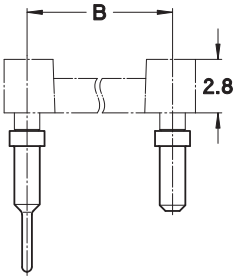


Fig. 1



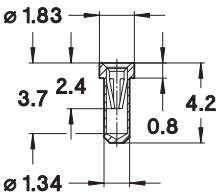



Fig. 2

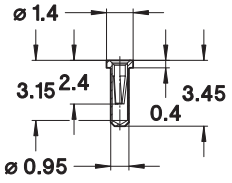
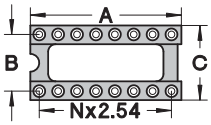


Fig. 3




| NO. OF POLES | A | B | C | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | Fig. 1 | 61**X**-**PP**-210-**XX**-**XXX**101 |
| 4 | 5.0 | 7.62 | 10.1 | Fig. 2 | 61**X**-**PP**-304-**XX**-**XXX**101 |
| 6 | 7.6 | 7.62 | 10.1 | Fig. 3 | 61**X**-**PP**-306-**XX**-**XXX**101 |
| 8 | 10.1 | 7.62 | 10.1 | Fig. 4 | 61**X**-**PP**-308-**XX**-**XXX**101 |
| 10 | 12.6 | 7.62 | 10.1 | Fig. 5 | 61**X**-**PP**-310-**XX**-**XXX**101 |
| 12 | 15.2 | 7.62 | 10.1 | Fig. 6 | 61**X**-**PP**-312-**XX**-**XXX**101 |
| 14 | 17.7 | 7.62 | 10.1 | Fig. 7 | 61**X**-**PP**-314-**XX**-**XXX**101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 8 | 61**X**-**PP**-316-**XX**-**XXX**101 |
| 18 | 22.8 | 7.62 | 10.1 | Fig. 9 | 61**X**-**PP**-318-**XX**-**XXX**101 |
| 20 | 25.3 | 7.62 | 10.1 | Fig. 10 | 61**X**-**PP**-320-**XX**-**XXX**101 |
| 22 | 27.8 | 7.62 | 10.1 | Fig. 11 | 61**X**-**PP**-322-**XX**-**XXX**101 |
| 24 | 30.4 | 7.62 | 10.1 | Fig. 12 | 61**X**-**PP**-324-**XX**-**XXX**101 |
| 28 | 35.5 | 7.62 | 10.1 | Fig. 13 | 61**X**-**PP**-328-**XX**-**XXX**101 |
| 20 | 25.4 | 10.16 | 12.6 | Fig. 14 | 61**X**-**PP**-420-**XX**-**XXX**101 |
| 22 | 27.8 | 10.16 | 12.6 | Fig. 15 | 61**X**-**PP**-422-**XX**-**XXX**101 |
| 24 | 30.4 | 10.16 | 12.6 | Fig. 16 | 61**X**-**PP**-424-**XX**-**XXX**101 |
| 28 | 35.5 | 10.16 | 12.6 | Fig. 17 | 61**X**-**PP**-428-**XX**-**XXX**101 |
| 32 | 40.6 | 10.16 | 12.6 | Fig. 18 | 61**X**-**PP**-432-**XX**-**XXX**101 |
| 10 | 12.7 | 15.24 | 17.7 | Fig. 19 | 61**X**-**PP**-610-**XX**-**XXX**101 |
| 24 | 30.5 | 15.24 | 17.7 | Fig. 20 | 61**X**-**PP**-624-**XX**-**XXX**101 |
| 28 | 35.5 | 15.24 | 17.7 | Fig. 21 | 61**X**-**PP**-628-**XX**-**XXX**101 |
| 32 | 40.6 | 15.24 | 17.7 | Fig. 22 | 61**X**-**PP**-632-**XX**-**XXX**101 |
| 36 | 45.7 | 15.24 | 17.7 | Fig. 23 | 61**X**-**PP**-636-**XX**-**XXX**101 |
| 40 | 50.8 | 15.24 | 17.7 | Fig. 24 | 61**X**-**PP**-640-**XX**-**XXX**101 |
| 42 | 53.3 | 15.24 | 17.7 | Fig. 25 | 61**X**-**PP**-642-**XX**-**XXX**101 |
| 48 | 60.9 | 15.24 | 17.7 | Fig. 26 | 61**X**-**PP**-648-**XX**-**XXX**101 |
| 50 | 63.5 | 15.24 | 17.7 | Fig. 27 | 61**X**-**PP**-650-**XX**-**XXX**101 |
| 52 | 66.0 | 15.24 | 17.7 | Fig. 28 | 61**X**-**PP**-652-**XX**-**XXX**101 |
| 50 | 63.5 | 22.86 | 25.3 | Fig. 29 | 61**X**-**PP**-950-**XX**-**XXX**101 |
| 52 | 66.0 | 22.86 | 25.3 | Fig. 30 | 61**X**-**PP**-952-**XX**-**XXX**101 |
| 64 | 81.2 | 22.86 | 25.3 | Fig. 31 | 61**X**-**PP**-964-**XX**-**XXX**101 |

## AVAILABLE VERSIONS

- **Standard carrier** **612...-41-001101**
  see Fig. 1

- **Low profile** **614...-41-001101**
  see Fig. 2 for PCB hole Ø 1.4-1.8 mm

- **Low profile, ultra thin** **614...-31-012101**
  see Fig. 3 for PCB hole Ø 1.0-1.3 mm



Due to technical progress, all information provided is subject to change without prior notice.

# DUAL-IN-LINE SOCKETS

## RIGHT ANGLE VERSION / CLOSED FRAME / SOLDER TAIL

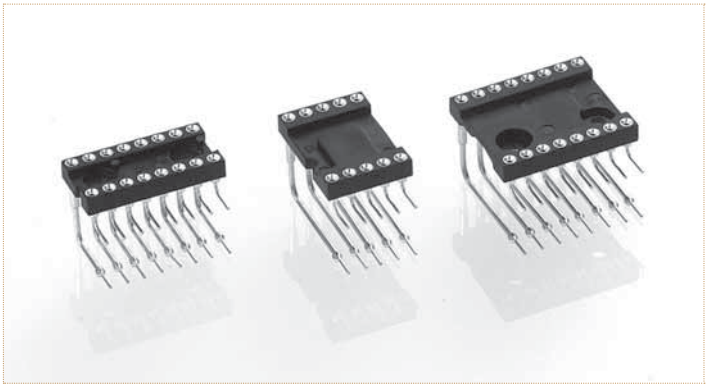
Right angle DIL Sockets for components to be mounted perpendicularly to the PCB such as displays.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |



Other plating on request (see page 178 for plating specs).
For complete part number replace **XX** with the code given below left.

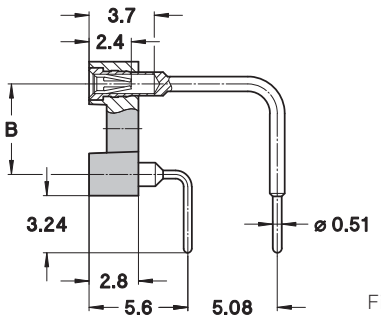



Fig. 1

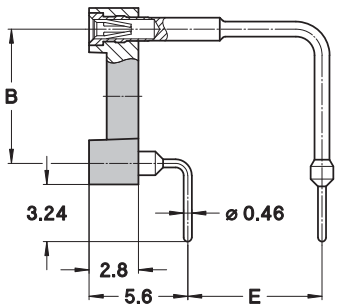



Fig. 2

### ROW SPACING E

| E (mm) | ORDER CODE XX |
|---|---|
| 7.62 | 299...**10**-001101 |
| 2.54 | 299...**11**-001101 |

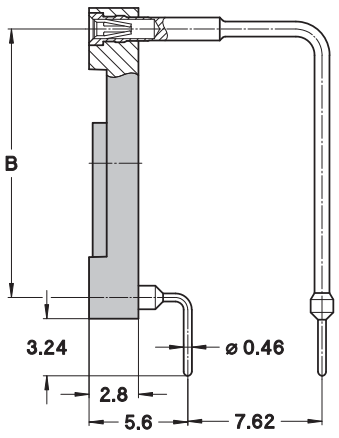
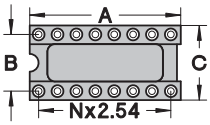



Fig. 3




| NO. OF POLES | A | B | C | SEE | ORDER CODES |
|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | Fig. 1 | 299-**PP**-210-10-001101 |
| 6 | 7.6 | 7.62 | 10.1 | Fig. 2 | 299-**PP**-306-**XX**-001101 |
| 8 | 10.1 | 7.62 | 10.1 | Fig. 2 | 299-**PP**-308-**XX**-001101 |
| 10 | 12.6 | 7.62 | 10.1 | Fig. 2 | 299-**PP**-310-**XX**-001101 |
| 12 | 15.2 | 7.62 | 10.1 | Fig. 2 | 299-**PP**-312-**XX**-001101 |
| 14 | 17.7 | 7.62 | 10.1 | Fig. 2 | 299-**PP**-314-**XX**-001101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 2 | 299-**PP**-316-**XX**-001101 |
| 18 | 22.8 | 7.62 | 10.1 | Fig. 2 | 299-**PP**-318-**XX**-001101 |
| 20 | 25.3 | 7.62 | 10.1 | Fig. 2 | 299-**PP**-320-**XX**-001101 |
| 22 | 27.8 | 7.62 | 10.1 | Fig. 2 | 299-**PP**-322-**XX**-001101 |
| 24 | 30.4 | 7.62 | 10.1 | Fig. 2 | 299-**PP**-324-**XX**-001101 |
| 8 | 10.1 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-608-10-002101 |
| 10 | 12.6 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-610-10-002101 |
| 12 | 15.2 | 15.24 | 10.1 | Fig. 3 | 299-**PP**-612-10-002101 |
| 14 | 17.7 | 15.24 | 10.1 | Fig. 3 | 299-**PP**-614-10-002101 |
| 16 | 20.1 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-616-10-002101 |
| 18 | 22.8 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-618-10-002101 |
| 20 | 25.3 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-620-10-002101 |
| 22 | 27.8 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-622-10-002101 |
| 24 | 30.4 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-624-10-002101 |
| 26 | 33.0 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-626-10-002101 |
| 28 | 35.5 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-628-10-002101 |
| 30 | 38.0 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-630-10-002101 |
| 32 | 40.6 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-632-10-002101 |
| 36 | 45.7 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-636-10-002101 |
| 40 | 50.6 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-640-10-002101 |
| 48 | 61.0 | 15.24 | 17.7 | Fig. 3 | 299-**PP**-648-10-002101 |



Due to technical progress, all information provided is subject to change without prior notice.

# DUAL-IN-LINE PIN HEADERS

## OPEN FRAME / SOLDER TAIL

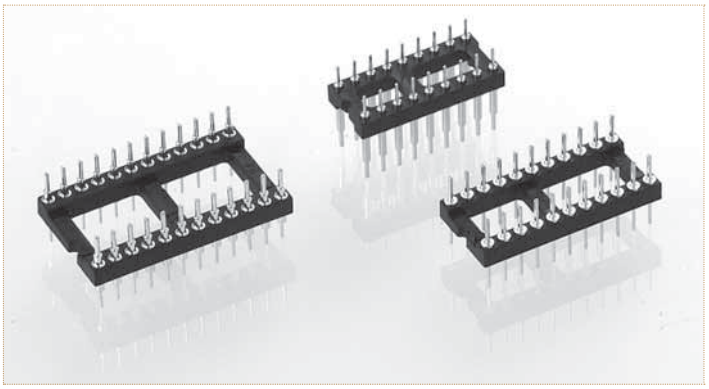
DIL pin headers with male contacts pluggable into standard female socket contacts.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm / 0.76 mm |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |



Other plating on request (see page 178 for plating specs).
For complete part number replace **X**-...-**XXX** with the code given below left.

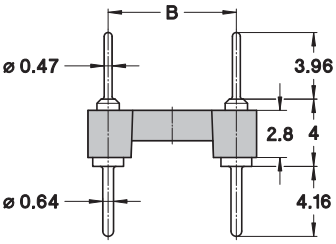



Fig. 1

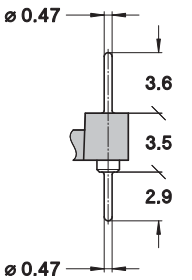



Fig. 2

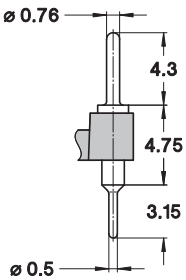



Fig. 3

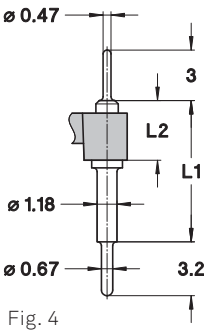



Fig. 4

## AVAILABLE VERSIONS

**STANDARD HEADER**

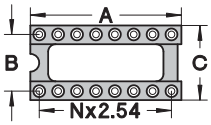
| | |
|---|---|
| **150-...-001101** | See Fig. 1 |
| **150-...-006101** | See Fig. 2 |
| **150-...-018101** | See Fig. 3 |

**INTERCONNECT HEADER**

| | |
|---|---|
| **151-...-XXX101** | See Fig. 4 |

| CONTACT LENGTH L1 (mm) | CONTACT LENGTH L2 (mm) | XXX CODE |
|---|---|---|
| 6.2 | 4.7 | 003 |
| 8.4 | 3.55 | 004 |
| 15.3 | 3.55 | 005 |
| 21.2 | 3.55 | 016 |
| 27.4 | 3.55 | 017 |

Other lengths on request




| NO. OF POLES | A | B | C | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | Fig. 1 | 15**X**-**PP**-210-00-**XXX**101 |
| 4 | 5.0 | 7.62 | 10.1 | Fig. 2 | 15**X**-**PP**-304-00-**XXX**101 |
| 6 | 7.6 | 7.62 | 10.1 | Fig. 3 | 15**X**-**PP**-306-00-**XXX**101 |
| 8 | 10.1 | 7.62 | 10.1 | Fig. 4 | 15**X**-**PP**-308-00-**XXX**101 |
| 10 | 12.6 | 7.62 | 10.1 | Fig. 5 | 15**X**-**PP**-310-00-**XXX**101 |
| 12 | 15.2 | 7.62 | 10.1 | Fig. 6 | 15**X**-**PP**-312-00-**XXX**101 |
| 14 | 17.7 | 7.62 | 10.1 | Fig. 7 | 15**X**-**PP**-314-00-**XXX**101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 8 | 15**X**-**PP**-316-00-**XXX**101 |
| 18 | 22.8 | 7.62 | 10.1 | Fig. 9 | 15**X**-**PP**-318-00-**XXX**101 |
| 20 | 25.3 | 7.62 | 10.1 | Fig. 10 | 15**X**-**PP**-320-00-**XXX**101 |
| 22 | 27.8 | 7.62 | 10.1 | Fig. 11 | 15**X**-**PP**-322-00-**XXX**101 |
| 24 | 30.4 | 7.62 | 10.1 | Fig. 12 | 15**X**-**PP**-324-00-**XXX**101 |
| 28 | 35.5 | 7.62 | 10.1 | Fig. 13 | 15**X**-**PP**-328-00-**XXX**101 |
| 20 | 25.4 | 10.16 | 12.6 | Fig. 14 | 15**X**-**PP**-420-00-**XXX**101 |
| 22 | 27.8 | 10.16 | 12.6 | Fig. 15 | 15**X**-**PP**-422-00-**XXX**101 |
| 24 | 30.4 | 10.16 | 12.6 | Fig. 16 | 15**X**-**PP**-424-00-**XXX**101 |
| 28 | 35.5 | 10.16 | 12.6 | Fig. 17 | 15**X**-**PP**-428-00-**XXX**101 |
| 32 | 40.6 | 10.16 | 12.6 | Fig. 18 | 15**X**-**PP**-432-00-**XXX**101 |
| 10 | 12.7 | 15.24 | 17.7 | Fig. 19 | 15**X**-**PP**-610-00-**XXX**101 |
| 24 | 30.5 | 15.24 | 17.7 | Fig. 20 | 15**X**-**PP**-624-00-**XXX**101 |
| 28 | 35.5 | 15.24 | 17.7 | Fig. 21 | 15**X**-**PP**-628-00-**XXX**101 |
| 32 | 40.6 | 15.24 | 17.7 | Fig. 22 | 15**X**-**PP**-632-00-**XXX**101 |
| 36 | 45.7 | 15.24 | 17.7 | Fig. 23 | 15**X**-**PP**-636-00-**XXX**101 |
| 40 | 50.8 | 15.24 | 17.7 | Fig. 24 | 15**X**-**PP**-640-00-**XXX**101 |
| 42 | 53.3 | 15.24 | 17.7 | Fig. 25 | 15**X**-**PP**-642-00-**XXX**101 |
| 48 | 60.9 | 15.24 | 17.7 | Fig. 26 | 15**X**-**PP**-648-00-**XXX**101 |
| 50 | 63.5 | 15.24 | 17.7 | Fig. 27 | 15**X**-**PP**-650-00-**XXX**101 |
| 52 | 66.0 | 15.24 | 17.7 | Fig. 28 | 15**X**-**PP**-652-00-**XXX**101 |
| 50 | 63.5 | 22.86 | 25.3 | Fig. 29 | 15**X**-**PP**-950-00-**XXX**101 |
| 52 | 66.0 | 22.86 | 25.3 | Fig. 30 | 15**X**-**PP**-952-00-**XXX**101 |
| 64 | 81.2 | 22.86 | 25.3 | Fig. 31 | 15**X**-**PP**-964-00-**XXX**101 |



Due to technical progress, all information provided is subject to change without prior notice.

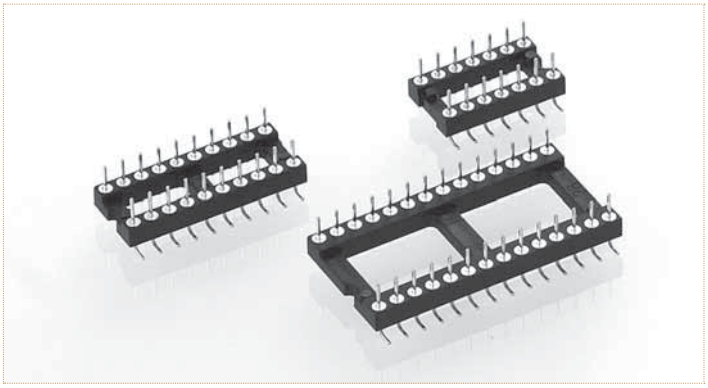
# DUAL-IN-LINE PIN HEADERS

## OPEN FRAME / SURFACE MOUNT

Specially designed for reflow soldering including vapor phase with male contacts pluggable into standard socket contacts and gull wing terminations.

### TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

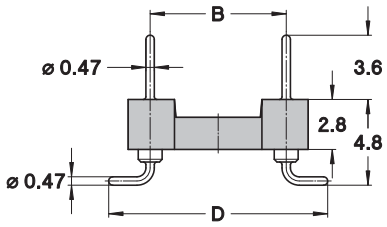
| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.10 mm |

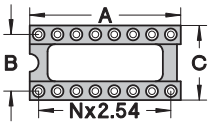


### ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3 | Tin | 0.75 µm gold |

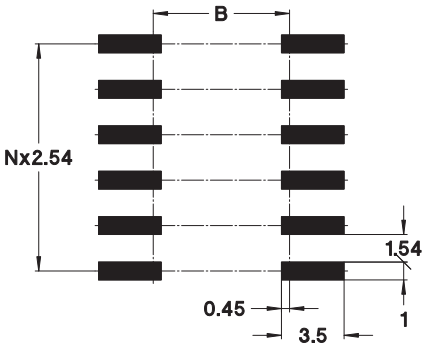
Other plating on request (see page 178 for plating specs).




| NO. OF POLES | A | B | C | D | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | 9.76 | Fig. 1 | 150-**PP**-210-00-106101 |
| 4 | 5.0 | 7.62 | 10.1 | 12.30 | Fig. 2 | 150-**PP**-304-00-106101 |
| 6 | 7.6 | 7.62 | 10.1 | 12.30 | Fig. 3 | 150-**PP**-306-00-106101 |
| 8 | 10.1 | 7.62 | 10.1 | 12.30 | Fig. 4 | 150-**PP**-308-00-106101 |
| 10 | 12.6 | 7.62 | 10.1 | 12.30 | Fig. 5 | 150-**PP**-310-00-106101 |
| 12 | 15.2 | 7.62 | 10.1 | 12.30 | Fig. 6 | 150-**PP**-312-00-106101 |
| 14 | 17.7 | 7.62 | 10.1 | 12.30 | Fig. 7 | 150-**PP**-314-00-106101 |
| 16 | 20.3 | 7.62 | 10.1 | 12.30 | Fig. 8 | 150-**PP**-316-00-106101 |
| 18 | 22.8 | 7.62 | 10.1 | 12.30 | Fig. 9 | 150-**PP**-318-00-106101 |
| 20 | 25.3 | 7.62 | 10.1 | 12.30 | Fig. 10 | 150-**PP**-320-00-106101 |
| 22 | 27.8 | 7.62 | 10.1 | 12.30 | Fig. 11 | 150-**PP**-322-00-106101 |
| 24 | 30.4 | 7.62 | 10.1 | 12.30 | Fig. 12 | 150-**PP**-324-00-106101 |
| 28 | 35.5 | 7.62 | 10.1 | 12.30 | Fig. 13 | 150-**PP**-328-00-106101 |
| 20 | 25.4 | 10.16 | 12.6 | 14.84 | Fig. 14 | 150-**PP**-420-00-106101 |
| 22 | 27.8 | 10.16 | 12.6 | 14.84 | Fig. 15 | 150-**PP**-422-00-106101 |
| 24 | 30.4 | 10.16 | 12.6 | 14.84 | Fig. 16 | 150-**PP**-424-00-106101 |
| 28 | 35.5 | 10.16 | 12.6 | 14.84 | Fig. 17 | 150-**PP**-428-00-106101 |
| 32 | 40.6 | 10.16 | 12.6 | 14.84 | Fig. 18 | 150-**PP**-432-00-106101 |
| 24 | 30.5 | 15.24 | 17.7 | 19.92 | Fig. 20 | 150-**PP**-624-00-106101 |
| 28 | 35.5 | 15.24 | 17.7 | 19.92 | Fig. 21 | 150-**PP**-628-00-106101 |
| 32 | 40.6 | 15.24 | 17.7 | 19.92 | Fig. 22 | 150-**PP**-632-00-106101 |
| 36 | 45.7 | 15.24 | 17.7 | 19.92 | Fig. 23 | 150-**PP**-636-00-106101 |
| 40 | 50.8 | 15.24 | 17.7 | 19.92 | Fig. 24 | 150-**PP**-640-00-106101 |
| 42 | 53.3 | 15.24 | 17.7 | 19.92 | Fig. 25 | 150-**PP**-642-00-106101 |
| 48 | 60.9 | 15.24 | 17.7 | 19.92 | Fig. 26 | 150-**PP**-648-00-106101 |

### PCB LAYOUT






Due to technical progress, all information provided is subject to change without prior notice.

# DUAL-IN-LINE PIN HEADERS

## OPEN FRAME / SURFACE MOUNT PICK AND PLACE

Specially designed for reflow soldering including vapor phase with male contact pluggable into standard socket contacts.

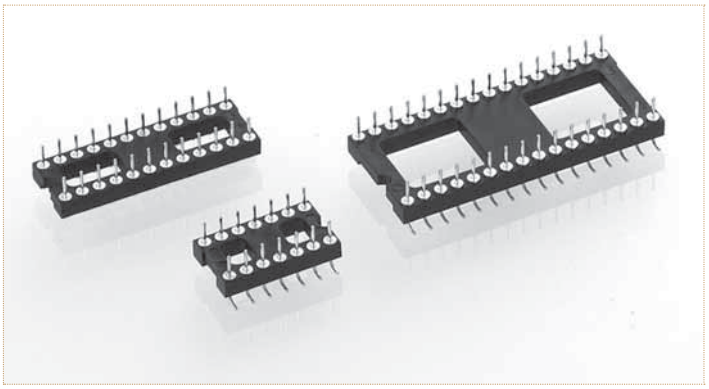
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.47 mm |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |
| COPLANARITY SMD TERMINATIONS | Max. 0.10 mm |

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |
| V3* | Tin | 0.75 µm gold |

*only for 150-PP-XXX-00-106161

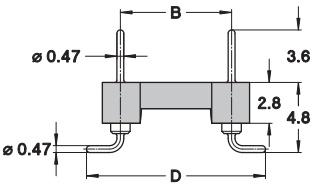


Other plating on request (see page 178 for plating specs).

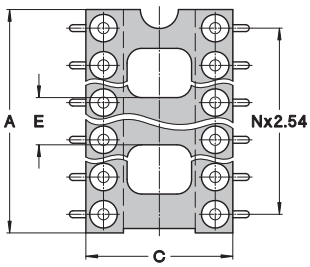
**Tape & Reel packaging:**

replace 161 by suffix 191 to part number. Other pin counts please consult. Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

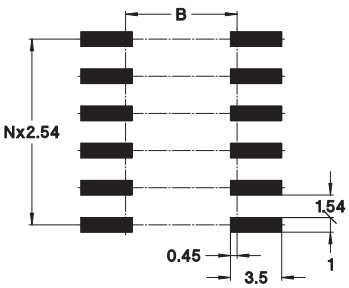





### INSULATOR

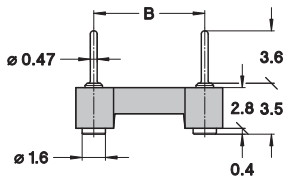



### PCB LAYOUT

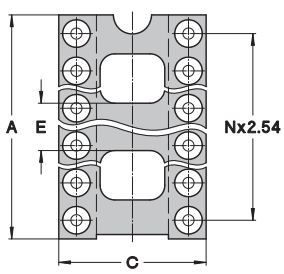



## HEADER WITH GULL-WING TERMINATION

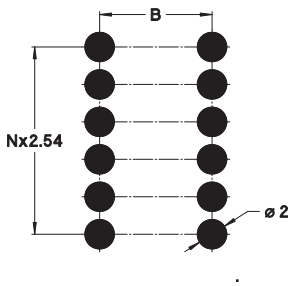
| NO. OF POLES | A | B | C | D | E | ORDER CODES |
|---|---|---|---|---|---|---|
| 6 | 7.6 | 7.62 | 10.1 | 12.30 | 7.6 | 150-**PP**-306-00-106161 |
| 8 | 10.1 | 7.62 | 10.1 | 12.30 | 10.1 | 150-**PP**-308-00-106161 |
| 10 | 12.6 | 7.62 | 10.1 | 12.30 | 12.6 | 150-**PP**-310-00-106161 |
| 14 | 17.8 | 7.62 | 10.1 | 12.30 | 5.3 | 150-**PP**-314-00-106161 |
| 16 | 20.3 | 7.62 | 10.1 | 12.30 | 5.3 | 150-**PP**-316-00-106161 |
| 18 | 22.9 | 7.62 | 10.1 | 12.30 | 5.3 | 150-**PP**-318-00-106161 |
| 20 | 25.4 | 7.62 | 10.1 | 12.30 | 8.3 | 150-**PP**-320-00-106161 |
| 24 | 30.4 | 7.62 | 10.1 | 12.30 | 8.3 | 150-**PP**-324-00-106161 |
| 28 | 35.6 | 7.62 | 10.1 | 12.30 | 8.3 | 150-**PP**-328-00-106161 |
| 28 | 35.5 | 15.24 | 17.7 | 19.22 | 10.0 | 150-**PP**-628-00-106161 |
| 32 | 40.6 | 15.24 | 17.7 | 19.22 | 10.0 | 150-**PP**-632-00-106161 |
| 40 | 50.8 | 15.24 | 17.7 | 19.22 | 10.0 | 150-**PP**-640-00-106161 |
| 42 | 53.4 | 15.24 | 17.7 | 19.22 | 10.0 | 150-**PP**-642-00-106161 |




### INSULATOR




### PCB LAYOUT




## HEADER WITH FLOATING PIN TERMINATION

| NO. OF POLES | A | B | C | D | E | ORDER CODES |
|---|---|---|---|---|---|---|
| 6 | 7.6 | 7.62 | 10.1 | 12.30 | 7.6 | 150-**PP**-306-01-899161 |
| 8 | 10.1 | 7.62 | 10.1 | 12.30 | 10.1 | 150-**PP**-308-01-899161 |
| 10 | 12.6 | 7.62 | 10.1 | 12.30 | 12.6 | 150-**PP**-310-01-899161 |
| 14 | 17.8 | 7.62 | 10.1 | 12.30 | 5.3 | 150-**PP**-314-01-899161 |
| 16 | 20.3 | 7.62 | 10.1 | 12.30 | 5.3 | 150-**PP**-316-01-899161 |
| 18 | 22.9 | 7.62 | 10.1 | 12.30 | 5.3 | 150-**PP**-318-01-899161 |
| 20 | 25.4 | 7.62 | 10.1 | 12.30 | 8.3 | 150-**PP**-320-01-899161 |
| 24 | 30.4 | 7.62 | 10.1 | 12.30 | 8.3 | 150-**PP**-324-01-899161 |
| 28 | 35.6 | 7.62 | 10.1 | 12.30 | 8.3 | 150-**PP**-328-01-899161 |
| 28 | 35.5 | 15.24 | 17.7 | 19.22 | 10.0 | 150-**PP**-628-01-899161 |
| 32 | 40.6 | 15.24 | 17.7 | 19.22 | 10.0 | 150-**PP**-632-01-899161 |
| 40 | 50.8 | 15.24 | 17.7 | 19.22 | 10.0 | 150-**PP**-640-01-899161 |
| 42 | 53.4 | 15.24 | 17.7 | 19.22 | 10.0 | 150-**PP**-642-01-899161 |

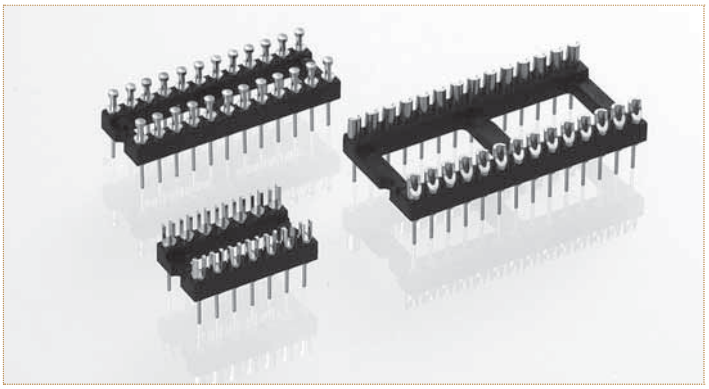
# DUAL-IN-LINE PIN HEADERS

## SLOTTED HEAD / TURRET / SOLDER CUP / OPEN FRAME / SOLDER TAIL

DIL headers for wiring applications.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR<br>(Black glass filled polyamide PA66T-GF25-FR for<br>160-PP-XXX-00-001101/R1 and<br>180-PP-XXX-00-001101/R1) |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| CONNECTING PIN Ø | 0.5 mm |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

Other plating on request (see page 178 for plating specs).
For complete part number replace **XX** with the code given below left.

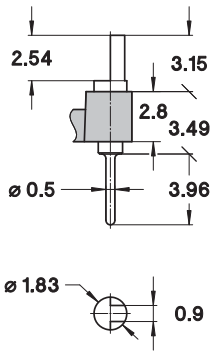



Fig. 1

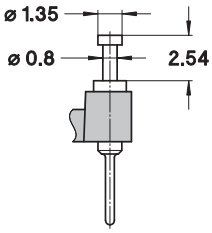



Fig. 2

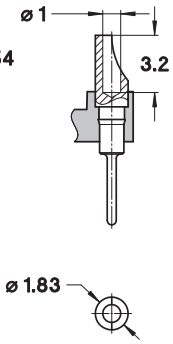
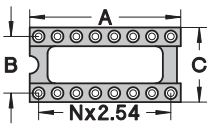



Fig. 3

## AVAILABLE VERSIONS

Replace 1**XX**-... in order code by

| ORDER CODE | DESCRIPTION | DIMENSIONS |
|---|---|---|
| 160 | Header with slotted head to accept wires or component leads | See Fig. 1 |
| 170 | Header with turret head | See Fig. 2 |
| 180 | Header with solder cup | See Fig. 3 |




| NO. OF POLES | A | B | C | SEE PAGE 128 | ORDER CODES |
|---|---|---|---|---|---|
| 10 | 12.6 | 5.08 | 7.6 | Fig. 1 | 1**XX**-**PP**-210-00-001101 |
| 4 | 5.0 | 7.62 | 10.1 | Fig. 2 | 1**XX**-**PP**-304-00-001101 |
| 6 | 7.6 | 7.62 | 10.1 | Fig. 3 | 1**XX**-**PP**-306-00-001101 |
| 8 | 10.1 | 7.62 | 10.1 | Fig. 4 | 1**XX**-**PP**-308-00-001101 |
| 10 | 12.6 | 7.62 | 10.1 | Fig. 5 | 1**XX**-**PP**-310-00-001101 |
| 12 | 15.2 | 7.62 | 10.1 | Fig. 6 | 1**XX**-**PP**-312-00-001101 |
| 14 | 17.7 | 7.62 | 10.1 | Fig. 7 | 1**XX**-**PP**-314-00-001101 |
| 16 | 20.3 | 7.62 | 10.1 | Fig. 8 | 1**XX**-**PP**-316-00-001101 |
| 18 | 22.8 | 7.62 | 10.1 | Fig. 9 | 1**XX**-**PP**-318-00-001101 |
| 20 | 25.3 | 7.62 | 10.1 | Fig. 10 | 1**XX**-**PP**-320-00-001101 |
| 22 | 27.8 | 7.62 | 10.1 | Fig. 11 | 1**XX**-**PP**-322-00-001101 |
| 24 | 30.4 | 7.62 | 10.1 | Fig. 12 | 1**XX**-**PP**-324-00-001101 |
| 28 | 35.5 | 7.62 | 10.1 | Fig. 13 | 1**XX**-**PP**-328-00-001101 |
| 20 | 25.4 | 10.16 | 12.6 | Fig. 14 | 1**XX**-**PP**-420-00-001101 |
| 22 | 27.8 | 10.16 | 12.6 | Fig. 15 | 1**XX**-**PP**-422-00-001101 |
| 24 | 30.4 | 10.16 | 12.6 | Fig. 16 | 1**XX**-**PP**-424-00-001101 |
| 28 | 35.5 | 10.16 | 12.6 | Fig. 17 | 1**XX**-**PP**-428-00-001101 |
| 32 | 40.6 | 10.16 | 12.6 | Fig. 18 | 1**XX**-**PP**-432-00-001101 |
| 10 | 12.7 | 15.24 | 17.7 | Fig. 19 | 1**XX**-**PP**-610-00-001101 |
| 24 | 30.5 | 15.24 | 17.7 | Fig. 20 | 1**XX**-**PP**-624-00-001101 |
| 28 | 35.5 | 15.24 | 17.7 | Fig. 21 | 1**XX**-**PP**-628-00-001101 |
| 32 | 40.6 | 15.24 | 17.7 | Fig. 22 | 1**XX**-**PP**-632-00-001101 |
| 36 | 45.7 | 15.24 | 17.7 | Fig. 23 | 1**XX**-**PP**-636-00-001101 |
| 40 | 50.8 | 15.24 | 17.7 | Fig. 24 | 1**XX**-**PP**-640-00-001101 |
| 42 | 53.3 | 15.24 | 17.7 | Fig. 25 | 1**XX**-**PP**-642-00-001101 |
| 48 | 60.9 | 15.24 | 17.7 | Fig. 26 | 1**XX**-**PP**-648-00-001101 |
| 50 | 63.5 | 15.24 | 17.7 | Fig. 27 | 1**XX**-**PP**-650-00-001101 |
| 52 | 66.0 | 15.24 | 17.7 | Fig. 28 | 1**XX**-**PP**-652-00-001101 |
| 50 | 63.5 | 22.86 | 25.3 | Fig. 29 | 1**XX**-**PP**-950-00-001101 |
| 52 | 66.0 | 22.86 | 25.3 | Fig. 30 | 1**XX**-**PP**-952-00-001101 |
| 64 | 81.2 | 22.86 | 25.3 | Fig. 31 | 1**XX**-**PP**-964-00-001101 |



Due to technical progress, all information provided is subject to change without prior notice.

# TO SOCKETS

## SOLDER TAIL / SURFACE MOUNT

Sockets for packages with contacts arranged on .200" (5.08 mm) and .230" (5.84 mm) diameter acc. to JEDEC TO-Series outlines.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |



Other plating on request (see page 178 for plating specs).

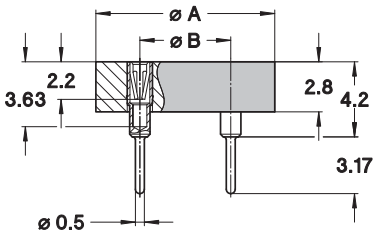



Fig. 1

## SOCKETS, SOLDER TAIL, FIG. 1

| NO. OF POLES | A | B | SEE | ORDER CODES |
|---|---|---|---|---|
| 3 | 10.0 | 5.08 | Fig. 3 | 917-**PP**-103-41-005101 |
| 4 | 10.0 | 5.08 | Fig. 4 | 917-**PP**-104-41-005101 |
| 8 | 10.0 | 5.08 | Fig. 5 | 917-**PP**-108-41-005101 |
| 8 | 10.0 | 5.84 | Fig. 6 | 917-**PP**-208-41-005101 |
| 10 | 10.0 | 5.84 | Fig. 7 | 917-**PP**-210-41-005101 |

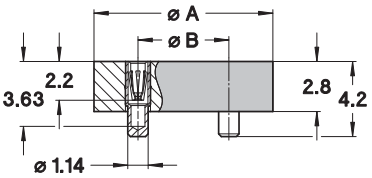



Fig. 2

## SOCKETS, SMD MOUNT, FIG. 2

| NO. OF POLES | A | B | SEE | ORDER CODES |
|---|---|---|---|---|
| 3 | 10.0 | 5.08 | Fig. 3 | 917-**PP**-103-41-053101* |
| 4 | 10.0 | 5.08 | Fig. 4 | 917-**PP**-104-41-053101* |
| 8 | 10.0 | 5.08 | Fig. 5 | 917-**PP**-108-41-053101* |
| 8 | 10.0 | 5.84 | Fig. 6 | 917-**PP**-208-41-053101* |
| 10 | 10.0 | 5.84 | Fig. 7 | 917-**PP**-210-41-053101* |

***Tape & Reel packaging:**
replace 101 by suffix 191 to part number. Other pin counts please consult. Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

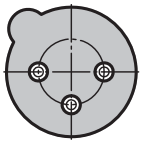


Fig. 3

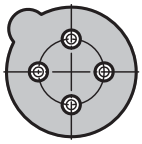


Fig. 4

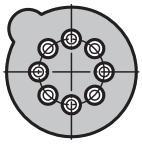


Fig. 5

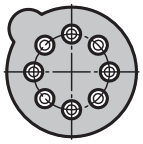


Fig. 6

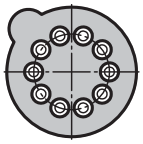


Fig. 7

# SPECIFIC APPLICATIONS SOCKETS

## SOLDER TAIL / STAGGERED DIL AND SIL SOCKETS

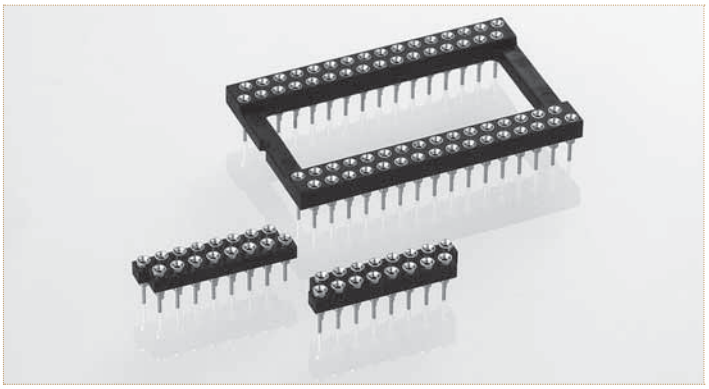
Quad-in-line sockets and staggered (zig-zag) strips are suitable for IC's with staggered double row Dual-in-line type pin patterns.

### TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. insertion 1 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

### ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |



Other plating on request (see page 178 for plating specs).

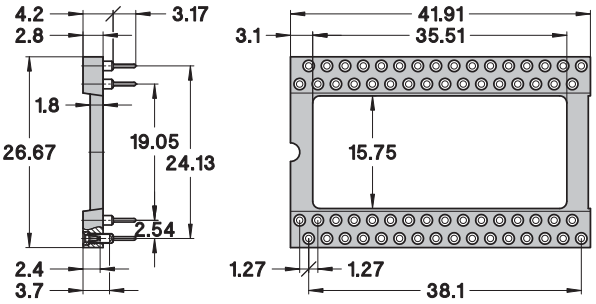



Fig. 1

### QUAD-IN-LINE SOCKET

| NO. OF POLES | SEE | ORDER CODES |
|---|---|---|
| 64 | Fig. 1 | 110-**PP**-064-01-505101 |

**Note:**
Suitable for quad-in-line packages with 19.05 / 23.50 mm row spacing acc. to JEDEC MO-030.
Quad-in-line socket layout requires 19.05 / 24.13 mm row spacing.

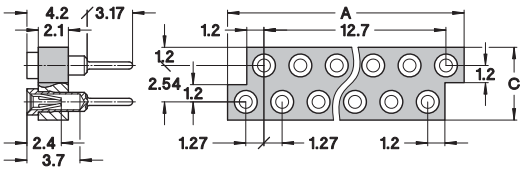



Fig. 2

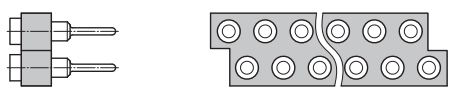


Fig. 3

### STAGGERED ZIG-ZAG STRIPS

| NO. OF POLES | A | C | VERSION | SEE | ORDER CODES |
|---|---|---|---|---|---|
| 14* | 19.00 | 5.0 | left | Fig. 2 | 410-**PP**-214-10-001101 |
| | | | right | Fig. 3 | 410-**PP**-214-10-002101 |
| 16 | 21.50 | 5.0 | left | Fig. 2 | 410-**PP**-216-10-001101 |
| | | | right | Fig. 3 | 410-**PP**-216-10-002101 |
| 20 | 26.57 | 5.0 | left | Fig. 2 | 410-**PP**-220-10-001101 |
| | | | right | Fig. 3 | 410-**PP**-220-10-002101 |
| 24 | 31.65 | 5.0 | left | Fig. 2 | 410-**PP**-224-10-001101 |
| | | | right | Fig. 3 | 410-**PP**-224-10-002101 |
| 28 | 36.73 | 5.0 | left | Fig. 2 | 410-**PP**-228-10-001101 |
| | | | right | Fig. 3 | 410-**PP**-228-10-002101 |
| 30 | 39.27 | 5.0 | left | Fig. 2 | 410-**PP**-230-10-001101 |
| | | | right | Fig. 3 | 410-**PP**-230-10-002101 |
| 40 | 52.00 | 5.0 | left | Fig. 2 | 410-**PP**-240-10-001101 |
| | | | right | Fig. 3 | 410-**PP**-240-10-002101 |

* 14-pin strips are not stackable end to end



Due to technical progress, all information provided is subject to change without prior notice.

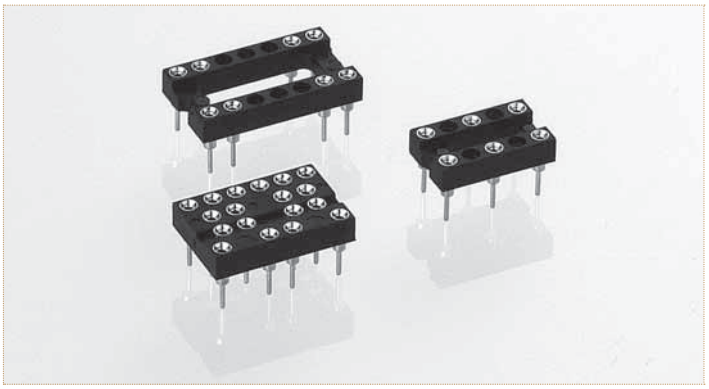
# SPECIFIC APPLICATIONS SOCKETS

## CRYSTAL, RELAY AND DISPLAY SOCKETS / SOLDER TAIL

Partially equipped DIL sockets and display sockets.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 127)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER)<br>(6 FINGER) | Beryllium copper (C17200)<br>(Series 510...504101) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 2 N typ. (0.7 N typ. 510...504101) insertion<br>1 N typ. (0.4 N typ. 510...504101) withdrawal<br>(polished steel gauge Ø 0.43 mm)<br>(6 finger: Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |



Other plating on request (see page 178 for plating specs).

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

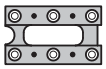
Fig. 1 

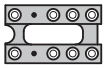
Fig. 2 

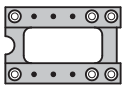
Fig. 3 

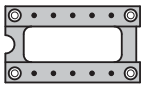
Fig. 4 

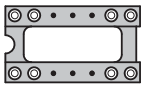
Fig. 5 

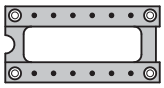
Fig. 6 

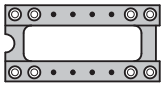
Fig. 7 

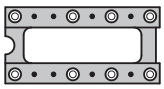
Fig. 8 

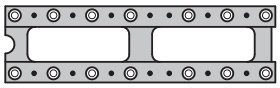
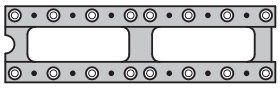
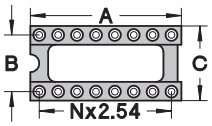
Fig. 9 

Fig. 10 

## PARTIALLY EQUIPPED DIL SOCKETS




| NO. OF POLES TOTAL EQUIPPED | A | B | C | SEE | ORDER CODES |
|---|---|---|---|---|---|
| 10 / 6 | 12.6 | 5.08 | 7.6 | Fig. 1 | 110-**PP**-210-01-742101 |
| 10 / 8 | 12.6 | 5.08 | 7.6 | Fig. 2 | 110-**PP**-210-01-839101 |
| 12 / 6 | 15.2 | 7.62 | 10.1 | Fig. 3 | 110-**PP**-312-01-680101 |
| 14 / 4 | 17.7 | 7.62 | 10.1 | Fig. 4 | 110-**PP**-314-10-001101 |
| 14 / 8 | 17.7 | 7.62 | 10.1 | Fig. 5 | 110-**PP**-314-10-002101 |
| 16 / 4 | 20.3 | 7.62 | 10.1 | Fig. 6 | 110-**PP**-316-01-822101 |
| 16 / 8 | 20.3 | 7.62 | 10.1 | Fig. 7 | 110-**PP**-316-01-931101 |
| 16 / 8 | 20.3 | 7.62 | 10.1 | Fig. 8 | 110-**PP**-316-10-003101 |
| 28 / 14 | 35.5 | 7.62 | 10.1 | Fig. 9 | 110-**PP**-328-01-777101 |
| 28 / 16 | 35.5 | 7.62 | 10.1 | Fig. 10 | 110-**PP**-328-01-762101 |

Other pin count and arrangement please consult

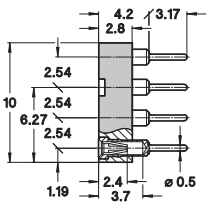



Fig. 11

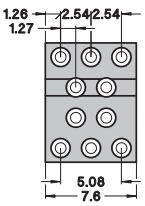
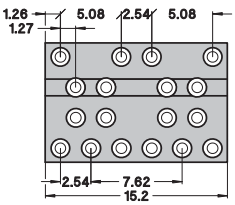



Fig. 12

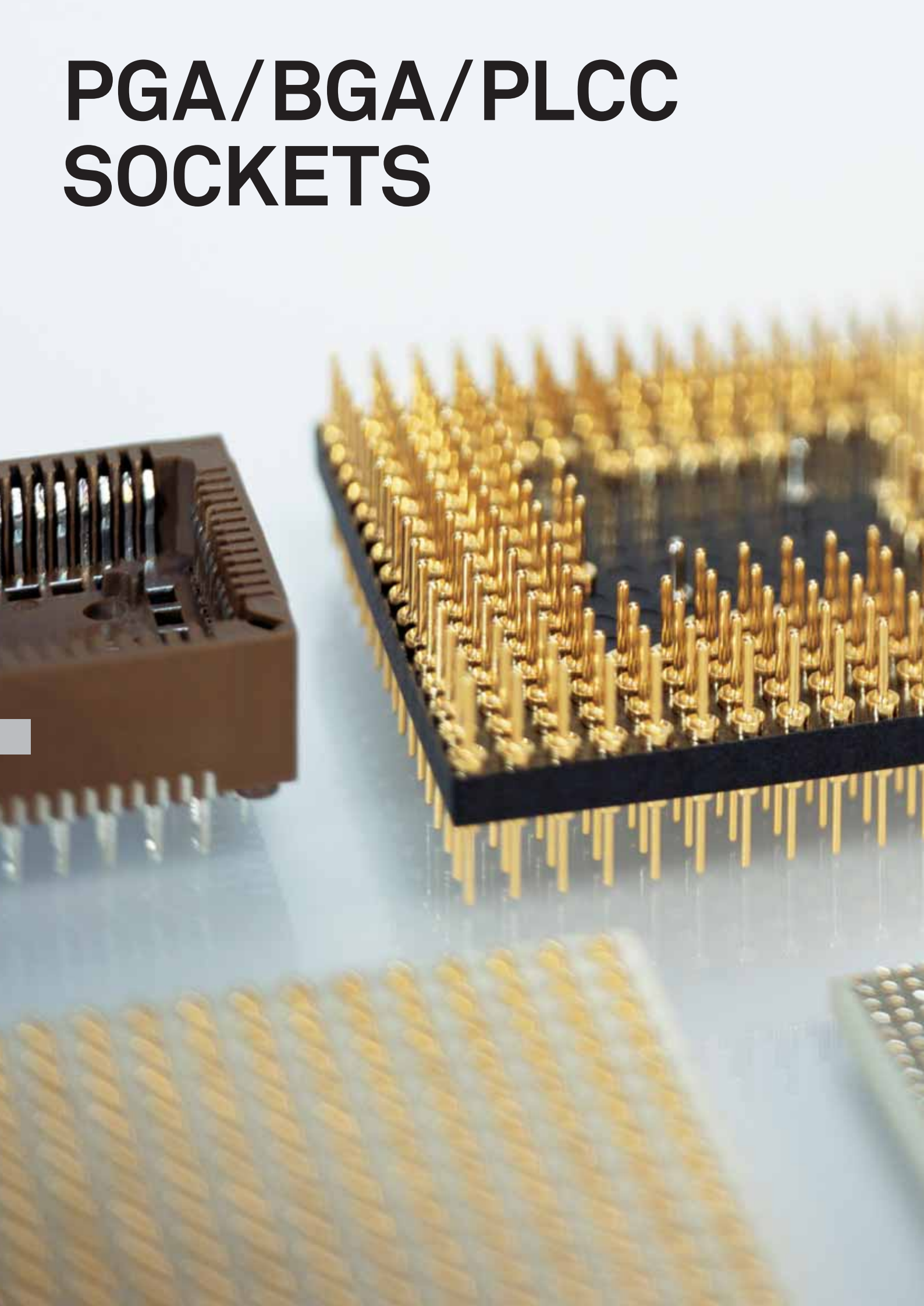


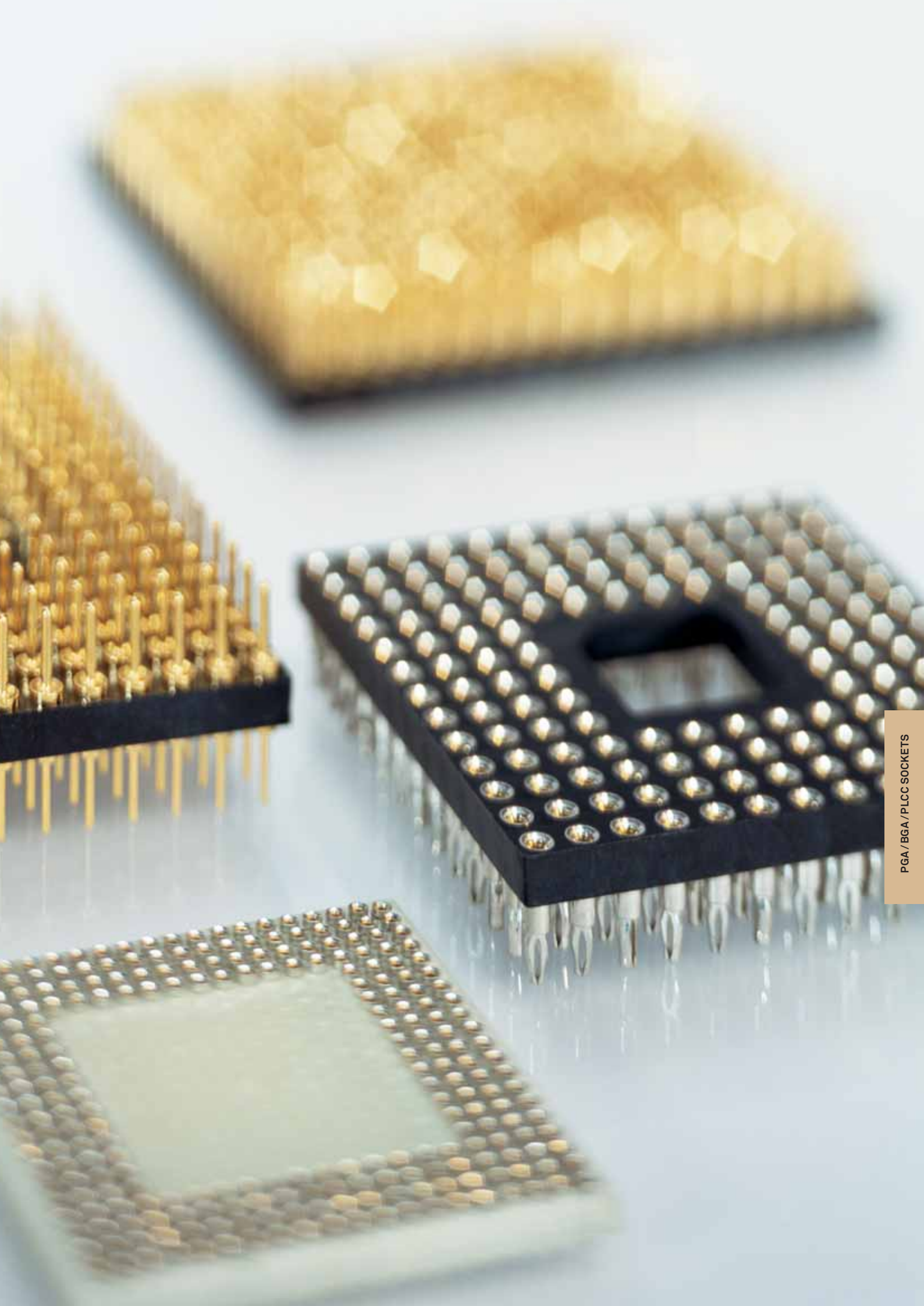

## DISPLAY SOCKETS FOR 7 SEGMENT DISPLAYS (1 OR 2 DIGITS)

| NO. OF POLES | SEE | ORDER CODES |
|---|---|---|
| 10 | Fig. 11 | 510-**PP**-010-01-504101 |
| 18 | Fig. 12 | 510-**PP**-018-01-504101 |

Please consult for other display sockets, single or multidigits

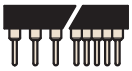
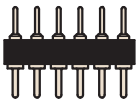
# PGA/BGA/PLCC SOCKETS





# QUICK SELECTOR CHART

PGA / BGA / PLCC

| GRID | | PGA | | | BGA | | PLCC |
|---|---|---|---|---|---|---|---|
| | | 2.54 mm | INTERSTITIAL | 1.27 mm | 1.27 mm | 1 mm | |
| **SOCKETS** | | **SEE PAGE** | | | | | |
| Solder tail |  | 156 | 161 | 165 | | | |
| |  | | | | | | 173 |
| Surface mount |  | 156 | 161 | 165 | 166 | 169 | |
| |  | | | | | | 172 |
| Solderless compliant press-fit |  | 157 | 161 | | | | |
| Carrier |  | 158 | 162 | | | | |
| Interconnect pin |  | 158 | 162 | 165 | 167 | | |
| Interconnect pin surface mount |  | | | | 167 | 169 | |
| BGA pin-adapter |  | | | | 166 | 169 | |



Due to technical progress, all information provided is subject to change without prior notice.

# PGA / BGA / PLCC

## GENERAL SPECIFICATIONS

The values listed below are general specs applying for PRECI-DIP PGA, BGA and PLCC sockets. Please see individual catalog page for additional and product specific technical data.

| | |
|---|---|
| **OPERATING TEMPERATURE RANGE** | -55 ... +125 °C |
| **CLIMATIC CATEGORY (IEC)** | 55/125/21 |
| **OPERATING HUMIDITY RANGE** | Annual mean 75% |
| **MAX. WORKING VOLTAGE** | 100 VRMS/150 VDC (2.54 mm grid) |

PRECI-DIP connectors designated « Series Preci-Dip Connector » are recognized by UL LLC and listed under « Connectors for Use in Data, Signal, Control and Power Applications », File Nr. E174442.

## MECHANICAL CHARACTERISTICS

| | |
|---|---|
| **CLIP RETENTION** | Min. 40 N (no displacement under axial force applied) |
| **CONTACT RETENTION** | Min. 3.3 N acc. to MIL-DTL-83734, pt 4.6.4.2 |

## ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| **INSULATION RESISTANCE BETWEEN ANY TWO ADJACENT CONTACTS** | Min. 10'000 MΩ at 500 VAC |
| **CAPACITANCE BETWEEN ANY TWO ADJACENT CONTACTS** | Max. 1 pF (PLCC max. 2 pF) |
| **SELF INDUCTANCE PER CONTACT** | Max. 2 nH |

## ENVIRONMENTAL CHARACTERISTICS

The sockets withstand the following environmental tests without mechanical and electrical defects:

- Dry heat steady state IEC 60512-11-9.11i / 60068-2-2.Bb: 125 °C, 16 h
- Damp heat cyclic IEC 60512-11-12.11m / 60068-2-30.Db: 25/55 °C, 90 – 100 %rH, 1 cycle of 24 h
- Cold steady state IEC 60512-11-10.11j / 60068-2-1.A: -55 °C, 2 h
- Thermal shock IEC 60512-11-4.11d / 60068-2-14.Na: -55/125 °C, 5 cycles 30 min.
- Sinusoidal vibrations IEC 60512-6-4.6d / 60068-2-6.Fc: 10 to 500 Hz, 10 g, 1 octave/min., 10 cycles for each axis
- Shock IEC 60512-6-3.6c / 60068-2-27.Ea: 50 g, 11 ms, 3 shocks in three axis

During the above two tests, no contact interruption >50 ns does appear.

- Solderability J-STD-002A, Test A, 245 °C, 5 s, solder alloy SnAg3.8Cu0.7
- Resistance to soldering heat J-STD-020C, 260 °C, 20 s
- Moisture sensitivity J-STD-020C level 1

## SOLDERLESS COMPLIANT PRESS-FIT CHARACTERISTICS

**PRESS-FIT CHARACTERISTICS MEASURED ACC. TO IEC 60352-5**

| | |
|---|---|
| • Press-in force: | 90 N max. (at min. hole dia.) / 65 N typ. |
| • Push-out force: | 30 N min. (at max. hole dia.) / 50 N typ. |
| • Push-out 3rd cycle: | 20 N min. (at max. hole dia.) |

**PCB HOLE DIMENSIONS**

| | |
|---|---|
| • 2.54 mm grid | Finished hole Ø: 1 + 0.09/-0.06 mm<br>Drilled hole Ø: 1.15 ± 0.025 mm |
| • Interstitial grid | Finished hole Ø: 0.7 + 0.09/-0.06 mm<br>Drilled hole Ø: 0.8 ± 0.02 mm |

**PCB HOLE PLATING**

| PCB surface finish | Hole plating |
|---|---|
| • Tin | 5-15 µm tin over min. 25 µm copper |
| • Copper | min. 25 µm copper |
| • Gold over nickel | 0.05-0.2 µm gold over 2.5-5 µm nickel over min. 25 µm copper |

# PIN GRID ARRAY SOCKETS

**SOLDER TAIL / SURFACE MOUNT**

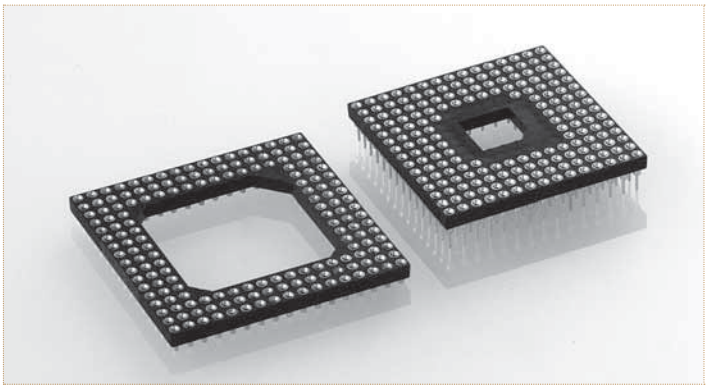
Pin grid array sockets, standard solder version and surface mount with floating contacts.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 0.7 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |



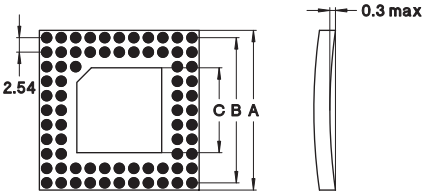
Other plating on request (see page 178 for plating specs).
Replace **NNN** with the number of poles and **XX-XXX** with body size and layout numbers as indicated on pages 159 to 160.
For example a 17x17 pin configuration with window and 168 contacts as shown on page 160 becomes 510-83-**168**-**17**-**101**101.

**Options:** please consult for availability
- PGA sockets with optional standoffs
- PGA sockets with solder tails, length 4.2 mm
- PGA sockets with low profile contacts and solder tails of 2.8 mm length
- PGA interconnect sockets with other contact lengths.

## DIMENSIONS

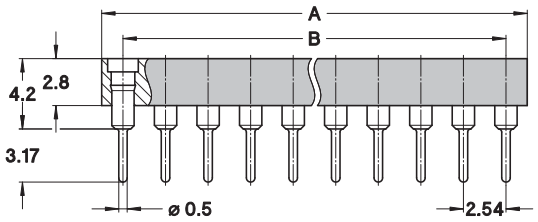
Calculate with n1 = number of contacts in one line and n2 = characteristic size of the window

A = n1x2.54
B = (n1-1)x2.54
C = (n2x2.54)-0.40



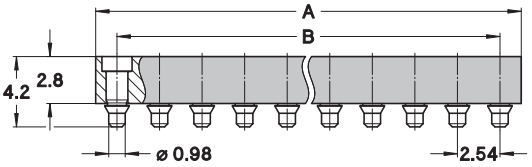

### 510-**PP**-**NNN**-**XX**-**XXX**101

PGA sockets with standard solder tails, length 3.17 mm.




### 514-**PP**-**NNN**-**XX**-**XXX**117

PGA sockets with self-aligning SMD floating contacts.
Contact diameter of soldering end 0.98 mm, allowing PCB pads as small as 1.1 mm.






Due to technical progress, all information provided is subject to change without prior notice.

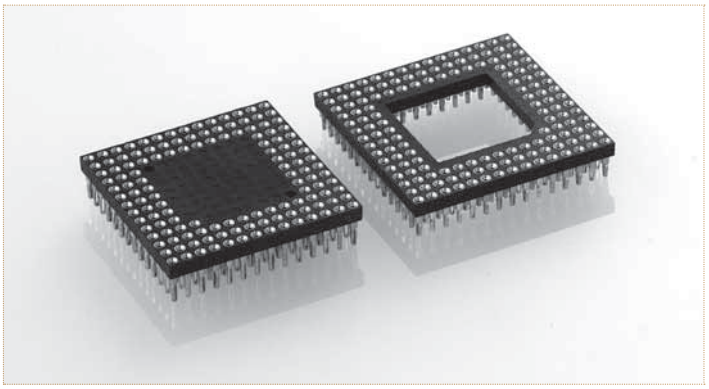
# PIN GRID ARRAY SOCKETS

## PRESS-FIT TERMINATIONS

Pin grid array sockets with compliant press-fit terminations.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Bronze CuSn4Pb4Zn4 (C54400) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 0.7 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

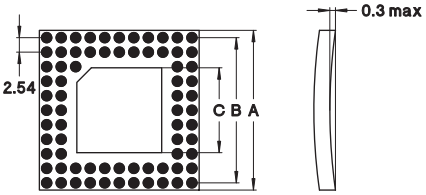
| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

Other plating on request (see page 178 for plating specs).
Replace **NNN** with the number of poles and **XX-XXX** with body size and layout numbers as indicated on pages 159 to 160.
For example a 17x17 pin configuration with window and 168 contacts as shown on page 160 becomes 546-83-**168**-**17**-**101**136.

## DIMENSIONS

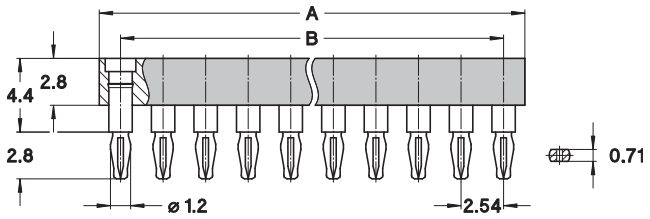
Calculate with n1 = number of contacts in one line and n2 = characteristic size of the window

A = n1x2.54
B = (n1-1)x2.54
C = (n2x2.54)-0.40



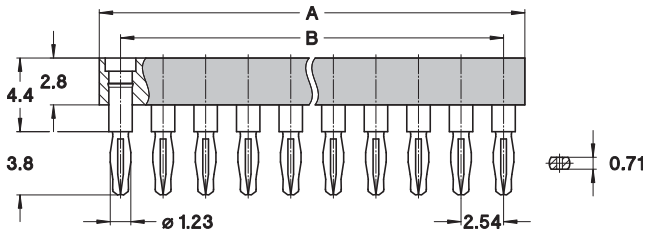

### 546-**PP**-**NNN**-**XX**-**XXX**136

PGA sockets with solderless compliant press-fit terminations for 1.5 to 2.0 mm PCB thickness.
Hole diameter 1 (+0.09/-0.06) mm after metallization (Drill diameter 1.15±0.025 mm).




### 546-**PP**-**NNN**-**XX**-**XXX**135

PGA sockets with solderless compliant press-fit terminations for 2.1 to 3.2 mm PCB thickness.
Hole diameter 1 (+0.09/-0.06) mm after metallization (Drill diameter 1.15±0.025 mm).



# PIN GRID ARRAY SOCKETS

## INTERCONNECT PIN AND CARRIERS

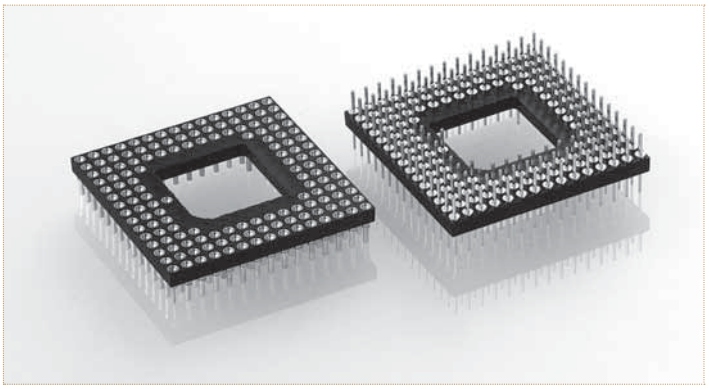
Pin grid array sockets, interconnect pin and carriers with disposable plastic body.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (3 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 0.8 N typ. insertion 0.4 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 1'000 VRMS |

## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 (Serie 550) | 0.25 µm gold | 0.25 µm gold |
| 80 (Serie 550) | Tin | Tin |
| **PP PLATING CODE** | **SLEEVE** | **CLIP** |
| 87 (Serie 614) | Tin | Flash gold |
| 83 (Serie 614) | Tin | 0.75 µm gold |



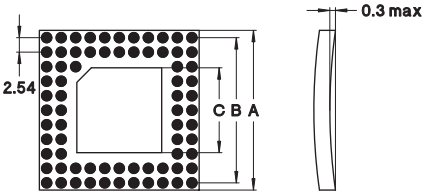
Other plating on request (see page 178 for plating specs).
Replace **NNN** with the number of poles and **XX-XXX** with body size and layout numbers as indicated on pages 159 to 160.
For example a 17x17 pin configuration with window and 168 contacts as shown on page 160 becomes 550-10-**168**-**17**-**101**101.

**Options:** please consult for availability
- PGA interconnect sockets with other contact lengths
- PGA carrier sockets with other contacts.

## DIMENSIONS

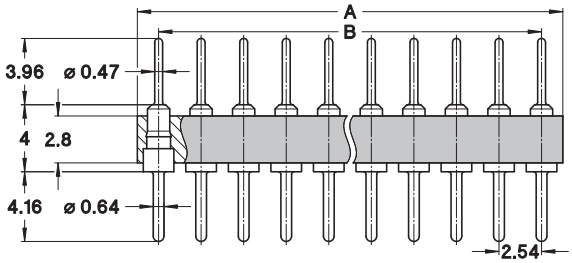
Calculate with n1 = number of contacts in one line and n2 = characteristic size of the window

A = n1x2.54
B = (n1-1)x2.54
C = (n2x2.54)-0.40



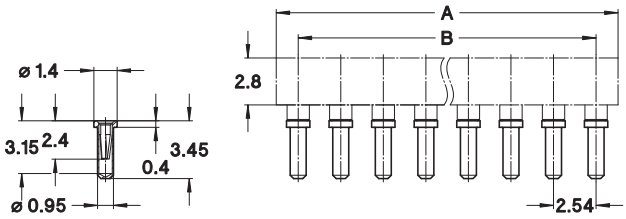

### 550-**PP**-**NNN**-**XX**-**XXX**101

PGA interconnect sockets with through hole solder tails and connecting pin Ø 0.47 mm.




### 614-**PP**-**NNN**-**XX**-**XXX**112

PGA carrier sockets with disposable plastic body.
Low profile ultra thin contacts with solder termination Ø 0.95 mm that requires Ø 1 mm holes in PCB.





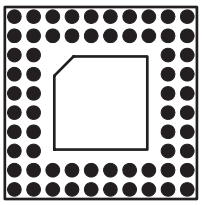

Due to technical progress, all information provided is subject to change without prior notice.

# PIN GRID ARRAY SOCKETS

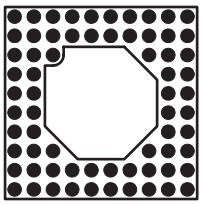
**2.54 mm GRID / FOOTPRINTS / TOP VIEW**



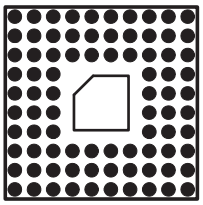
**5x5**
...-012-05-001...



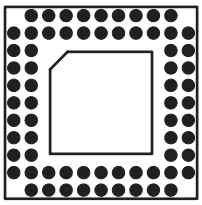
**10x10**
...-064-10-051...



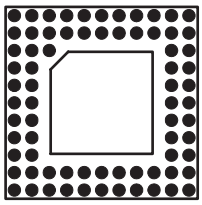
**10x10**
...-068-10-061...



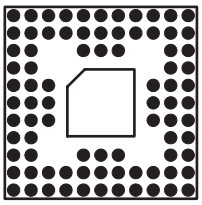
**10x10**
...-084-10-031...



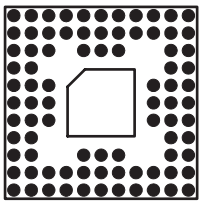
**11x11**
...-068-11-061...



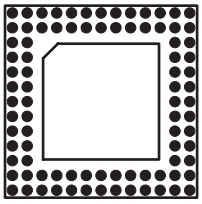
**11x11**
...-073-11-061...



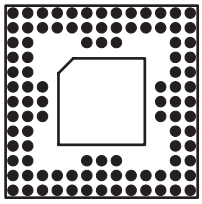
**11x11**
...-084-11-042...



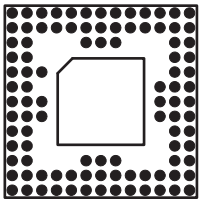
**11x11**
...-085-11-041...



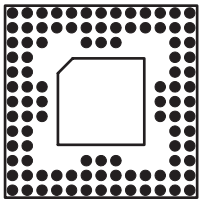
**13x13**
...-088-13-081...



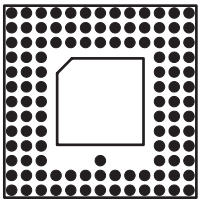
**13x13**
...-100-13-062...



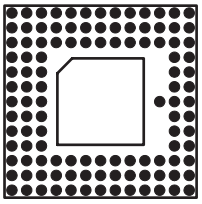
**13x13**
...-100-13-063...



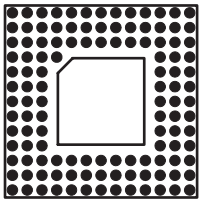
**13x13**
...-101-13-061...



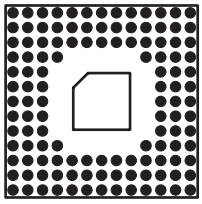
**13x13**
...-114-13-061...



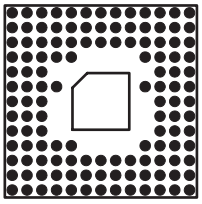
**13x13**
...-114-13-062...



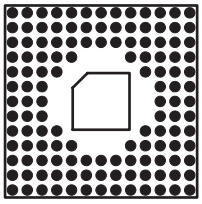
**13x13**
...-121-13-061...



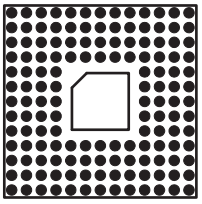
**13x13**
...-124-13-041...



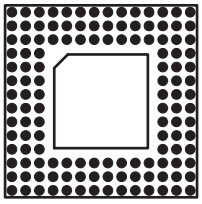
**13x13**
...-128-13-041...



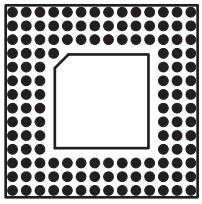
**13x13**
...-132-13-041...



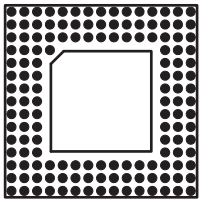
**13x13**
...-144-13-041...



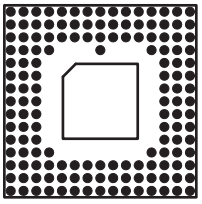
**14x14**
...-132-14-071...



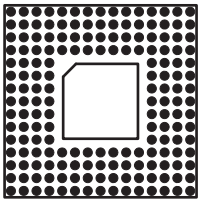
**14x14**
...-133-14-071...



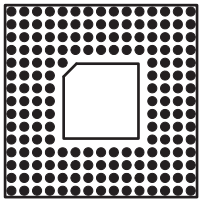
**15x15**
...-145-15-081...



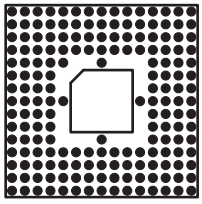
**15x15**
...-149-15-063...



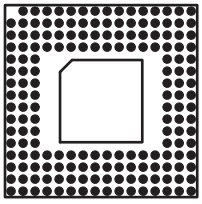
**15x15**
...-176-15-061...



**15x15**
...-177-15-061...



**15x15**
...-181-15-051...



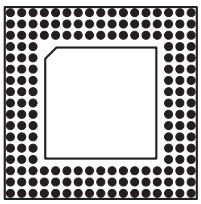
**16x16**
...-175-16-072...



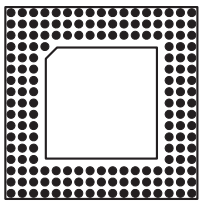
Due to technical progress, all information provided is subject to change without prior notice.

# PIN GRID ARRAY SOCKETS

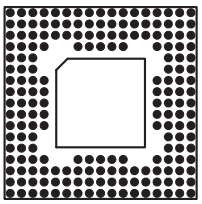
**2.54 mm GRID / FOOTPRINTS / TOP VIEW**



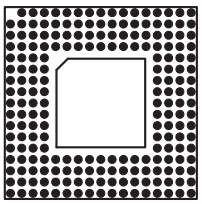
**17x17**
...-168-17-101...



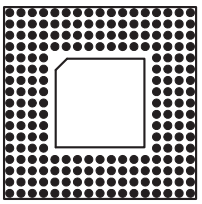
**17x17**
...-169-17-101...



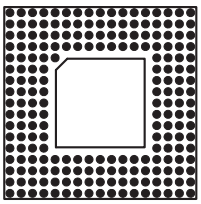
**17x17**
...-192-17-081...



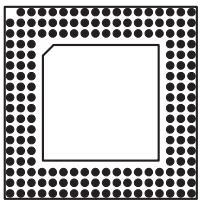
**17x17**
...-207-17-081...



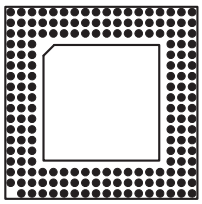
**17x17**
...-208-17-081...



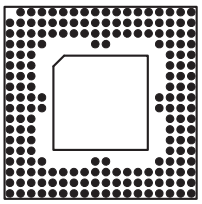
**17x17**
...-209-17-081...



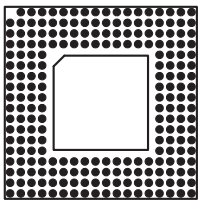
**18x18**
...-179-18-111...



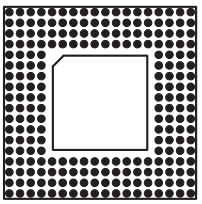
**18x18**
...-179-18-112...



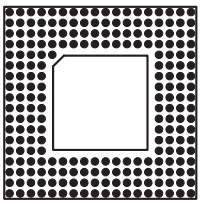
**18x18**
...-191-18-091...



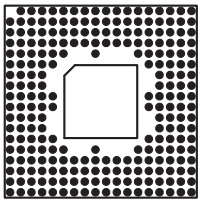
**18x18**
...-223-18-091...



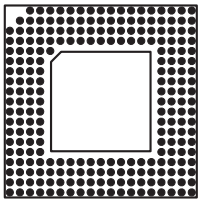
**18x18**
...-224-18-091...



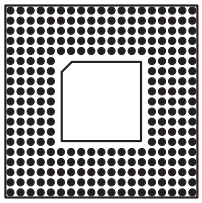
**18x18**
...-225-18-091...



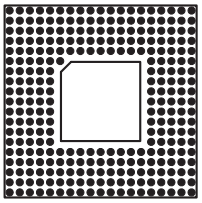
**18x18**
...-241-18-071...



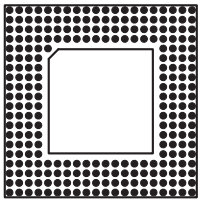
**19x19**
...-238-19-101...



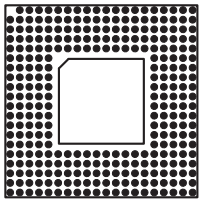
**19x19**
...-280-19-081...



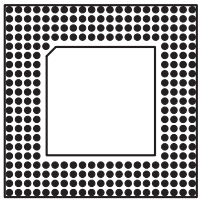
**19x19**
...-281-19-081...



**20x20**
...-257-20-111...



**20x20**
...-299-20-091...



**21x21**
...-273-21-121...



Due to technical progress, all information provided is subject to change without prior notice.

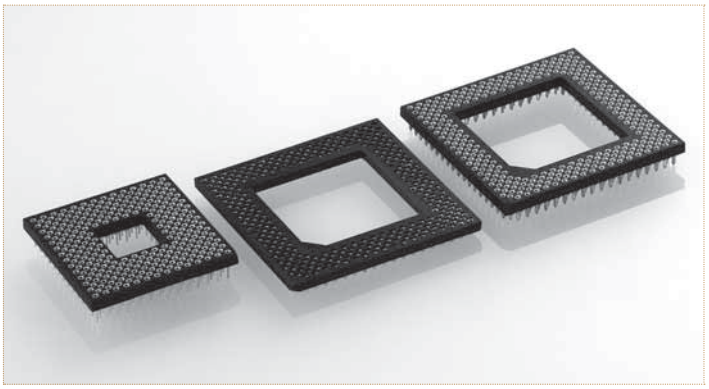
# PIN GRID ARRAY SOCKETS

**INTERSTITIAL / SOLDER TAIL / SURFACE MOUNT PRESS-FIT TERMINATIONS**

Pin grid array sockets with interstitial contact rows, solder tails, surface mount floating contacts and solderless compliant.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE | Brass CuZn36Pb3 (C36000)<br>(Bronze CuSn4Pb4Zn4 (C54400) for press-fit contacts) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 0.4 N typ. insertion 0.2 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 700 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 | Tin | Flash gold |
| 83 | Tin | 0.75 µm gold |

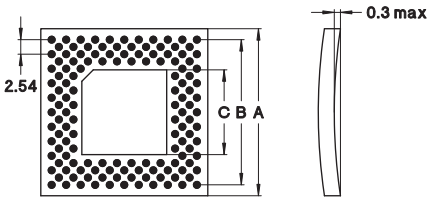
Other plating on request (see page 178 for plating specs).
Replace **NNN** with the number of poles and **XX-XXX** with body size and layout numbers as indicated on pages 163 to 164.
For example a 19x19 pin configuration with window and 296 contacts as shown on page 163 becomes 517-83-**296**-**19**-**131**111.

**Options:** please consult for availability
- PGA sockets with optional standoffs.

## DIMENSIONS

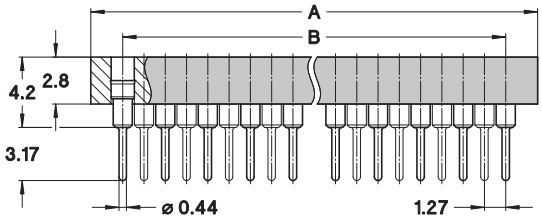
Calculate with n1 = number of contacts on the external row and n2 = characteristic size of the window

A = (n1x2.54)+1.30
B = (n1-1)x2.54
C = (n2x2.54)-0.40



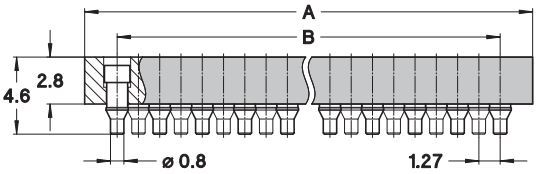

### 517-PP-NNN-XX-XXX111

Interstitial PGA sockets with through hole solder tails, length 3.17 mm.



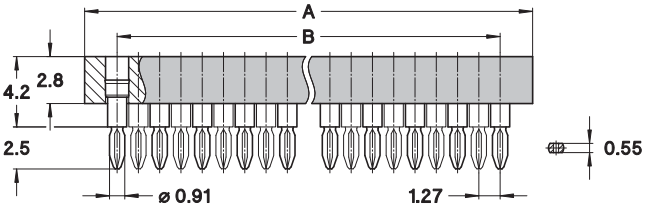

### 514-PP-NNN-XX-XXX154

Interstitial PGA sockets with self-aligning SMD floating contacts. Contact diameter of soldering end 0.8 mm allowing PCB pads with 0.9 mm diameter.




### 546-PP-NNN-XX-XXX147

Interstitial PGA sockets with solderless compliant press-fit terminations for 1.2 to 2.5 mm PCB thickness.
Hole diameter 0.7 (+0.07/-0.05) mm after metallization (Drill diameter 0.85±0.025 mm).



# PIN GRID ARRAY SOCKETS

**INTERSTITIAL / INTERCONNECT PIN AND CARRIER**

Pin grid array sockets with intersitial contact rows, interconnect pin and carriers with disposable plastic body.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Black glass filled polyester PCT-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE / PIN | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (3 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.40 to 0.56 mm |
| FORCES | 0.3 N typ. insertion 0.15 N typ. withdrawal (polished steel gauge Ø 0.46 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 700 VRMS |

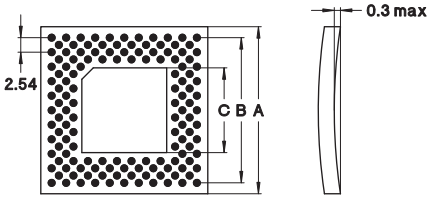
## ORDERING INFORMATION ROHS COMPLIANT PARTS

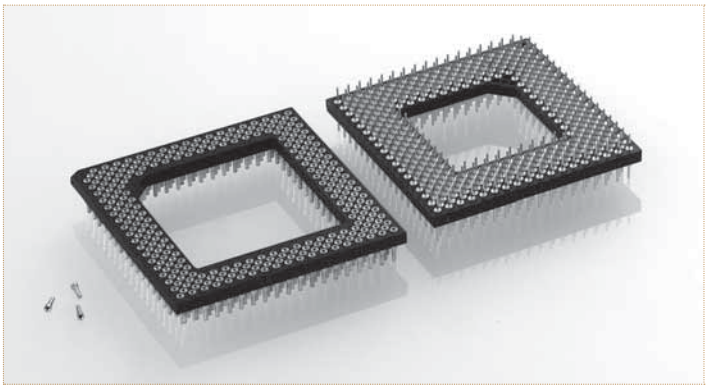
| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 (Serie 550) | 0.25 µm gold | 0.25 µm gold |
| 80 (Serie 550) | Tin | Tin |
| **PP PLATING CODE** | **SLEEVE** | **CLIP** |
| 87 (Serie 614) | Tin | Flash gold |
| 83 (Serie 614) | Tin | 0.75 µm gold |

## DIMENSIONS

Calculate with n1 = number of contacts on the external row and n2 = characteristic size of the window

A = (n1x2.54)+1.30
B = (n1-1)x2.54
C = (n2x2.54)-0.40



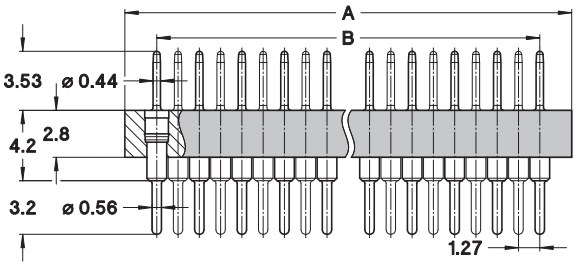



Other plating on request (see page 178 for plating specs).
Replace **NNN** with the number of poles and **XX-XXX** with body size and layout numbers as indicated on pages 163 to 164.
For example a 19x19 pin configuration with window and 296 contacts as shown on page 163 becomes 550-10-**296**-**19**-**131**135.

**Options:** please consult for availability
- PGA pin header interconnect sockets with other contact lengths
- PGA carrier sockets with other contacts.

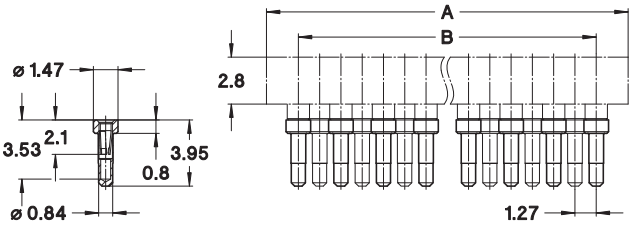
### 550-**PP**-**NNN**-**XX**-**XXX**135

Interstitial PGA interconnect sockets with through hole solder tails and connecting pin Ø 0.44 mm.




### 614-**PP**-**NNN**-**XX**-**XXX**144

Interstitial PGA carrier sockets with disposable plastic body and low profile, ultra-thin contacts with Ø 0.84 mm that requires Ø min 0.9 mm PCB holes.

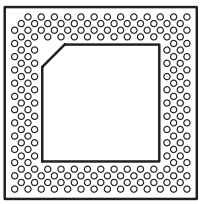




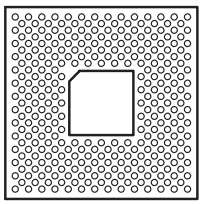

Due to technical progress, all information provided is subject to change without prior notice.

# PIN GRID ARRAY SOCKETS

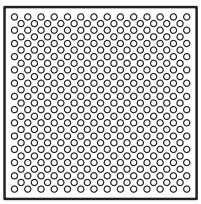
## INTERSTITIAL / FOOTPRINTS / TOP VIEW



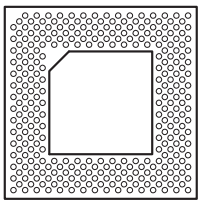
**14x14**
...-183-14-091...



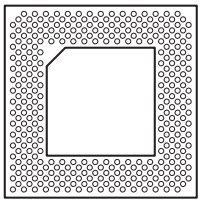
**14x14**
...-304-14-051...



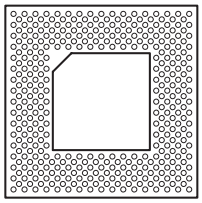
**14x14**
...-365-14-000...



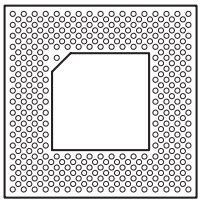
**16x16**
...-299-16-091...



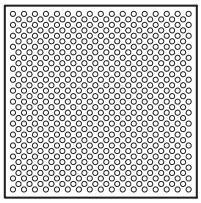
**17x17**
...-321-17-101...



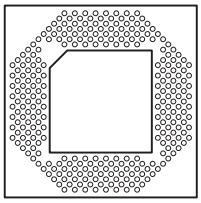
**17x17**
...-364-17-091...



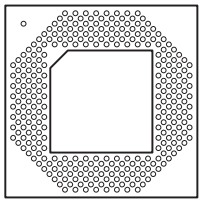
**17x17**
...-365-17-091...



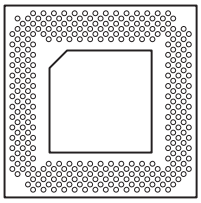
**17x17**
...-545-17-000...



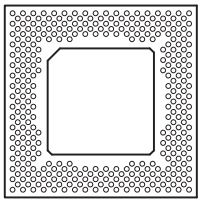
**18x18**
...-280-18-101...



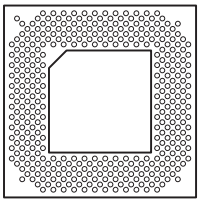
**18x18**
...-293-18-101...



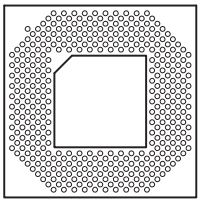
**18x18**
...-305-18-101...



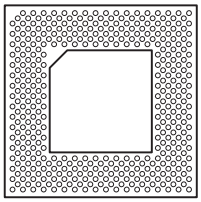
**18x18**
...-325-18-111...



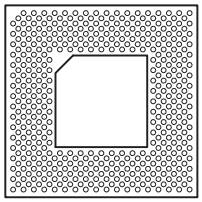
**18x18**
...-361-18-101...



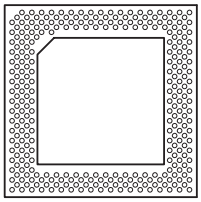
**18x18**
...-369-18-091...



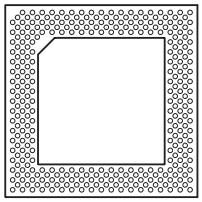
**18x18**
...-391-18-101...



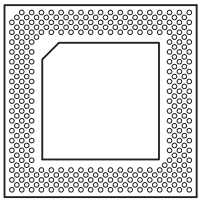
**18x18**
...-431-18-091...



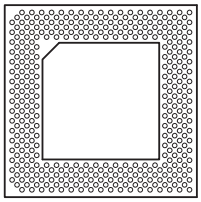
**19x19**
...-296-19-131...



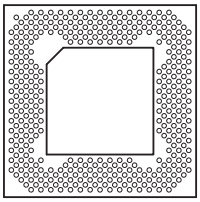
**19x19**
...-320-19-131...



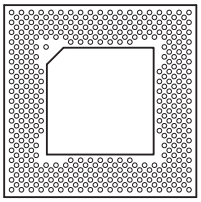
**19x19**
...-321-19-121...



**19x19**
...-370-19-121...



**19x19**
...-372-19-111...



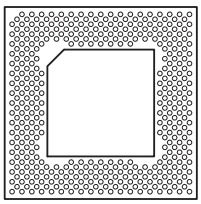
**19x19**
...-401-19-111...



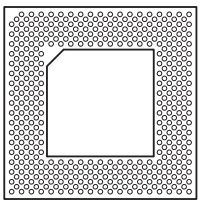
Due to technical progress, all information provided is subject to change without prior notice.

# PIN GRID ARRAY SOCKETS

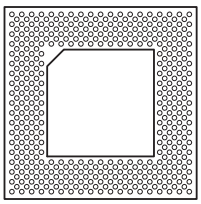
## INTERSTITIAL / FOOTPRINTS / TOP VIEW



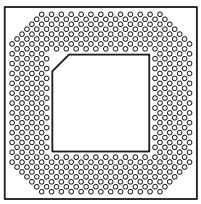
**19x19**
...-403-19-111...



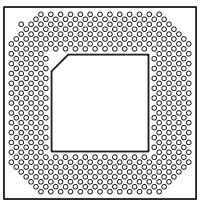
**19x19**
...-419-19-111...



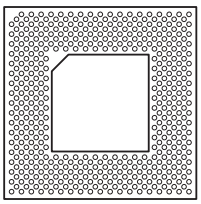
**19x19**
...-420-19-111...



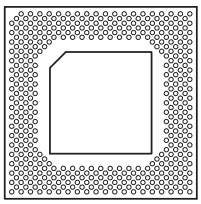
**19x19**
...-428-19-101...



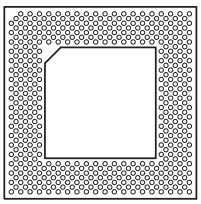
**19x19**
...-429-19-101...



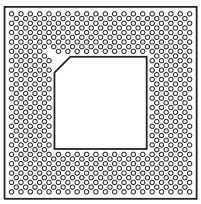
**19x19**
...-463-19-101...



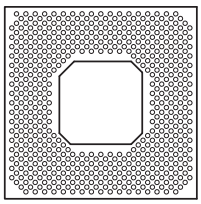
**20x20**
...-411-20-111...



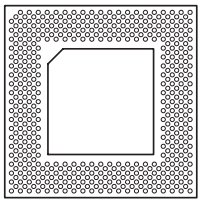
**20x20**
...-447-20-121...



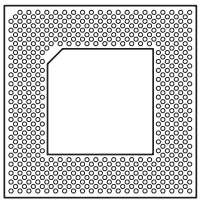
**20x20**
...-539-20-101...



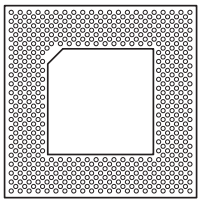
**20x20**
...-557-20-091...



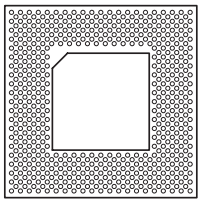
**21x21**
...-475-21-121...



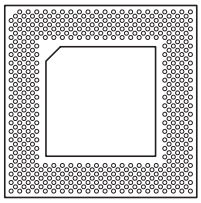
**21x21**
...-528-21-121...



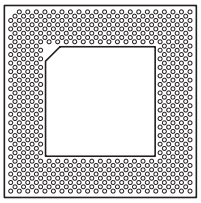
**21x21**
...-529-21-121...



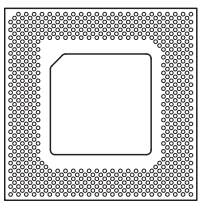
**21x21**
...-565-21-111...



**22x22**
...-503-22-131...



**22x22**
...-559-22-131...



**24x24**
...-599-54-131...



Due to technical progress, all information provided is subject to change without prior notice.

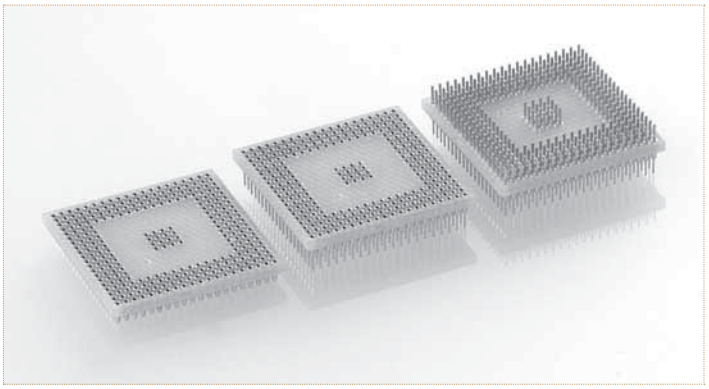
# MICRO PIN GRID ARRAY SOCKETS

**1.27 mm GRID / SOLDER TAIL / SURFACE MOUNT / INTERCONNECT PIN**

Micro pin grid array sockets (µPGA) with contacts placed on 1.27 mm grid, solder tail, surface mount and interconnect pin.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Glass-epoxy laminate FR4 |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE / PIN | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (6 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.30 to 0.35 mm |
| FORCES | 0.2 N typ. insertion 0.15 N typ. withdrawal (polished steel gauge Ø 0.3 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 77 (Serie 518) | Flash gold | Flash gold |
| **PP PLATING CODE** | **TERMINATION** | **CONNECTING PIN** |
| 10 (Serie 558) | 0.25 µm gold | 0.25 µm gold |

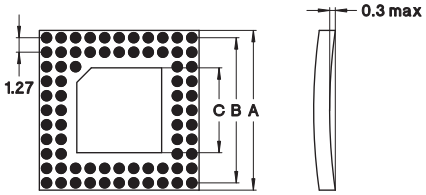
Other plating on request (see page 178 for plating specs).
Replace **NNN** with the number of poles and **XX-XXX** with body size and layout numbers as indicated on page 168.
For example a 26x26 pin configuration with window and 478 contacts as shown on page 168 becomes 518-77-**478**M**26**-**131**105.

**Options:** please consult for availability
- µPGA interconnect headers for SMD mount.

## DIMENSIONS

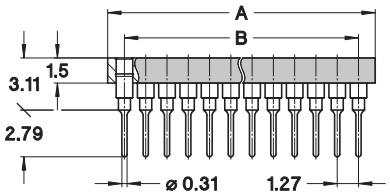
Calculate with n1 = number of contacts in one line and n2 = characteristic size of the window

A = (n1x1.27)+1.27
B = (n1-1)x1.27
C = (n2x1.27)-0.40



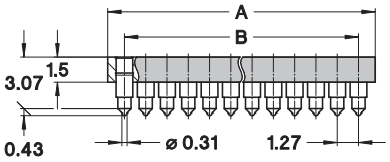

### 518-77-**NNN**M**XX**-**XXX**105

PGA sockets 1.27 mm grid with through hole solder tails length 2.79 mm.



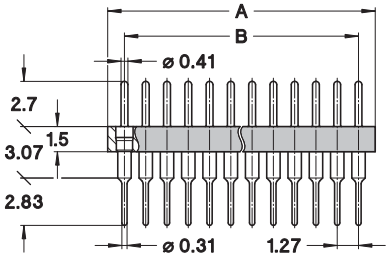

### 518-77-**NNN**M**XX**-**XXX**106

PGA sockets 1.27 mm grid, surface mount.
Contact diameter of soldering end 0.31 mm allowing PCB pads with 0.4 mm diameter.




### 558-10-**NNN**M**XX**-**XXX**101

PGA 1.27 mm grid, interconnect sockets with through hole solder tail and connecting pin Ø 0.31 mm.



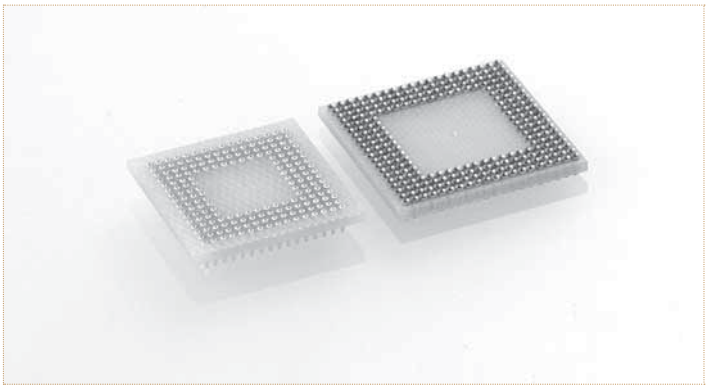
# BALL GRID ARRAY SOCKETS

**1.27 mm GRID / SURFACE MOUNT / SOCKET AND ADAPTER**

Ball grid array sockets and adapters, surface mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Glass-epoxy laminate FR4 |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE / PIN | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (4 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.36 to 0.46 mm |
| FORCES | 0.3 N typ. insertion 0.15 N typ. withdrawal (polished steel gauge Ø 0.43 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 87 (Serie 514) | Tin | Flash gold |
| 83 (Serie 514) | Tin | 0.75 µm gold |
| **PP PLATING CODE** | **TERMINATION** | **CONNECTING PIN** |
| 10 (Serie 550) | 0.25 µm gold | 0.25 µm gold |
| 80 (Serie 550) | Tin | Tin |

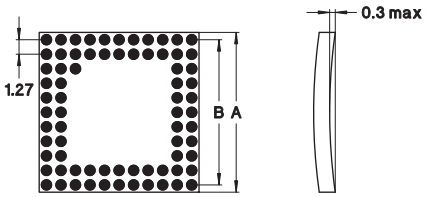
Other plating on request (see page 178 for plating specs).
Replace **NNN** with the number of poles and **XX-XXX** with body size and layout numbers as indicated on page 168.
For example a 20x20 pin configuration with 256 contacts as shown on page 168 becomes 514-83-**256**M**20**-**001**148.

## DIMENSIONS

Calculate with n1 = number of contacts in one line

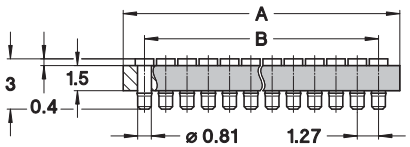
for sockets
A = (n1x1.27)+1.27
B = (n1-1)x1.27

for adapters
A = (n1x1.27)+3.27
B = (n1-1)x1.27



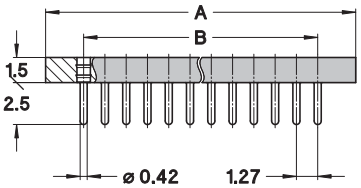

### 514-**PP**-**NNN**M**XX**-**XXX**148

BGA sockets 1.27 mm grid with self-aligning surface mount floating contacts.
Same foot print as the BGA device, to mate with the corresponding adapter.



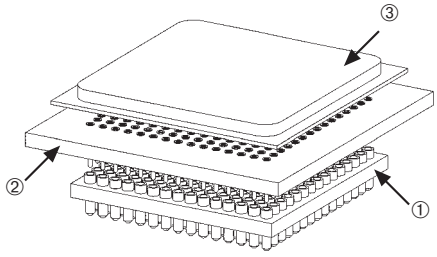

### 550-10-**NNN**M**XX**-**XXX**166

BGA adapter 1.27 mm grid pluggable into the corresponding socket.
Connecting pin Ø 0.42 mm.
BGA device is SMD soldered on the solder pads.




BGA socket and adapter systems are the reliable solution to make BGAs pluggable:

- the BGA socket Series 514 ① is soldered to the PCB in place of the BGA device and using the same footprint
- the BGA device ③ is soldered to the adapter Series 550 ②
- the BGA + adapter sub-assembly is plugged into the socket






Due to technical progress, all information provided is subject to change without prior notice.

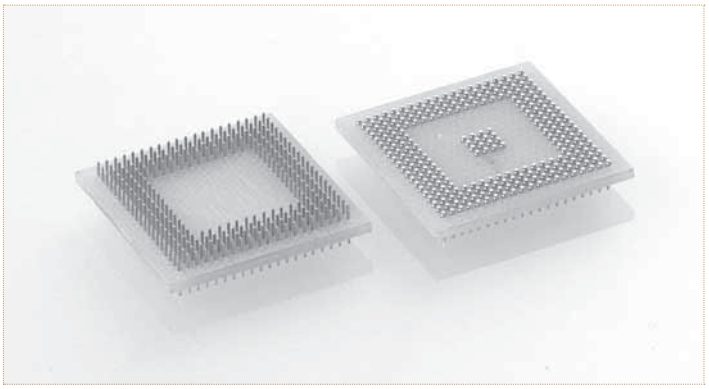
# BALL GRID ARRAY SOCKETS

**1.27 mm GRID / INTERCONNECT PIN / SOLDER TAIL / SURFACE MOUNT**

Ball grid array interconnect pin, through hole solder tail and surface mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Glass-epoxy laminate FR4 |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Brass CuZn36Pb3 (C36000) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

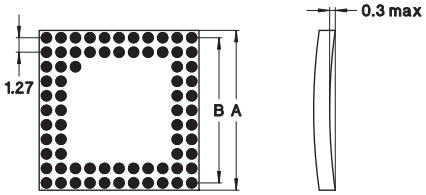
| PP PLATING CODE | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |

Other plating on request (see page 178 for plating specs).
Replace **NNN** with the number of poles and **XX-XXX** with body size and layout numbers as indicated on page 168.
For example a 20x20 pin configuration with 256 contacts as shown on page 168 becomes 550-10-2**56**M**20**-**001**152.

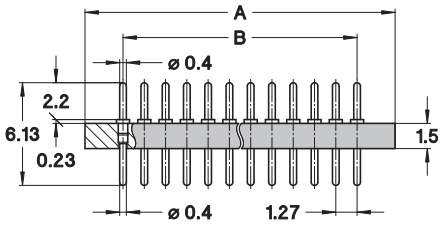
## DIMENSIONS

Calculate with n1 = number of contacts in one line

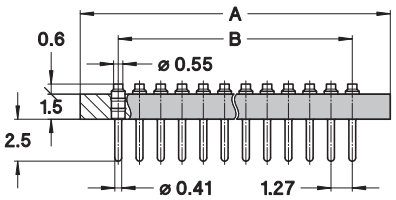
A = (n1x1.27)+3.27
B = (n1-1)x1.27




550-10-**NNN**M**XX**-**XXX**152
BGA interconnect sockets 1.27 mm grid, through hole solder tails and connecting pin Ø 0.40 mm.




558-10-**NNN**M**XX**-**XXX**104
BGA interconnect sockets 1.27 mm grid, with surface mount terminations and connecting pin Ø 0.41 mm.

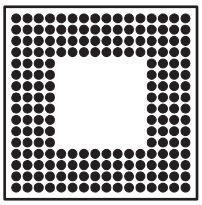




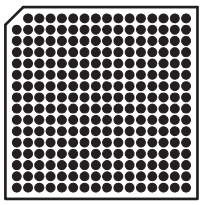

Due to technical progress, all information provided is subject to change without prior notice.

# BALL/PIN GRID ARRAY SOCKETS

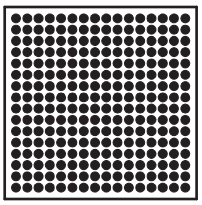
**1.27 mm GRID / FOOTPRINTS / TOP VIEW**



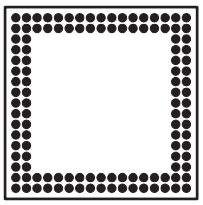
**16x16**
...-192M16-001...



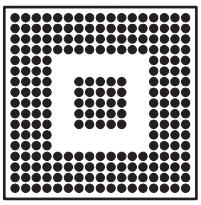
**16x16**
...-255M16-001...



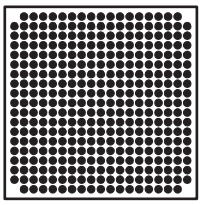
**16x16**
...-256M16-000...



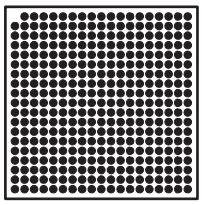
**17x17**
...-120M17-001...



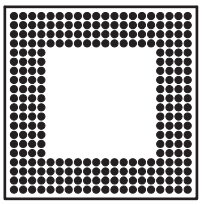
**17x17**
...-233M17-001...



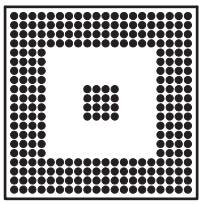
**19x19**
...-357M19-001...



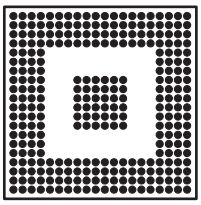
**19x19**
...-360M19-001...



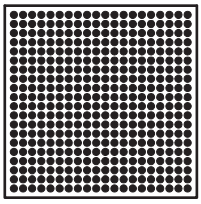
**20x20**
...-256M20-001...



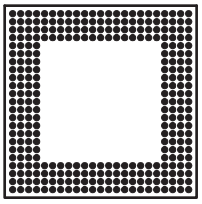
**20x20**
...-272M20-001...



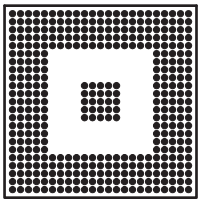
**20x20**
...-292M20-001...



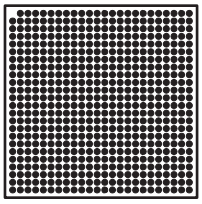
**20x20**
...-400M20-000...



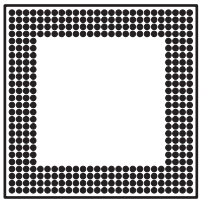
**23x23**
...-304M23-001...



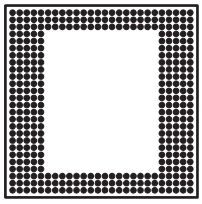
**23x23**
...-385M23-001...



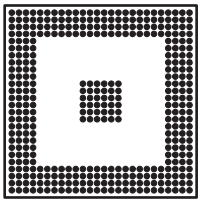
**24x24**
...-575M24-001...



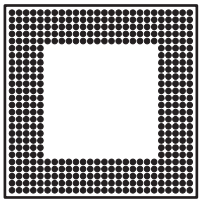
**26x26**
...-352M26-001...



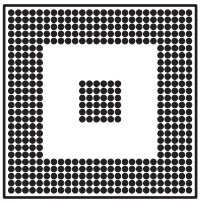
**26x26**
...-356M26-001...



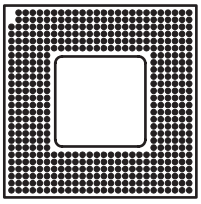
**26x26**
...-388M26-001...



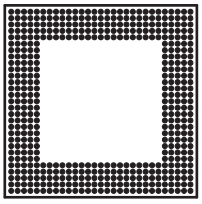
**26x26**
...-420M26-001...



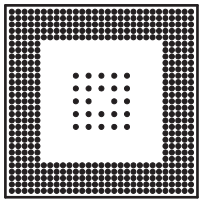
**26x26**
...-456M26-001...



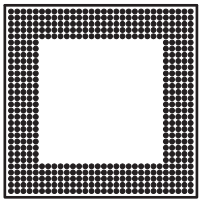
**26x26**
...-478M26-131...



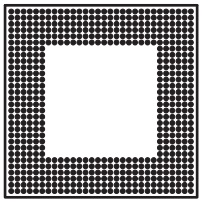
**29x29**
...-480M29-001...



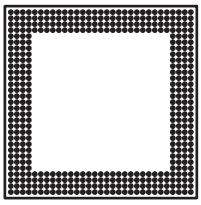
**29x29**
...-504M29-001...



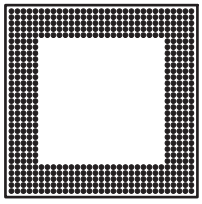
**30x30**
...-500M30-001...



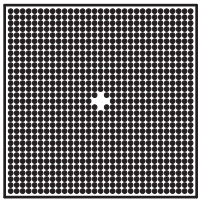
**30x30**
...-576M30-001...



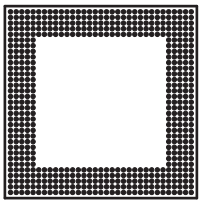
**31x31**
...-432M31-001...



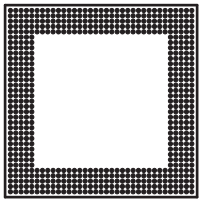
**31x31**
...-520M31-001...



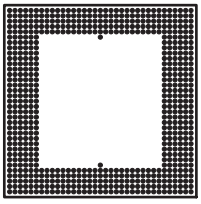
**31x31**
...-956M31-001...



**33x33**
...-560M33-001...



**35x35**
...-600M35-001...



**35x35**
...-652M35-001...



Due to technical progress, all information provided is subject to change without prior notice.

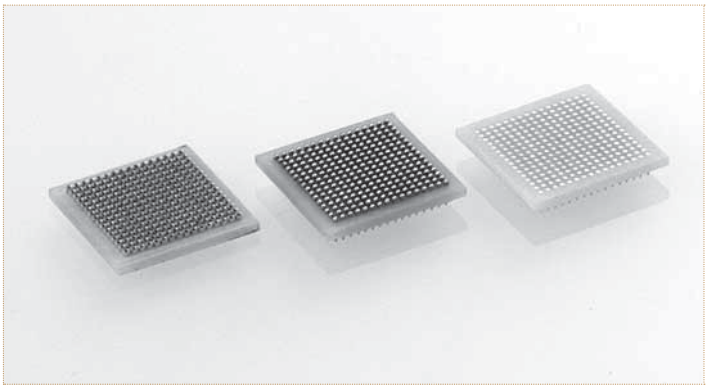
# BALL GRID ARRAY SOCKETS

**1 mm GRID / SURFACE MOUNT SOCKET, ADAPTER / INTERCONNECT PIN**

Ball grid array sockets and adapter surface mount.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Glass-epoxy laminate FR4 |
| FLAMMABILITY | UL 94V-0 |
| SLEEVE / PIN | Brass CuZn36Pb3 (C36000) |
| CONTACT CLIP (3 FINGER) | Beryllium copper (C17200) |
| ACCEPTED PIN Ø | 0.20 to 0.30 mm |
| FORCES | 0.4 N typ. insertion 0.2 N typ. withdrawal (polished steel gauge Ø 0.25 mm) |
| MECHANICAL LIFE | Min. 100 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 10 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | SLEEVE | CLIP |
|---|---|---|
| 11 (Serie 514) | 0.25 µm gold | 0.25 µm gold |
| **PP PLATING CODE** | **TERMINATION** | **CONNECTING PIN** |
| 10 (Serie 558) | 0.25 µm gold | 0.25 µm gold |

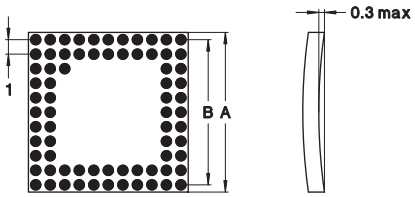
Other plating on request (see page 178 for plating specs).
Please consult for complete part number and available footprints.

**Options:** please consult for availability
- Through hole adapter.

## DIMENSIONS

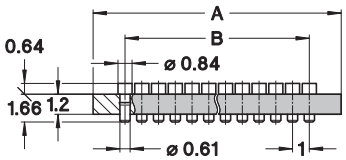
Calculate with n1 = number of contacts in one line

A = n1+2.81
B = n1-1



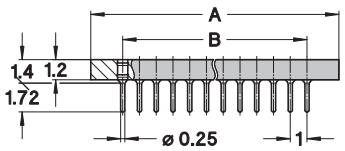

### 514-11-**NNN**P**XX**-**XXX**159

BGA sockets 1 mm grid, surface mount.
Same foot print as the BGA device to mate with the corresponding adapter.



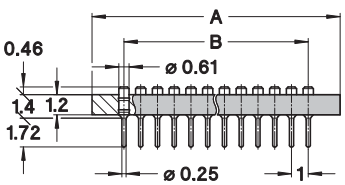

### 558-10-**NNN**P**XX**-**XXX**102

BGA adapter 1 mm grid, pluggable into the corresponding socket.
Connecting pin Ø 0.25 mm.
BGA device is SMD soldered on the solder pads.




### 558-10-**NNN**P**XX**-**XXX**103

BGA interconnect sockets 1 mm grid with surface mount terminations and connecting pin Ø 0.25 mm.



# BALL/PIN GRID ARRAY SOCKETS

PART NUMBER IDENTIFICATION

## TYPE OF SOCKET


| Standard PGA, Interstitial PGA and µPGA | | PAGE |
|---|---|---|
| 510-...01 | Solder pin 2.54 mm grid | 156 |
| 514-...34 | SMD 2.54 mm grid | 156 |
| 514-...54 | SMD interstitial | 161 |
| 517-...11 | Solder pin interstitial | 161 |
| 518-...05 | Solder pin 1.27 mm grid | 165 |
| 518-...06 | SMD 1.27 mm grid | 165 |
| 546-...35 | Press-fit 2.54 mm, PCB 2.1-3.2 mm | 157 |
| 546-...36 | Press-fit 2.54 mm, PCB 1.5-2.0 mm | 157 |
| 546-...47 | Press-fit interstitial | 161 |
| 550-...01 | Interconnect, solder pin, 2.54 mm grid | 158 |
| 550-...35 | Interconnect, solder pin, interstitial | 162 |
| 558-...01 | Interconnect, solder pin, 1.27 mm grid | 165 |
| 614-...12 | Carrier 2.54 mm grid | 158 |
| 614-...44 | Carrier interstitial | 162 |
| **BGA** | | |
| 514-...48 | Socket SMD, 1.27 mm grid | 166 |
| 514-...59 | Socket SMD, 1 mm grid | 169 |
| 550-...66 | Adapter, 1.27 mm grid | 166 |
| 550-...52 | Interconnect, solder pin, 1.27 mm grid | 167 |
| 558-...02 | Adapter, 1 mm grid | 169 |
| 558-...03 | Interconnect SMD, 1 mm grid | 169 |
| 558-...04 | Interconnect SMD, 1.27 mm grid | 167 |





## PLATING CODE ROHS COMPLIANT PARTS

| CODE | SLEEVE | CLIP |
|---|---|---|
| 77 | Flash gold | Flash gold |
| 83 | Tin | 0.75 µm gold |
| 87 | Tin | Flash gold |

| | TERMINATION | CONNECTING PIN |
|---|---|---|
| 10 | 0.25 µm gold | 0.25 µm gold |
| 80 | Tin | Tin |

**TOTAL NUMBER OF PINS**

**SIZE OF BODY**

**SIZE OF WINDOW AND FOOTPRINT**

**Grid:**
– 2.54 mm or interstitial
**M** 1.27 mm grid
**P** 1 mm grid

See pages 159, 160, 163, 164 and 168 for most popular footprints.



Due to technical progress, all information provided is subject to change without prior notice.

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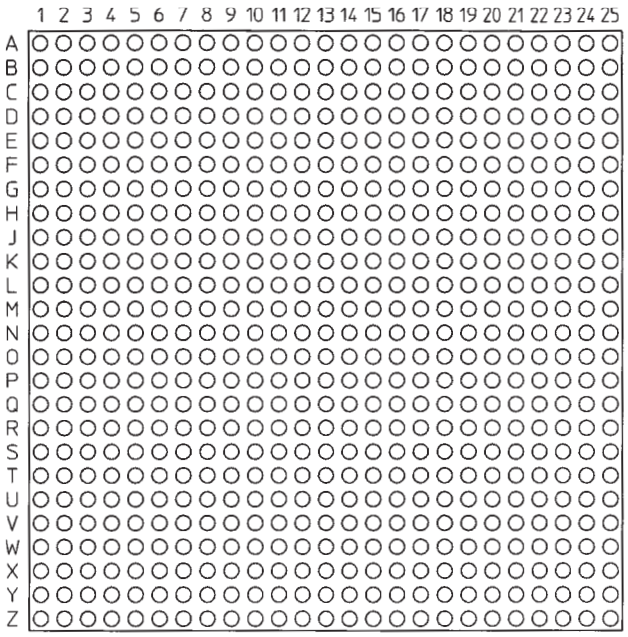
# BALL/PIN GRID ARRAY SOCKETS

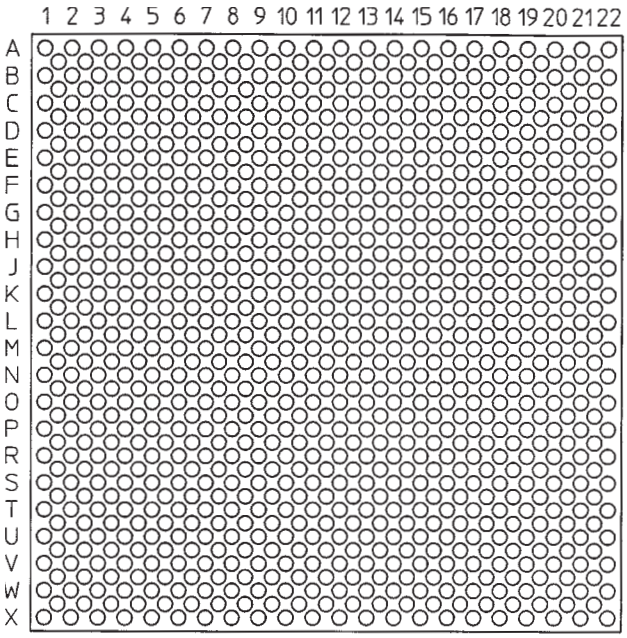
**CUSTOM GRID DESIGN**

If the desired footprint does not exist in this catalogue, please photocopy this page, complete it and send it to your local PRECI-DIP distributor.

Your address




**TOP VIEW**




## ORDERING INFORMATION

**Type of socket** (see opposite page)

**Plating code PP** (see opposite page)

**Grid**

- **Standard 2.54 mm**
- **Interstitial**
- **1.27 mm**
- **1 mm**

**Size of body**

**x**

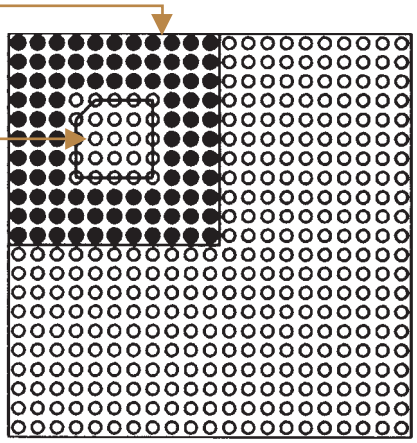
**Semiconductor device used**

**Quantity**

## EXAMPLE

Fill in the position of pins

Mark of the window





Due to technical progress, all information provided is subject to change without prior notice.

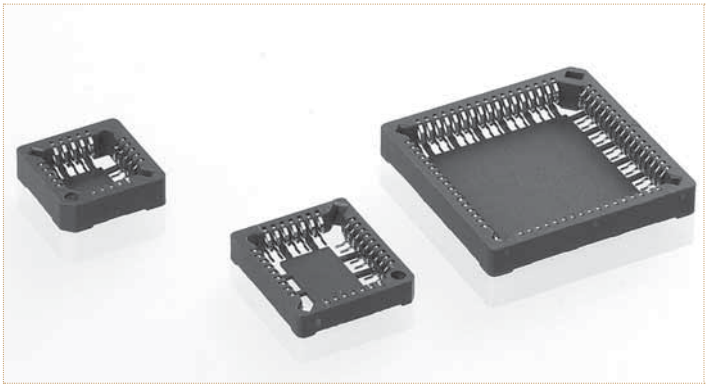
# SOCKETS FOR PLASTIC LEADED CHIP CARRIERS (PLCC)

## SMT TERMINATIONS

Series 540 PLCC sockets with SMT terminations come with square sizes for IC-packages according to JEDEC MO-047 and rectangular size (32) according to JEDEC MO-052, low profile.

## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Glass filled thermoplastic PPS-GF30-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Phosphor bronze |
| CONTACT PRESSURE | Min. 1.5 N per contact |
| MECHANICAL LIFE | Min. 50 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 20 mΩ |
| DIELECTRIC STRENGTH | Min. 600 VRMS |
| INSULATION RESISTANCE | Min. 5'000 MΩ |
| CAPACITANCE | Max. 2 pF |
| COPLANARITY SMD TERMINATIONS | Max. 0.1 mm |

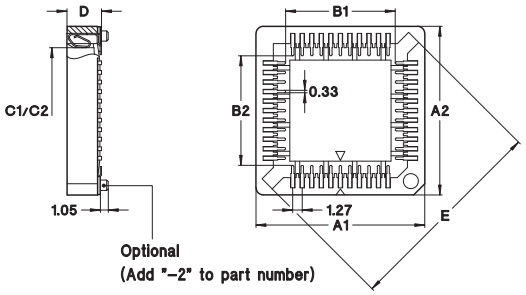


## ORDERING INFORMATION ROHS COMPLIANT PARTS

| PP PLATING CODE | TERMINATION | CONTACT |
|---|---|---|
| 88 | Tin | Tin |

**Option:** parts with positioning pegs add suffix **-2** to part number (only available for No. of poles 32 and 68).

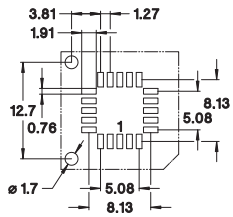
**Tape & Reel packaging:**
add suffix **-TR** to part number (except for 540-88-084-17-400).
Please consult **www.precidip.com** for availability size of tape, size of reel, number of components per reel and packing units.

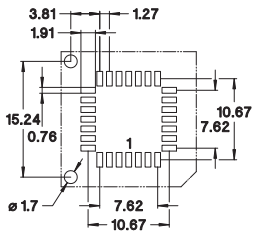


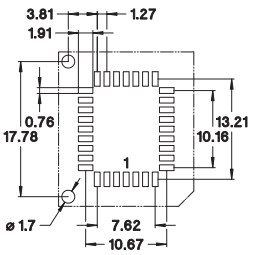

* RECTANGULAR

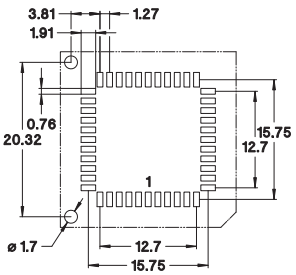
| NO. OF POLES | A1/A2 | B1/B2 | C1/C2 | D | E | ORDER CODES |
|---|---|---|---|---|---|---|
| 20 | 14.86 | 7.02 | 9.20 | 4.60 | 16.20 | 540-88-020-17-400 |
| 28 | 17.34 | 9.50 | 11.76 | 4.60 | 19.70 | 540-88-028-17-400 |
| 32* | 16.95 / 19.50 | 9.40 / 11.90 | 11.60 / 14.20 | 3.80 | 22.00 | 540-88-032-17-400 |
| 44 | 22.42 | 14.50 | 16.70 | 4.60 | 27.00 | 540-88-044-17-400 |
| 52 | 25.40 | 17.24 | 19.46 | 4.60 | 30.80 | 540-88-052-17-400 |
| 68 | 30.54 | 22.26 | 24.40 | 4.60 | 37.65 | 540-88-068-17-400 |
| 84 | 35.56 | 27.34 | 29.58 | 4.60 | 45.10 | 540-88-084-17-400 |

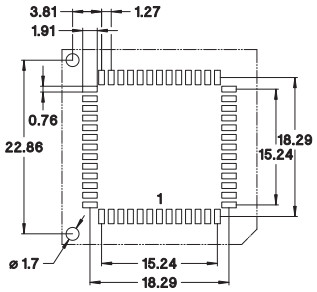
## PCB LAYOUT SERIES 540, SMD TYPES

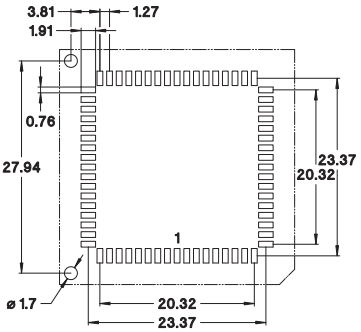


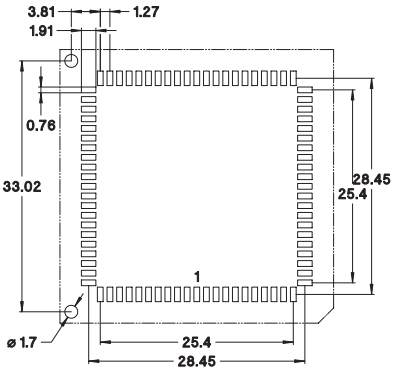






Due to technical progress, all information provided is subject to change without prior notice.

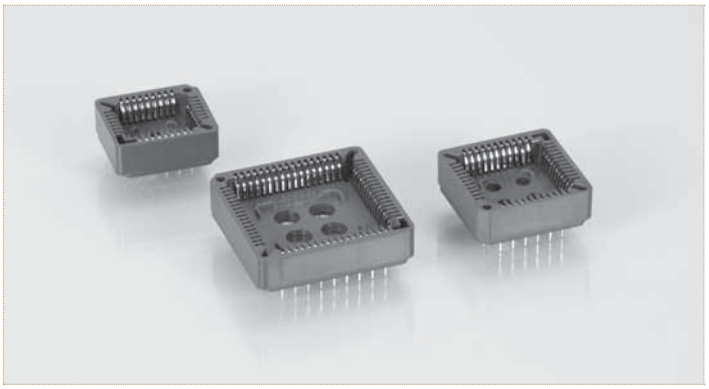
# SOCKETS FOR PLASTIC LEADED CHIP CARRIERS (PLCC)

SOLDER TAIL

Series 540 PLCC sockets, solder tail, with precision stamped contacts providing component retention thanks to positive spring action.

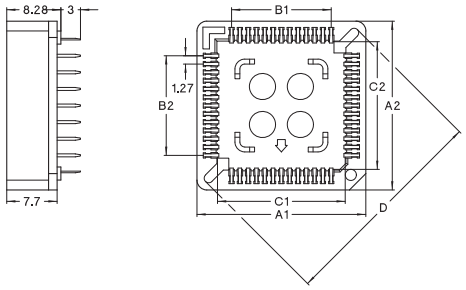
## TECHNICAL SPECIFICATIONS (FOR GENERAL SPECS, SEE PAGE 155)

| | |
|---|---|
| INSULATOR | Glass filled thermoplastic PPS-GF40-FR |
| FLAMMABILITY | UL 94V-0 |
| CONTACT | Phosphor bronze |
| MECHANICAL LIFE | Min. 25 cycles |
| RATED CURRENT | 1 A |
| CONTACT RESISTANCE | Max. 30 mΩ |
| DIELECTRIC STRENGTH | Min. 500 VRMS |
| INSULATION RESISTANCE | Min. 1'000 MΩ |
| CAPACITANCE | Max. 1 pF |



## ORDERING INFORMATION ROHS COMPLIANT PARTS

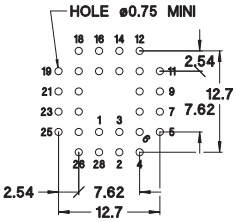
| PP PLATING CODE | TERMINATION | CONTACT |
|---|---|---|
| 88 | Tin | Tin |

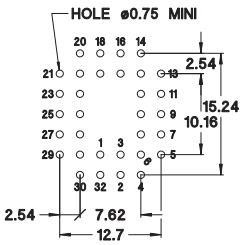


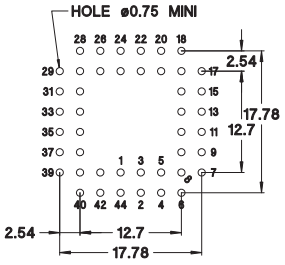

* RECTANGULAR

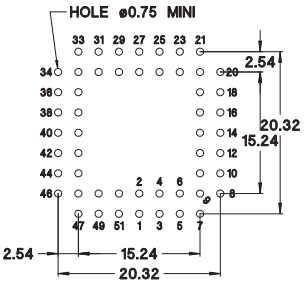
| NO. OF POLES | A1 | A2 | B1 | B2 | C1 | C2 | D | ORDER CODES |
|---|---|---|---|---|---|---|---|---|
| 28 | 18.20 | 18.20 | 7.62 | 7.62 | 11.91 | 11.91 | 22.11 | 540-88-028-24-008 |
| 32* | 18.20 | 20.74 | 7.62 | 10.16 | 11.91 | 14.45 | 23.90 | 540-88-032-24-008 |
| 44 | 23.28 | 23.28 | 12.70 | 12.70 | 16.99 | 16.99 | 29.23 | 540-88-044-24-008 |
| 52 | 25.82 | 25.82 | 15.24 | 15.24 | 19.53 | 19.53 | 32.85 | 540-88-052-24-008 |
| 68 | 30.90 | 30.90 | 20.32 | 20.32 | 24.61 | 24.61 | 40.03 | 540-88-068-24-008 |
| 84 | 35.98 | 35.98 | 25.40 | 25.40 | 29.69 | 29.69 | 47.21 | 540-88-084-24-008 |

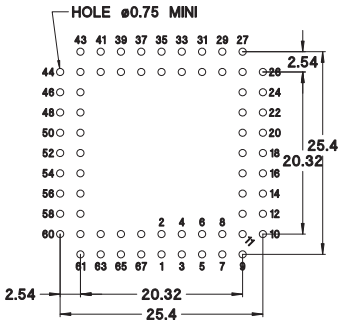
## PCB HOLE PATTERNS SERIES 540, THRU-HOLE TYPES

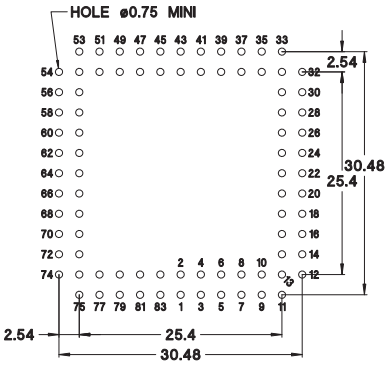


# CONTACTS





# CONTACT TECHNOLOGY

## INTRODUCTION

PRECI-DIP, a world wide leading manufacturer of precision machined contacts and related interconnect components is continuously improving its ability to design innovative contacts. This catalog provides general technical information on PRECI-DIP contacts. It should help potential users make the best technical choice for a given application.

**TO FIND INDIVIDUAL SPECIFICATIONS OF STANDARD CONTACTS, PLEASE CONSULT OUR SEARCH ENGINE AT WWW.PRECIDIP.COM**

If no adequate solution can be found there, please contact us, only a selected choice of all existing contacts is displayed. Further, PRECI-DIP will be pleased to offer full support to design and manufacture customer specific contacts.

## THREE MAIN GROUPS OF CONTACT PRODUCTS ARE DESCRIBED AND OFFERED

- Spring-loaded contacts
- Socket contacts also called female contacts or pin receptacles
- Pin or male contacts and PCB terminals

All of these can be manufactured with different type of terminations:

PCB SOLDER TAIL



SMD TERMINATION



PRESS-FIT FOR PCB SOLDERLESS CONNECTION



WRAPOST



WIRING CRIMP



SOLDER CUP



WIRING TURRET



WIRING SLOT



## THIS CATALOG SECTION CONTAINS GENERAL TECHNICAL INFORMATION ON PRECI-DIP CONTACTS


| | PAGE | | PAGE |
|---|---|---|---|
| Socket contact selector | 177 | Spring-loaded contacts | 180 |
| General technical specifications | 178 | MIL contacts | 182 |
| Socket + pin contacts | 179 | Data sheet clip contacts | 185 |




Due to technical progress, all information provided is subject to change without prior notice.

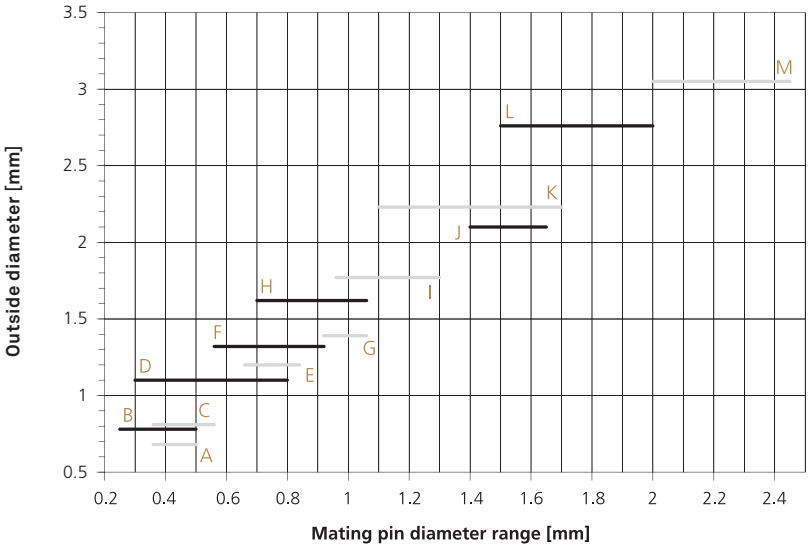
## CONTACT SELECTOR BY MATING PIN DIAMETER

The mating pin diameter range and insertion characteristics of socket contacts are identified with the clip code, given by the last 4 digits of the part number.

**1 TO SEARCH A SUITABLE SOCKET CONTACT TO MATE WITH A KNOWN PIN:**

With the graph on the right, find the group code corresponding to the mating pin diameter.
In the table below right, search the clip codes corresponding to the group and the page number of the corresponding data sheet.

All clip codes from the same group are interchangeable within a given contact body. This allows for contacts with a larger range of insertion characteristics to fulfill the requirements of special applications




**2 TO SEARCH THE CHARACTERISTICS OF A KNOWN CLIP CODE:**

Find the corresponding page number for each clip code data sheet in the table on the right side

| GROUP | CLIP CODE | TYP. INSERTION FORCE [N] | TEST PIN DIAM. [mm] | SEE PAGE |
|---|---|---|---|---|
| A | 0110 | 0.25 | 0.38 | 185 |
| B | 5410 | 0.20 | 0.30 | 185 |
| C | 1110 | 1.0 | 0.43 | 185 |
| | 2110 | 0.8 | 0.46 | 186 |
| | 0510 | 0.5 | 0.52 | 186 |
| D | 3020 | 0.45 | 0.30 | 186 |
| | 1210 | 3.0 | 0.43 | 187 |
| | 3010 | 2.0 | 0.43 | 187 |
| | 2210 | 0.6 | 0.46 | 187 |
| | 3110 | 0.7 | 0.46 | 188 |
| | 3130 | 0.4 | 0.46 | 188 |
| | 3160 | 0.2 | 0.46 | 188 |
| | 5210 | 0.56 | 0.76 | 189 |
| E | 1410 | 1.5 | 0.78 | 189 |
| F | 1610 | 3.5 | 0.76 | 189 |
| | 0610 | 1.5 | 0.76 | 190 |
| | 4710 | 0.4 | 0.76 | 190 |
| G | 1810 | 2.0 | 1.04 | 190 |
| H | 3410 | 4.0 | 1.04 | 191 |
| I | 0210 | 5.0 | 1.15 | 191 |
| | 2710 | 2.2 | 1.15 | 191 |
| J | 4910 | 3.0 | 1.61 | 192 |
| K | 1310 | 1.3 | 1.27 | 192 |
| | 2310 | 3.0 | 1.30 | 192 |
| | 3920 | 2.5 | 1.61 | 193 |
| L | 0710 | 4.0 | 1.88 | 193 |
| M | 4010 | 10.0 | 2.41 | 193 |



Due to technical progress, all information provided is subject to change without prior notice.

## GENERAL TECHNICAL SPECIFICATIONS

The contacts are manufactured by high speed turning process with, if necessary, additional secondary machining operation for example for flats, slots or solder cups. The preferred diameter range lies between 1 and 6 mm and contact length up to 40 mm are standard.

## MATERIALS

**CONTACT BODIES**
- Brass CuZn36Pb3, C36000
- Brass CuZn35Pb2, C34500 for contacts with crimp terminations
- Bronze CuSn4Pb4Zn4, C54400 for contacts with compliant press-fit terminations

**CLIPS**
- Beryllium copper alloy C17200

**SPRINGS**
- Stainless steel X12CrNi177 mat. Nr 1.4310, DIN 17224
- Music wire mat. Nr 1.1211, DIN 17223

**HOODS**
- Stainless steel AISI 305

All these materials are compliant with RoHS requirements. Lead content of copper alloys is less than 4% in accordance with Exception 6 of the RoHS directive 2002/95/CE.

## PLATING

Contact plating is made up of basis underplating acting as diffusion barrier and of finishing layer.

**UNDERPLATING**
- Nickel (Ni) electro-deposited, acc. to SAE-AMS-QQ-N-290
- Electroless nickel phosphorus alloy for max. corrosion and wear resistance and for lowest magnetic permeability (plating suffix N)

**FINISH**
- Gold (Au) acc. to ASTM B488, type II C, plating codes 1 (0.25 µm), 3 (0.75 µm), 4 (1.27 µm) and 7 (gold flash)
- Tin (pure tin Sn), plating code 8, standard tin plating with excellent solderability, RoHS compliant
- Tin-Lead (SnPb90/10) acc. to ASTM B545, plating code 9. This plating is **not RoHS compliant**.
- Silver (Ag) acc. to ASTM B700, plating code 6

## ELECTRICAL AND MECHANICAL CHARACTERISTICS

See individual data pages

## ENVIRONMENTAL CHARACTERISTICS

The contacts withstands following environmental tests without mechanical and electrical defects:
- Dry heat steady state IEC 60512-11-9.11i / 60068-2-2.Bb: 125 °C, 16 h
- Damp heat cyclic IEC 60512-11-12.11m / 60068-2-30.Db: 25/55 °C, 90 – 100 %rH, 1 cycle of 24 h
- Cold steady state IEC 60512-11-10.11j / 60068-2-1.A: -55 °C, 2 h
- Thermal shock IEC 60512-11-4.11d / 60068-2-14.Na: -55/125 °C, 5 cycles 30 min
- Sinusoidal vibrations IEC 60512-6-4.6d / 60068-2-6.Fc: 10 to 500 Hz, 10 g, 1 octave/min, 10 cycles for each axis
- Shock IEC 60512-6-3.6c / 60068-2-27.Ea: 50 g, 11 ms, 3 shocks in three axis

During the above two tests no contact interruption >50 ns does appear.

- Solderability J-STD-002C, Test A1, 245 °C, 5 s, solder alloy SnAg3.8Cu0.7
- Resistance to soldering heat J-STD-020C, 260 °C, 20 s
- Resistance to corrosion:
  1) Salt spray test IEC 60068-2-11.Ka: 48 h
  2) Sulfur dioxide ($SO_2$) test IEC 60068-2-42.Kc: 96 h at 25 ppm $SO_2$, 25 °C, 75 %rH
  3) Hydrogen sulfide ($H_2S$) test IEC 60068-2-43.Kd: 96 h at 12 ppm $H_2S$, 25 °C, 75 %rH



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# CONTACT TECHNOLOGY

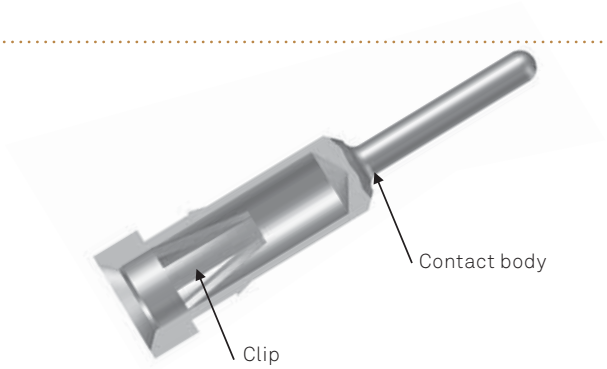
SOCKET AND PIN CONTACTS

## SOCKET CONTACTS

The PRECI-DIP technology for socket contacts is based on a two-parts design:

- Contact body
- Multi-finger contact spring called clip

These socket contacts with clip are compatible with all existing machined and stamped mating pin contacts of same size




## CONTACT BODIES AND CLIPS ARE MANUFACTURED AND PLATED SEPARATELY

The contact bodies are manufactured by high speed turning process with additional secondary machining operation if required.

The clip are stamped and formed from sheet material. Depending on size and characteristics, the clips are designed with 3 to 8 contact finger. The choice of heat treated beryllium copper alloy gives the best possible combination of mechanical and electrical properties for use in electrical contacts. More than 40 clips are pre-tooled, covering a mating pin diameter range from 0.25 to 2.5 mm. They can accept square or rectangular pin.

The clip is assembled into the contact body by press-fit on automatic equipment including on-line inspections.

## MAIN ADVANTAGES OF THE TECHNOLOGY

- The combination of existing standard clip with specific contact body gives a flexibility unknown with traditional contact design
- Production of machined specific contact bodies is cost effective starting at medium sized quantities
- PRECI-DIP automatic high speed contact assembly lines are optimized for large production runs but also for smaller series

## MECHANICAL CHARACTERISTICS

- Insertion characteristics
  Insertion and withdrawal force for standard clips are displayed on the corresponding data sheets. The values are measured with polished steel gauges with spherical tip and are typical average measurements. These data are for general information and selection of best suited clip for a given application.
- Compliancy
  Each clip is able to accept a broad range of mating pins. This ability is called «compliancy». The compliancy factor $\Delta$ specifies the resulting operating range after insertion of the largest permissible mating pin.
- Clip retention
  This is the force needed to pull-out the press-fitted clip from its contact body. Clip retention is greater than 40 N.
- Mechanical life
  The mechanical life expectancy is dependent on the surface smoothness and diameter of the mating pin and on the plating. For some applications, more than 1000 mating cycles are possible.

## ELECTRICAL CHARACTERISTICS

- Current rating
  The given currents are for one mated combination of socket and pin contact, in free air and for 10°C temperature rise.

## PIN CONTACTS

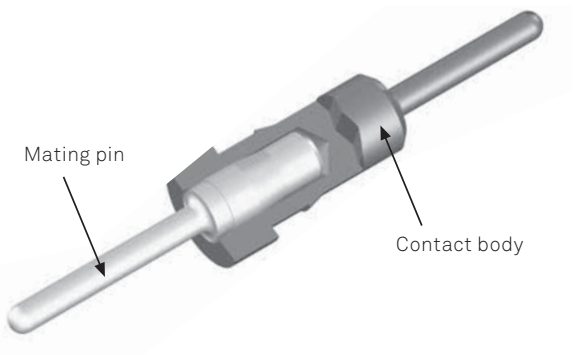
Precision screw-machined pin contacts are the best choice for many applications:

- High quality, low dimensional tolerances
- Best surface of the mating end for applications requiring high mating cycle count
- Wide range of dimensions and geometry
  - Length from 3 to 50 mm
  - Diameter from 0.25 to 6 mm
- Low initial (tooling) costs and attractive prices for medium and high volume production due to manufacturing on high speed automatic lathes

With its own plating unit, PRECI-DIP offers single source services for finished contacts

## BI-BLOC PIN CONTACTS

PRECI-DIP offers «selective plated» bi-bloc pin contact with the high quality of machined contact and the advantages of selective plating. These contacts are made from 2 parts: the contact body with termination and the connecting or mating pin manufactured separately and assembled after plating.



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# CONTACT TECHNOLOGY
SPRING-LOADED CONTACTS

## SPRING-LOADED CONTACTS

Spring-loaded contacts were initially designed since 1995 for mobile phones. The application requires miniature, reliable, contacts with very high mating cycles count at low cost.
The basic design of spring-loaded contact with hollow piston consists of a contact body or barrel, a contact member or piston and an helical compression spring. The piston is retained in the barrel by a crimp.
The electrical contact is established by pressure between the piston and a fixed, flat, conducting area of the opposite part.

Based on this initial model, new contacts with improved characteristics were designed:

- Low resistance spring-loaded contacts with shaped piston

- High-reliable contacts with clip. This contact design is protected by international patents

**Main advantages**

- Very long life time
- Many types of terminations available (see page Introduction)
- Small dimensions for use in applications with limited space (min. contact height 3 mm, min. contact diameter 1 mm)
- Very good resistance to shocks and vibrations
- Best adapted where conventional connection solutions cannot satisfy the application requirements:
  In case of important positioning tolerances of the connectors parts
  For compensation of errors of parallelism and flatness
  To make connection with pivoting, rotating or non parallel mating movement
  For connections with sliding mating action (push and lock)

## CHARACTERISTICS

| | STANDARD CONTACTS | IMPROVED-DESIGN CONTACTS | | «HIGH RELIABILITY» CONTACTS | |
|---|---|---|---|---|---|
| | HOLLOW PISTON DESIGN | SLANT PISTON DESIGN | POLYGONAL PISTON DESIGN | CLIP COAXIAL DESIGN | CLIP IN-LINE DESIGN |
| |  |  |  |  |  |
| | | | | patented | patented |

## ENVIRONMENTAL

| | | | | | |
|---|---|---|---|---|---|
| Operating temp. range | - 55°C to + 85°C (music wire) / + 125°C (stainless steel) | | | | |

## MATERIALS (RoHS-compliant)

| | | | | | |
|---|---|---|---|---|---|
| Piston | Gold plated machined brass | | | | |
| Barrel | Gold plated machined brass | | | | |
| Spring | Gold plated music wire / Stainless steel | | | | |
| Clip | – | – | Gold plated BeCu C17200 | | |

## MECHANICAL

| | | | | | |
|---|---|---|---|---|---|
| Min. diameter | 1.1 mm | 1.5 mm | 1.8 mm | | 0.8 mm |
| Min. initial height | 2.5 mm | 5 mm | 4.5 mm | | 9 mm |
| Travel / height ratio | Max. 0.3 | Max. 0.2 | Max. 0.2 | | Max. 0.15 |
| Max. travel (stroke) | 2 mm | 2 mm | 1.5 mm | | |
| Min. initial spring force | 0.2 N | 0.2 N | 0.2 N | | |
| Mechanical life* | 100'000 cycles | 50'000 cycles | 40'000 cycles | | |

## ELECTRICAL

| | | | | | |
|---|---|---|---|---|---|
| Contact resistance** | Max. 15 mΩ | Max. 10 mΩ | Max. 20 mΩ | | |
| Max. operating current*** | 1 A cont. / 2 A peak | 3.5 A cont. / 7 A peak | 2 A cont. / 4 A peak | | |

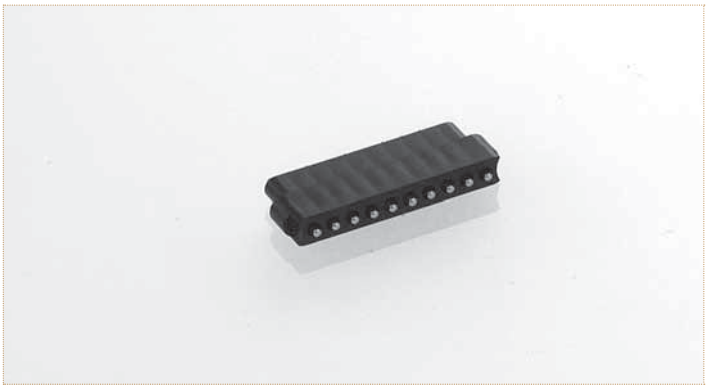
* Tested at nominal stroke with perpendicular pad connector area ** Static measurement in halfway position of piston travel
*** Above max. current values are for single contacts in free air and for 10°C temperature rise. Values are indicative and may be affected by contact force, static or dynamic applications, shocks or vibrations

# CONTACT TECHNOLOGY

SPRING-LOADED CONTACTS

## DOUBLE-SIDED SPRING-LOADED CONNECTORS

A solderless connecting system with double-sided pressure connection (Fig.1).



## WORKING MODE

The conventional spring-loaded contact (SLC) ① is mounted in a frame (housing) ②.
The barrel has a groove behind a retention barb ③.
The first contact surface is positioned on one side of the SLC (Fig. 2).
The second contact surface will actuate the spring-loaded contact. An equal contact pressure applies on both surfaces (Fig. 3).




Fig. 1

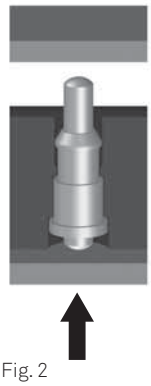


Fig. 2



Fig. 3

## AVAILABILITY

Double-sided contacts have been designed to be assembled on custom design connectors or to be integrated by customer into their own assembiles :

- conctacts with outside diameter 1.8 mm with min. 4.5 mm distance (D) between connecting surfaces (see Fig. 3).
- contacts with min. 0.8 mm outside diameter and min. 8 mm distance (D) for fine pitch applications.
- long stroke and high contact pressure high reliability clip contacts.

Please consult for more information.



Due to technical progress, all information provided is subject to change without prior notice.

# CONTACT TECHNOLOGY

MIL CONTACTS

## INTRODUCTION

PRECI-DIP has tapped its unique expertise and tested know-how to develop new MIL socket contacts based on the clip technology.

Two socket contact technologies are available:
hooded contacts using the reversed clip and hoodless contacts using the Eagle Grip clip.

These contacts have successfully passed all the qualification tests according to AS39029 and are listed on the QPL.

We are also manufacturing the corresponding precision-machined pin contacts.

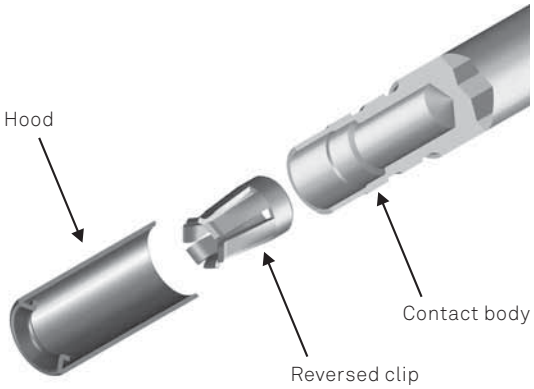
## HOODED CONTACTS USING THE REVERSED CLIP PATENTED TECHNOLOGY

### CONTACT DESIGN

The contact consists of three parts, separately manufactured and made of different base materials. This design allows to optimise the performance and to select the most appropriate production process individually:

- Contact body made of machined brass
- Reversed clip made of stamped and formed beryllium-copper
- Protection hood made of deep-drawn stainless steel

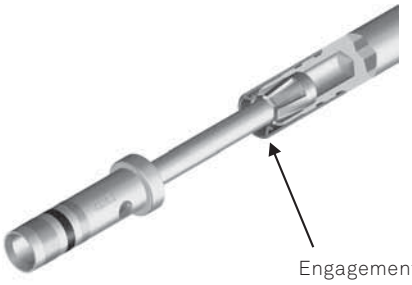
Separate electroplating processes of body and clip allow the best cost-performance ratio. The assembly of the three parts is then carried out on dedicated, fully automatic assembly lines.
Reversed clip contacts are presently available in size 12, 16, 20 and 22. This proprietary technology, entirely developed by PRECI-DIP, is protected by international patents.




### ADVANTAGES AND CHARACTERISTICS

In comparison with the traditional slotted contact body, the reversed clip design has several advantages:

- Smaller difference between insertion and extraction force
- Reduced dispersion of the force values
- Better redundancy at the level of the contact point, thanks to 6 or 8 contact fingers






Reversed clip
available
in sizes 12, 16, 20, 22

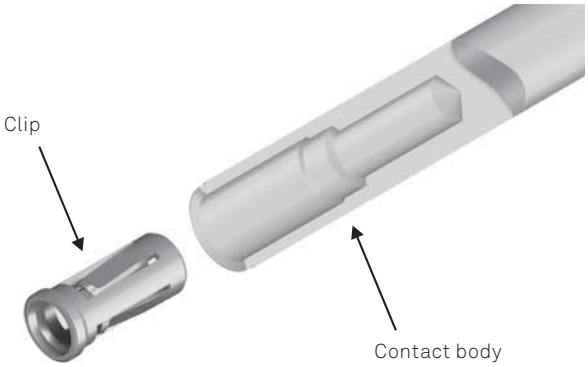


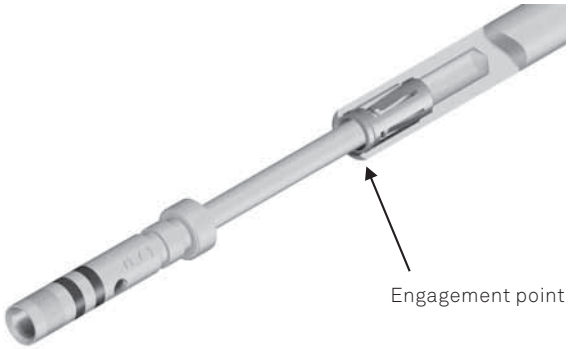
Due to technical progress, all information provided is subject to change without prior notice.

## HOODLESS CONTACTS USING THE EAGLE GRIP CLIP PATENTED TECHNOLOGY

### CONTACT DESIGN

- The hoodless contact consists of two parts: the contact body and the clip (separate pressure member) are made from different base materials.
- The high-speed screw machined contact body is made of brass.
- The use of quality crimping brass renders the annealing operation unnecessary.
- The precision stamped and formed Eagle Grip clip is made of beryllium-copper.
- Separate electroplating processes of the body and clip offer the best cost-performance ratio.
- Automatic assembly lines are designed by our engineers to conduct the body and clip assembly.
- The clip is precisely positioned in the outer shell and firmly held in place between a shoulder and the crimp lip.
- In-line mechanical check is carried out on the assembly machine.
- Eagle Grip clip hoodless contacts are presently available in sizes 16, 20 and 22.
- This PRECI-DIP proprietary technology is protected by international patents.




### ADVANTAGES AND CHARACTERISTICS

- 2-piece contact without hood
- Fully automatic assembly process with in-line mechanical check
- Localized finish: body and clip are plated separately
- High surface quality with a stamped and formed clip
- Precision rolling surface finish in the contact area
- Better contact redundancy thanks to 3 or 4 contact fingers
- Repeatability in the manufacturing process of the clip (tooling and stamping)
- Limited difference between insertion and extraction mating forces
- Narrow range of the force values
- Fully integrated manufacturing process on one single production site
- Swiss precision technology



Eagle Grip clip available in sizes 16, 20, 22



## TECHNICAL SPECIFICATIONS

### CONTACT BODY

| | |
|---|---|
| MATERIAL | Machined brass C34500 |
| OVERALL FINISH | Gold plate acc. to ASTM B488, Type II, C, over 2.5 µm Ni |

### CLIP

| | |
|---|---|
| MATERIAL | BeCu C17200 |
| OVERALL FINISH | Gold plate acc. to ASTM B488, Type II, C, min. 1.27 µm Au over 2.5 µm Ni |

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# LIST OF PART NUMBERS QUALIFIED PRODUCT LISTED

## SOCKET CONTACTS

| CONNECTOR TYPE ACC. TO | MIL P/N | REVERSED / EAGLE GRIP CLIP | PRECI-DIP P/N | SIZE |
|---|---|---|---|---|
| MIL-DTL-38999 Series I, III, IV | AS/M39029/56-348 | Reversed | 83011-1P4-7010-B1 | #22D |
| | | Eagle Grip | 83051-7Q4-6010-01 | |
| | AS/M39029/56-351 | Reversed | 83021-1P4-7110-B1 | #20 |
| | | Eagle Grip | 83061-7Q4-6110-01 | |
| | AS/M39029/56-352 | Reversed | 83031-1P4-7210-B1 | #16 |
| | | Eagle Grip | 83071-7Q4-6210-01 | |
| | AS/M39029/56-353 | Reversed | 83041-1P4-7310-B1 | #12 |
| MIL-DTL-38999 Series II<br>MIL-DTL-24308<br>MIL-DTL-55302<br>MIL-DTL-83733 | AS/M39029/57-354 | Reversed | 83101-7Q4-7010-B1 | #22D |
| | | Eagle Grip | 83091-7Q4-6010-01 | |
| MIL-DTL-24308 | AS/M39029/63-368 | Eagle Grip | 83121-7Q4-6110-01 | #20 |
| MIL-DTL-26482 Series 2<br>AS 81703 Series 3<br>MIL-DTL-83723 Series 3<br>MIL-DTL-83733 | AS/M39029/5-115 | Reversed | 83181-7Q4-7110-B1 | #20 |
| | | Eagle Grip | 83131-7Q4-6110-01 | |
| | AS/M39029/5-116 | Reversed | 83191-7Q4-7210-B1 | #16 |
| | | Eagle Grip | 83141-7Q4-6210-01 | |
| | AS/M39029/5-118 | Reversed | 83151-7Q4-7310-B1 | #12 |
| MIL-DTL-26482 Series 1 | AS/M39029/32-259 | Reversed | 83161-7Q4-7110-B1 | #20 |
| | | Eagle Grip | 83111-7Q4-6110-01 | |
| MIL-DTL-26482 Series 1<br>MIL-DTL-26500 | AS/M39029/32-248 | Reversed | 83171-7Q4-7210-B1 | #16 |
| | | Eagle Grip | 83081-7Q4-6210-01 | |

## PIN CONTACTS

| CONNECTOR TYPE ACC. TO | MIL P/N | OVERALL / LOCALIZED FINISH | PRECI-DIP P/N | SIZE |
|---|---|---|---|---|
| MIL-DTL-38999 Series I, II, III, IV<br>MIL-DTL-24308<br>MIL-DTL-55302<br>MIL-DTL-83733 | AS/M39029/58-360 | Overall | 82011-40-01 | #22D |
| | | Localized | 82011-7Q4-01 | |
| | AS/M39029/58-363 | Overall | 82021-40-01 | #20 |
| | | Localized | 82021-7Q4-01 | |
| | AS/M39029/58-364 | Overall | 82031-40-01 | #16 |
| | | Localized | 82031-7Q4-01 | |
| | AS/M39029/58-365 | Overall | 82041-40-01 | #12 |
| | | Localized | 82041-7Q4-01 | |
| MIL-DTL-24308 | AS/M39029/64-369 | Overall | 82061-40-01 | #20 |
| | | Localized | 82061-7Q4-01 | |
| MIL-DTL-26482 Series 2<br>AS 81703 Series 3<br>MIL-DTL-83723 Series 3<br>MIL-DTL-83733 | AS/M39029/4-110 | Overall | 82071-40-01 | #20 |
| | | Localized | 82071-7Q4-01 | |
| | AS/M39029/4-111 | Overall | 82081-40-01 | #16 |
| | | Localized | 82081-7Q4-01 | |
| | AS/M39029/4-113 | Overall | 82091-40-01 | #12 |
| | | Localized | 82091-7Q4-01 | |
| MIL-DTL-26482 Series 1 | AS/M39029/31-240 | Overall | 82051-40-01 | #20 |
| | | Localized | 82051-7Q4-01 | |
| MIL-DTL-26482 Series 1<br>MIL-DTL-26500 | AS/M39029/31-229 | Overall | 82101-40-01 | #16 |
| | | Localized | 82101-7Q4-01 | |



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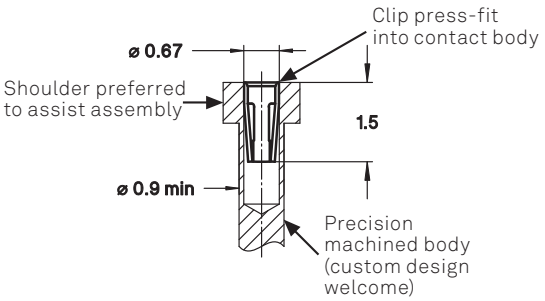
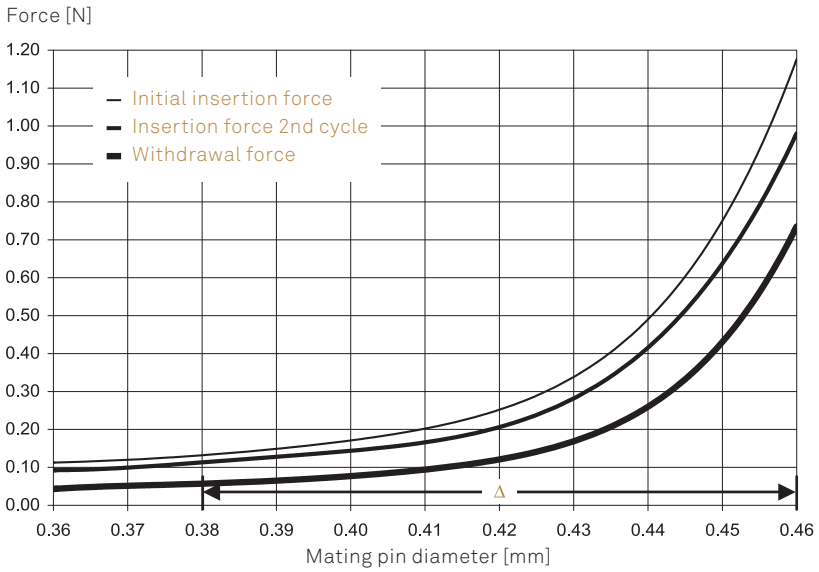
# CONTACT DATA
STANDARD CLIP

## CLIP CODE 0110 — 4-FINGER

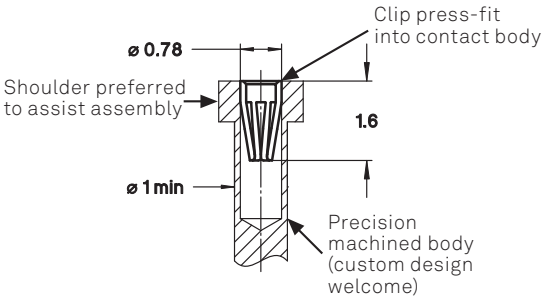
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.36-0.46 mm |
| COMPLIANCY Δ | 0.08 mm |
| MIN. MATING PIN LENGTH | 1.8 mm |
| CURRENT RATING | 1 A |

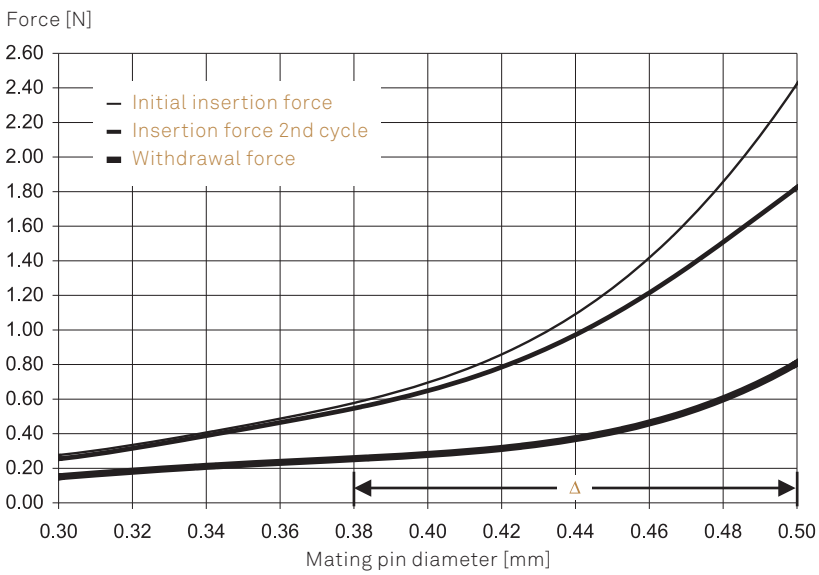



## CLIP CODE 5410 — 6-FINGER

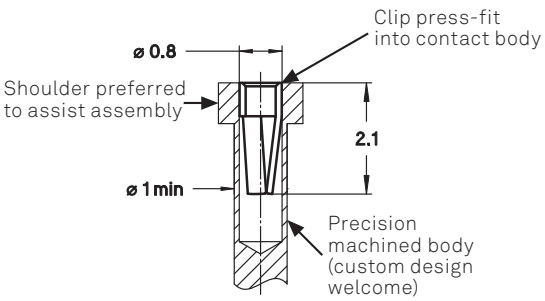
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.3-0.5 mm |
| COMPLIANCY Δ | 0.12 mm |
| MIN. MATING PIN LENGTH | 1.8 mm |
| CURRENT RATING | 1 A |

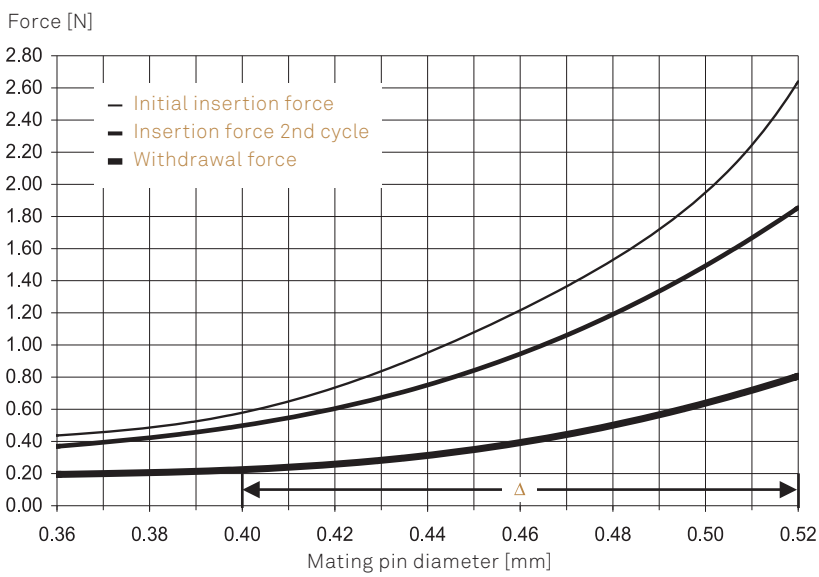



## CLIP CODE 1110 — 3-FINGER

| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.36-0.52 mm |
| COMPLIANCY Δ | 0.12 mm |
| MIN. MATING PIN LENGTH | 2.3 mm |
| CURRENT RATING | 3 A |

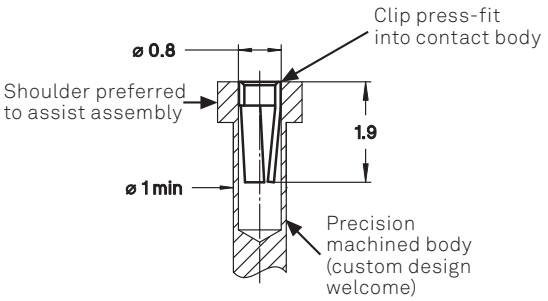


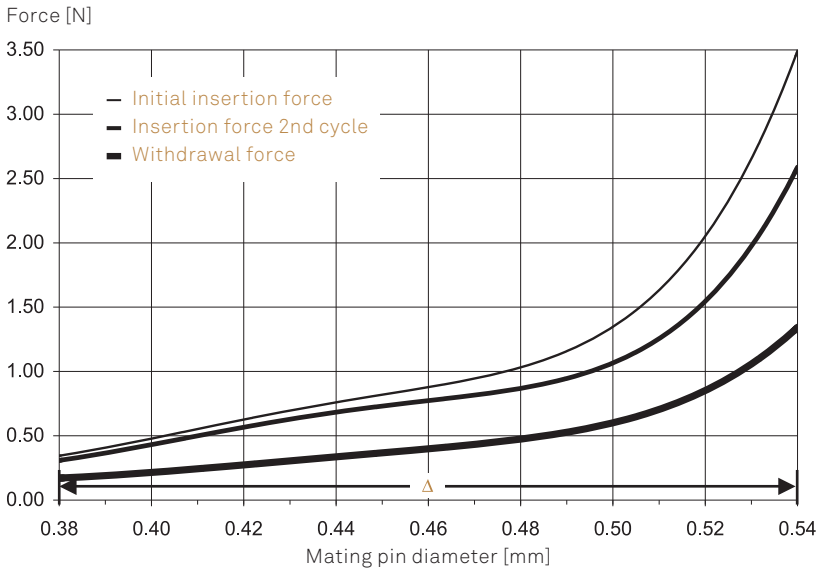



# CONTACT DATA
STANDARD CLIP

## CLIP CODE 2110 — 3-FINGER

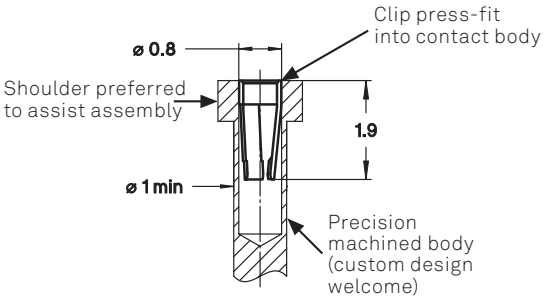
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.38-0.54 mm |
| COMPLIANCY Δ | 0.16 mm |
| MIN. MATING PIN LENGTH | 2.2 mm |
| CURRENT RATING | 2 A |

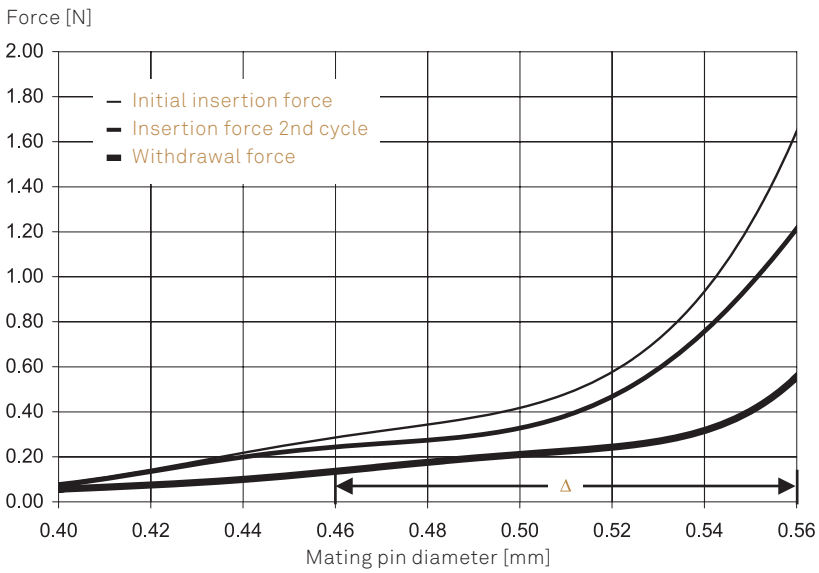



## CLIP CODE 0510 — 3-FINGER

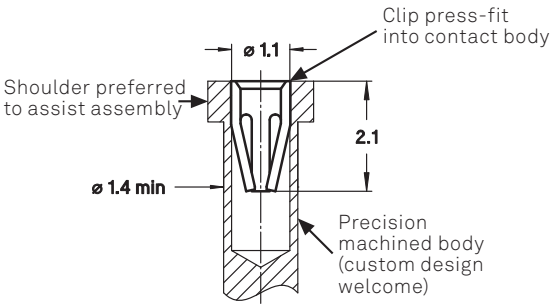
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.4-0.56 mm |
| COMPLIANCY Δ | 0.1 mm |
| MIN. MATING PIN LENGTH | 2.2 mm |
| CURRENT RATING | 2 A |

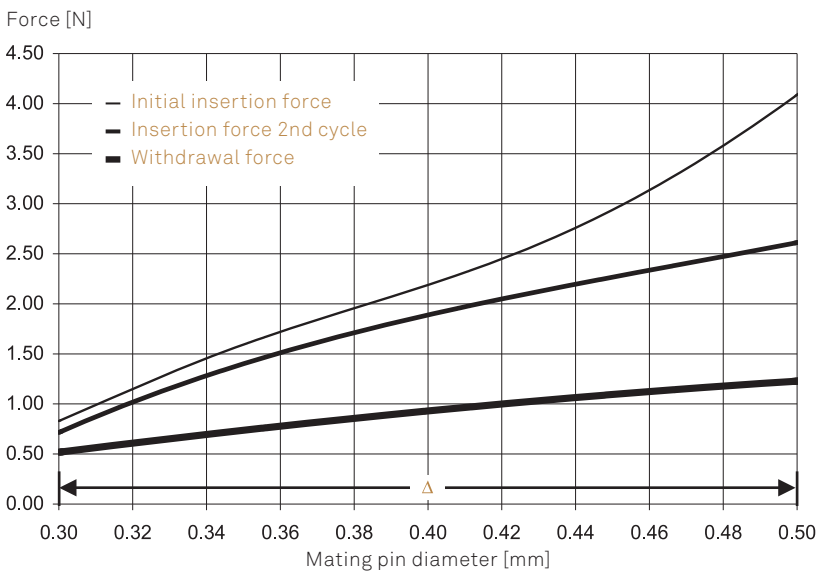



## CLIP CODE 3020 — 4-FINGER

| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.3-0.5 mm |
| COMPLIANCY Δ | 0.2 mm |
| MIN. MATING PIN LENGTH | 2.4 mm |
| CURRENT RATING | 3 A |



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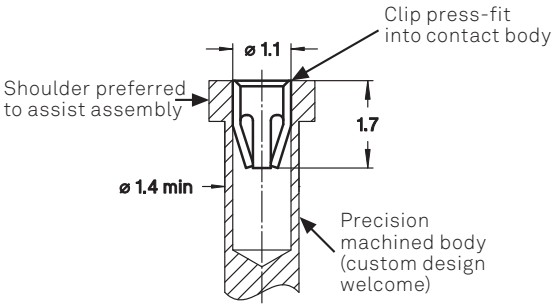
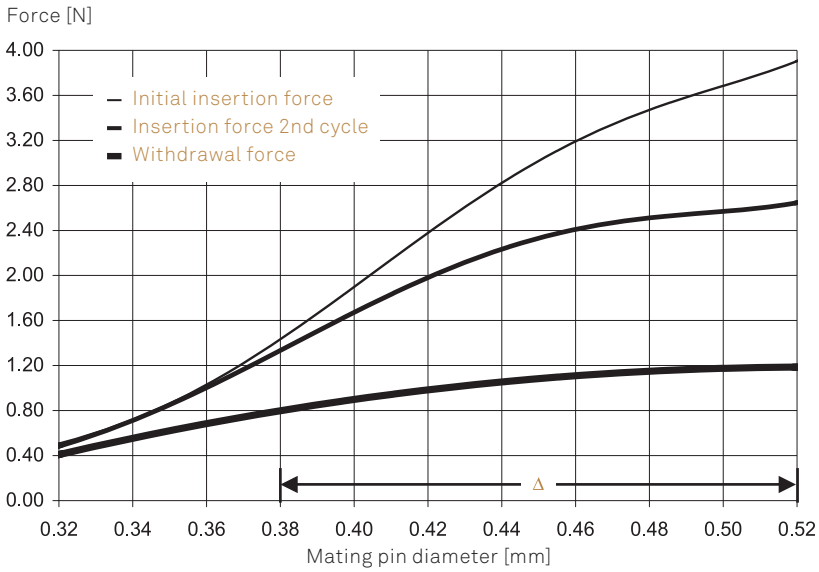
# CONTACT DATA
STANDARD CLIP

## CLIP CODE 1210 — 4-FINGER

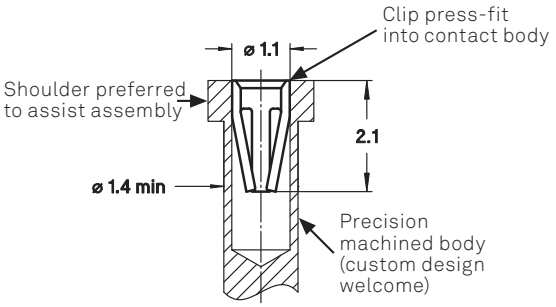
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.32-0.52 mm |
| COMPLIANCY Δ | 0.14 mm |
| MIN. MATING PIN LENGTH | 2 mm |
| CURRENT RATING | 3 A |

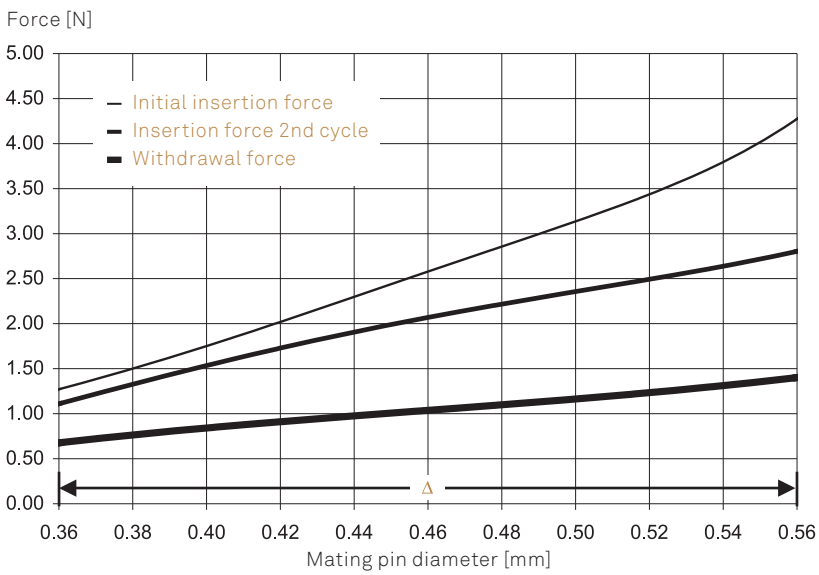



## CLIP CODE 3010 — 4-FINGER

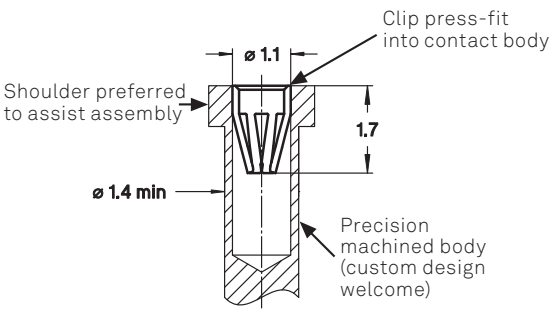
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.36-0.56 mm |
| COMPLIANCY Δ | 0.2 mm |
| MIN. MATING PIN LENGTH | 2.4 mm |
| CURRENT RATING | 3 A |

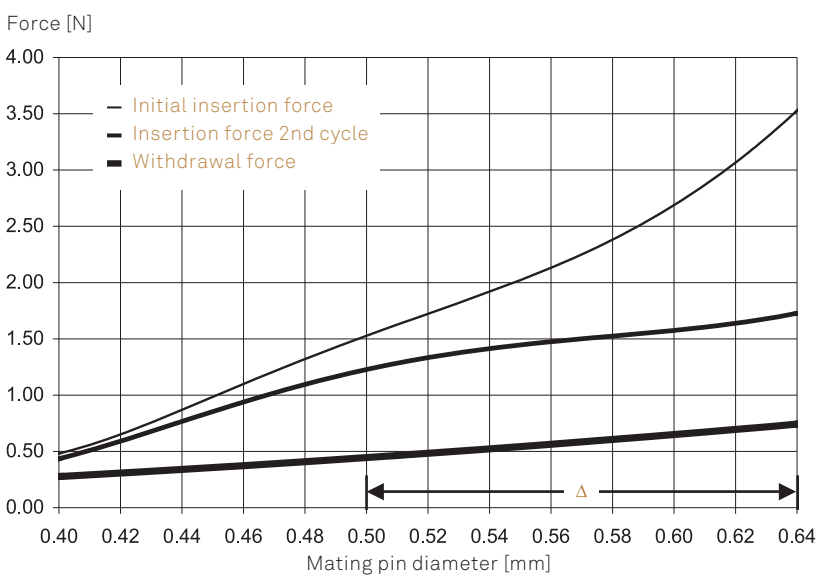



## CLIP CODE 2210 — 6-FINGER

| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.4-0.64 mm |
| COMPLIANCY Δ | 0.14 mm |
| MIN. MATING PIN LENGTH | 2 mm |
| CURRENT RATING | 3 A |

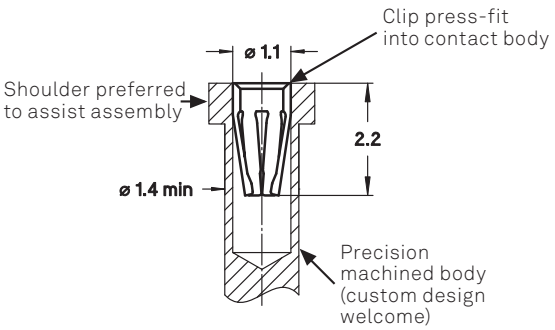


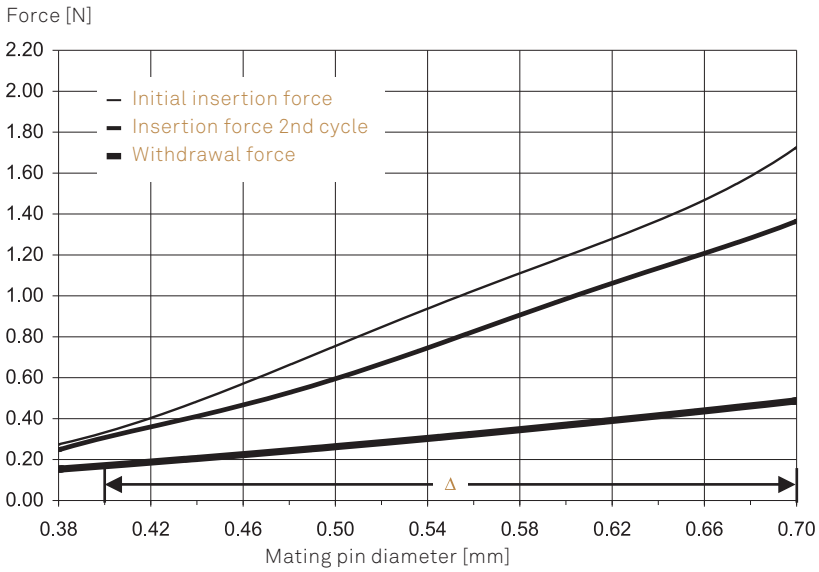



# CONTACT DATA
STANDARD CLIP

## CLIP CODE 3110 — 6-FINGER

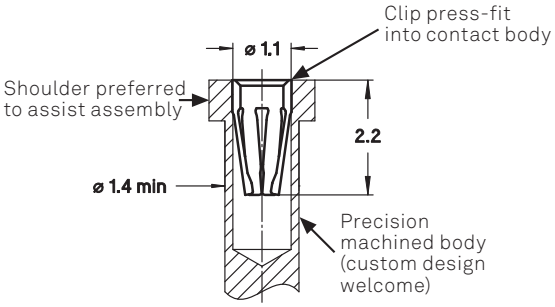
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.38-0.7 mm |
| COMPLIANCY Δ | 0.3 mm |
| MIN. MATING PIN LENGTH | 2.5 mm |
| CURRENT RATING | 3 A |

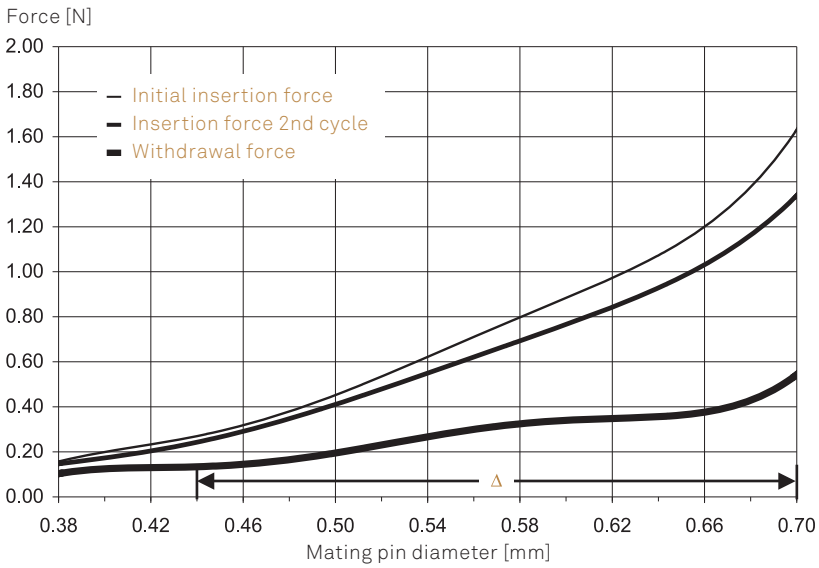



## CLIP CODE 3130 — 6-FINGER

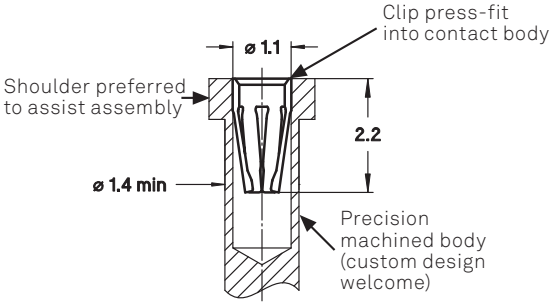
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.38-0.7 mm |
| COMPLIANCY Δ | 0.26 mm |
| MIN. MATING PIN LENGTH | 2.5 mm |
| CURRENT RATING | 3 A |

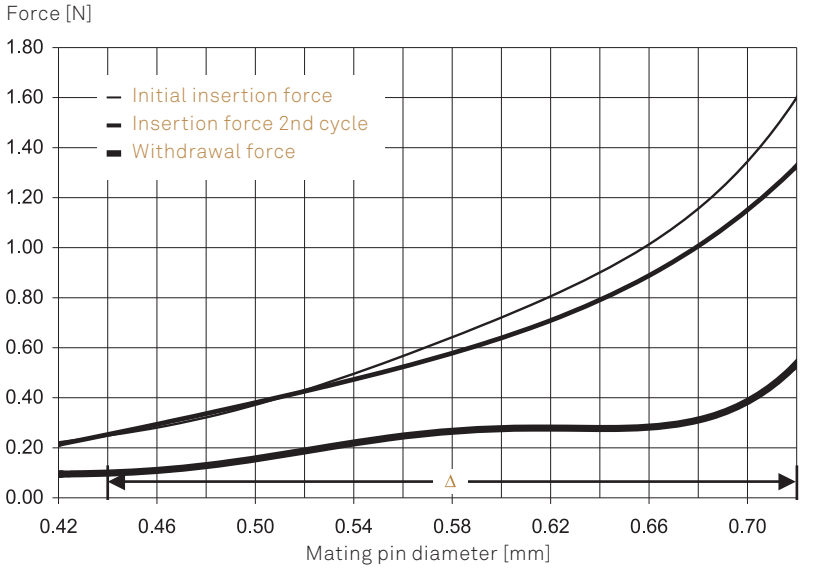



## CLIP CODE 3160 — 6-FINGER

| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.42-0.72 mm |
| COMPLIANCY Δ | 0.28 mm |
| MIN. MATING PIN LENGTH | 2.5 mm |
| CURRENT RATING | 3 A |





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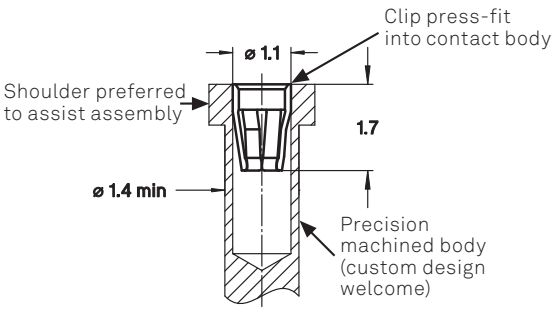
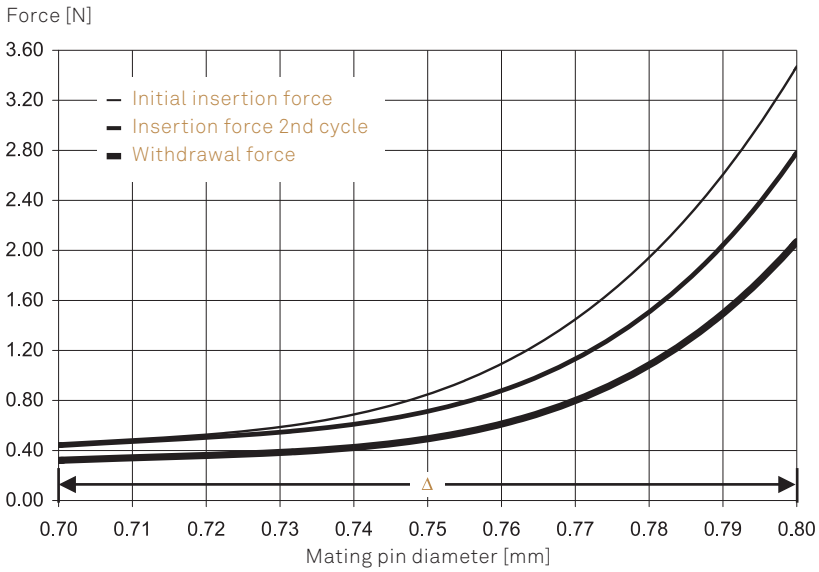
# CONTACT DATA
STANDARD CLIP

## CLIP CODE 5210 — 6-FINGER

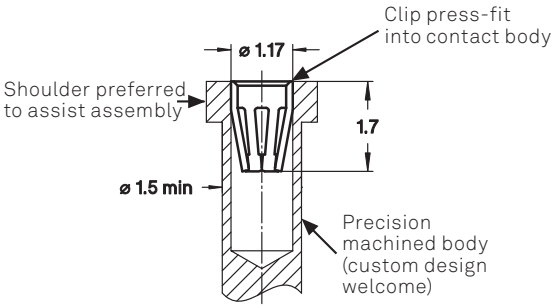
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.7-0.8 mm |
| COMPLIANCY Δ | 0.1 mm |
| MIN. MATING PIN LENGTH | 2.2 mm |
| CURRENT RATING | 4.5 A |

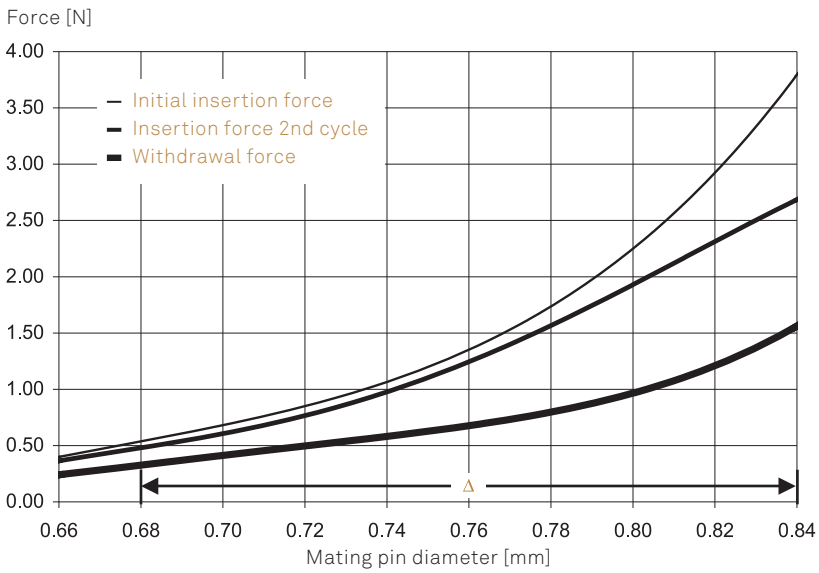



## CLIP CODE 1410 — 6-FINGER

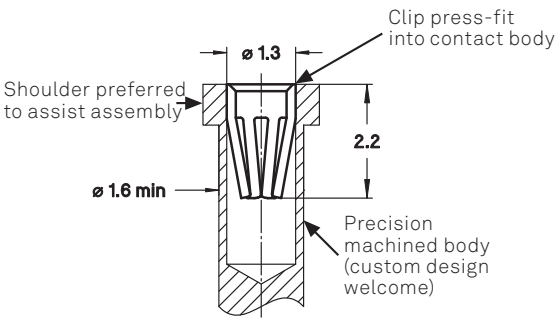
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.66-0.84 mm |
| COMPLIANCY Δ | 0.16 mm |
| MIN. MATING PIN LENGTH | 2.2 mm |
| CURRENT RATING | 4.5 A |

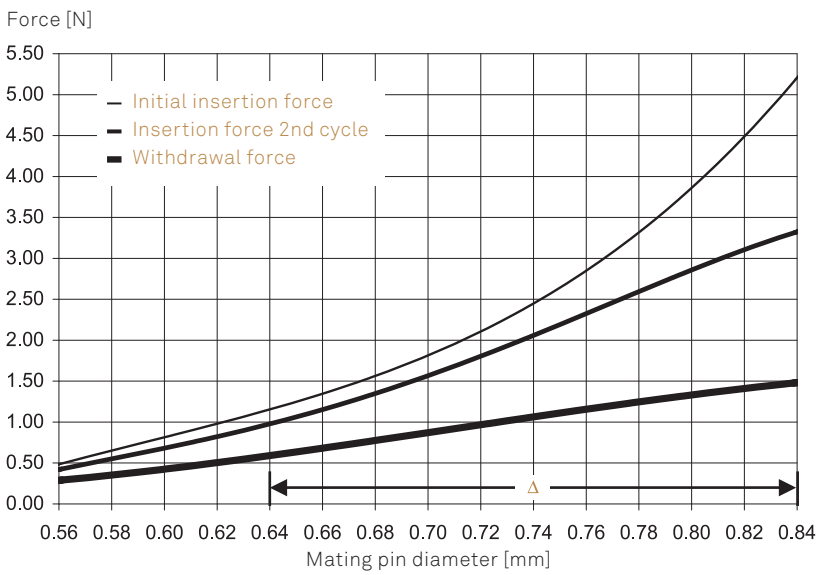



## CLIP CODE 1610 — 6-FINGER

| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.56-0.84 mm |
| COMPLIANCY Δ | 0.2 mm |
| MIN. MATING PIN LENGTH | 2.7 mm |
| CURRENT RATING | 5 A |



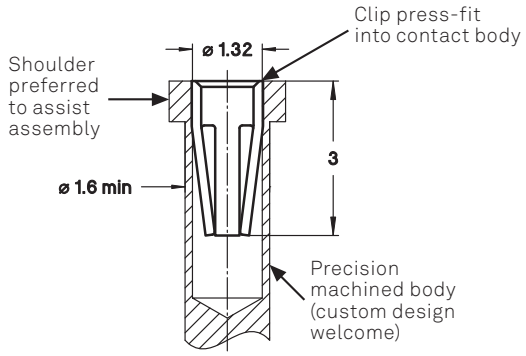


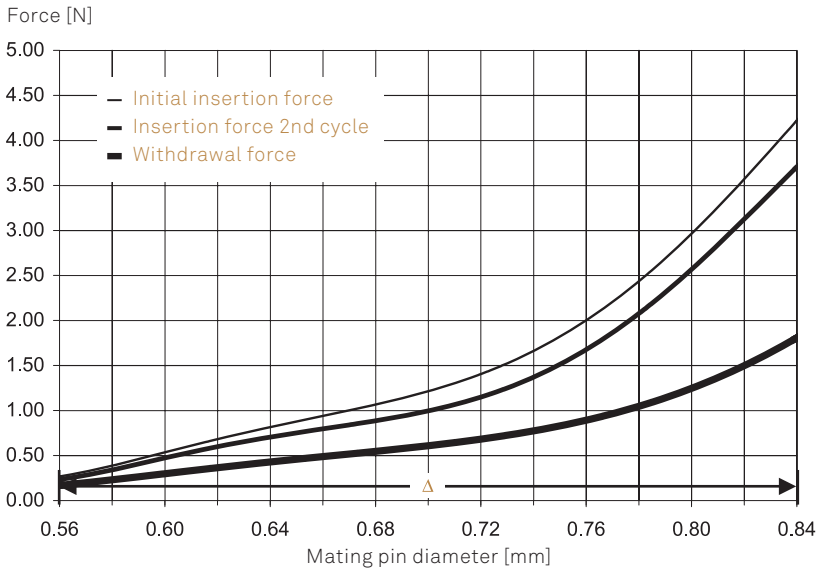

Due to technical progress, all information provided is subject to change without prior notice.

# CONTACT DATA
STANDARD CLIP

## CLIP CODE 0610 — 4-FINGER

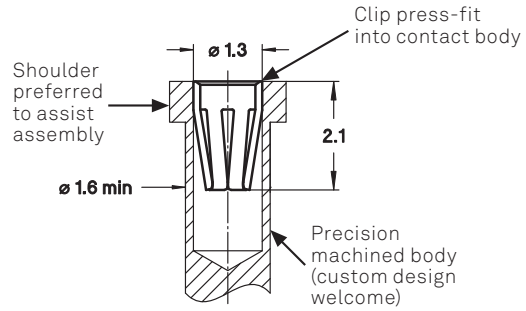
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.56-0.84 mm |
| COMPLIANCY Δ | 0.28 mm |
| MIN. MATING PIN LENGTH | 3.5 mm |
| CURRENT RATING | 5 A |

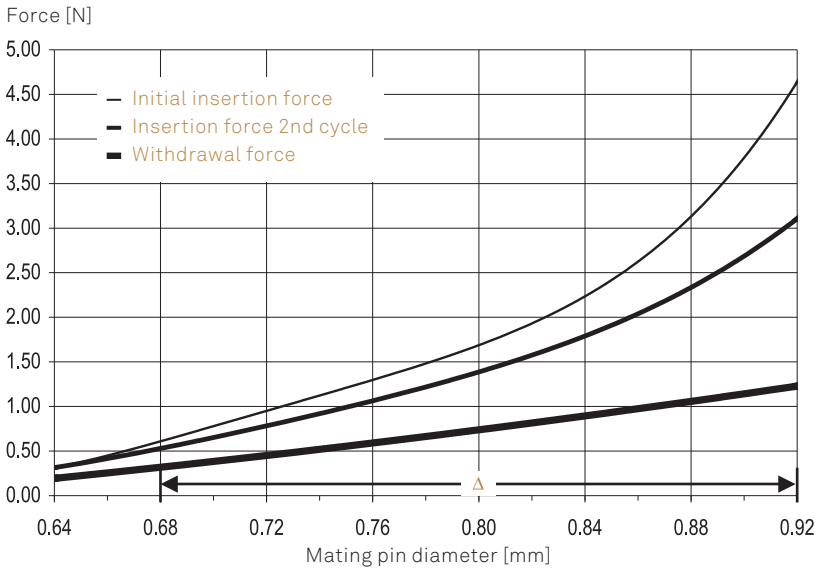



## CLIP CODE 4710 — 6-FINGER

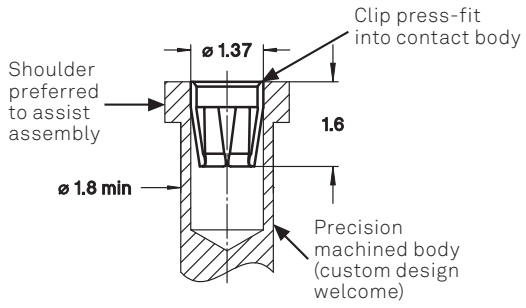
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.64-0.92 mm |
| COMPLIANCY Δ | 0.24 mm |
| MIN. MATING PIN LENGTH | 2.6 mm |
| CURRENT RATING | 5 A |

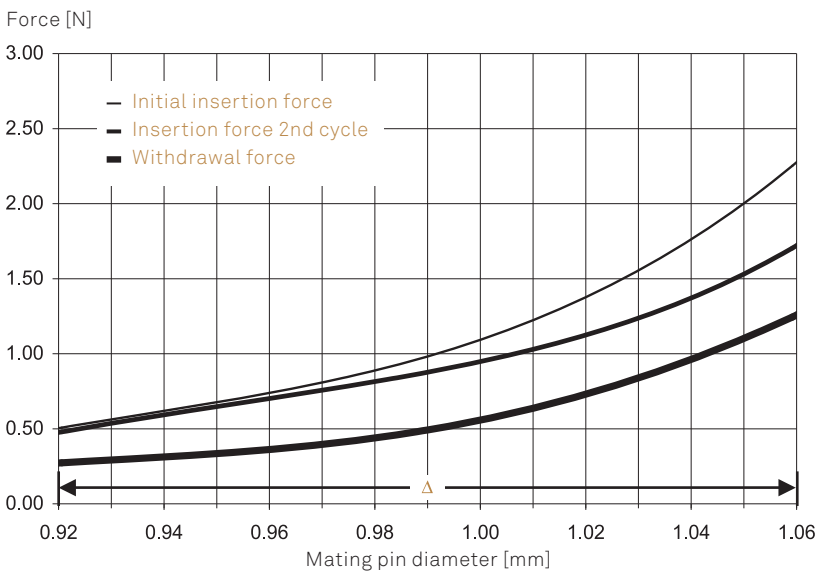



## CLIP CODE 1810 — 6-FINGER

| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.92-1.06 mm |
| COMPLIANCY Δ | 0.14 mm |
| MIN. MATING PIN LENGTH | 2.2 mm |
| CURRENT RATING | 8 A |



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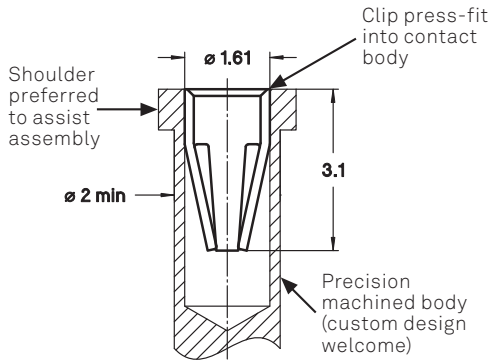
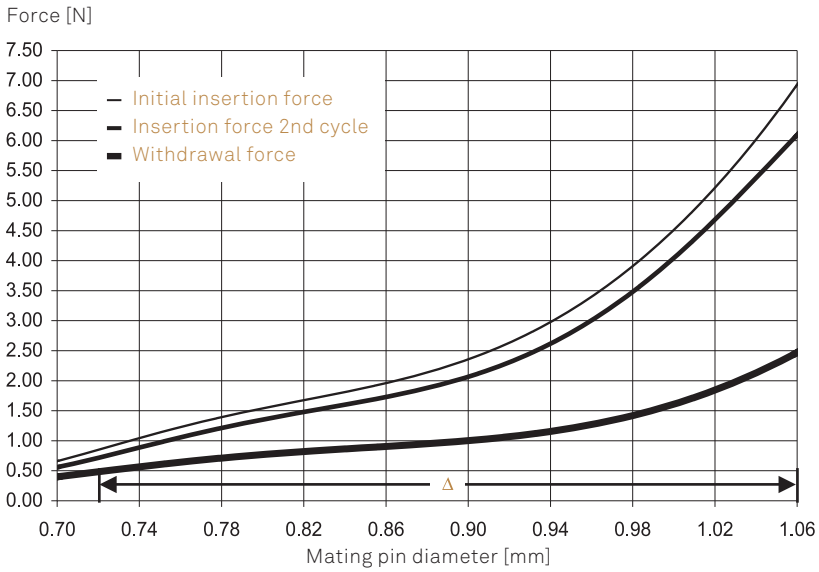
# CONTACT DATA
STANDARD CLIP

## CLIP CODE 3410 — 4-FINGER

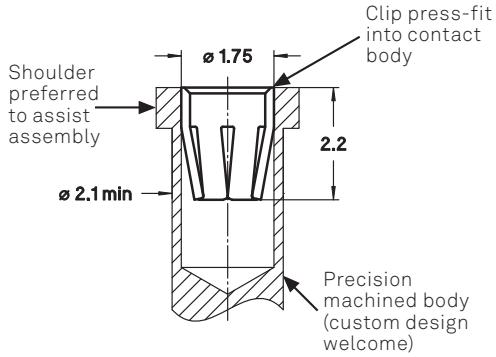
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.7-1.06 mm |
| COMPLIANCY Δ | 0.34 mm |
| MIN. MATING PIN LENGTH | 3.7 mm |
| CURRENT RATING | 8 A |

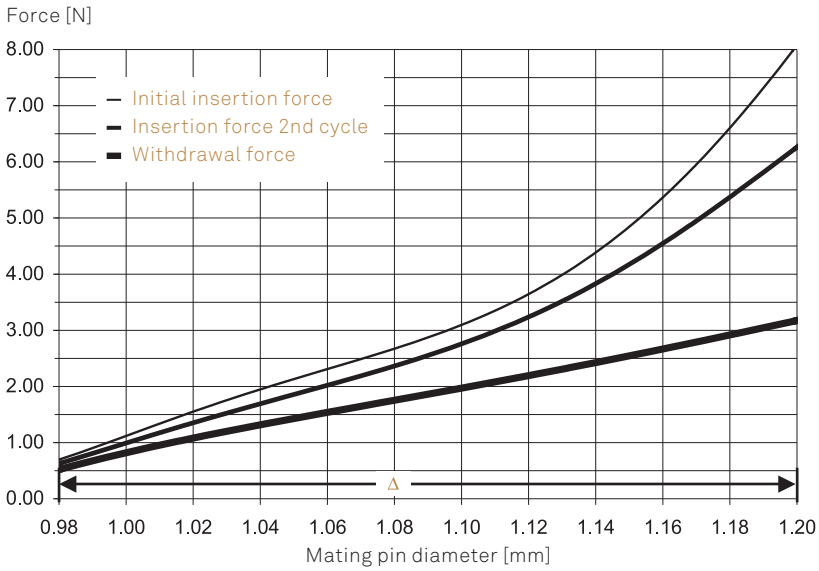



## CLIP CODE 0210 — 6-FINGER

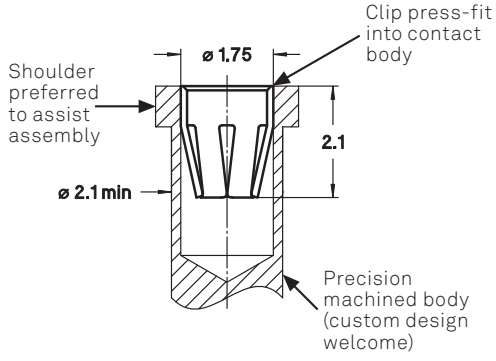
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.98-1.2 mm |
| COMPLIANCY Δ | 0.22 mm |
| MIN. MATING PIN LENGTH | 3 mm |
| CURRENT RATING | 8 A |

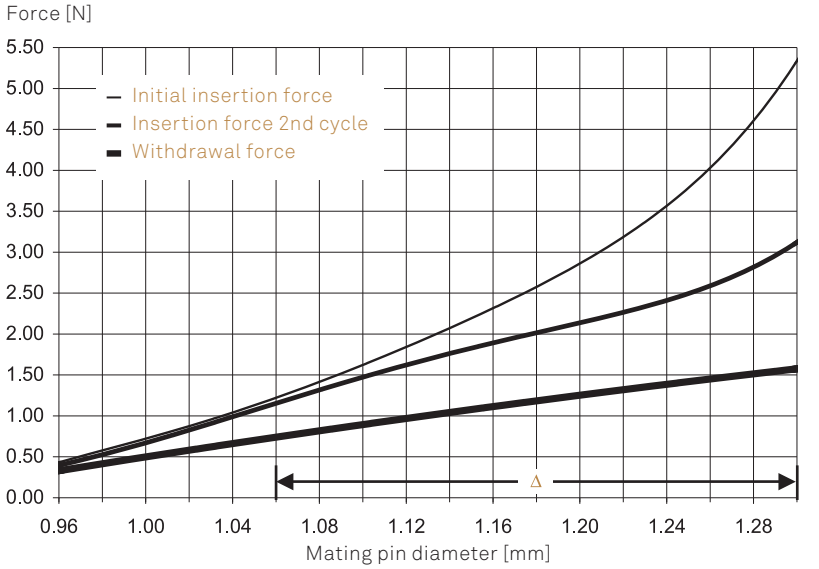



## CLIP CODE 2710 — 6-FINGER

| | |
|---|---|
| MATING PIN DIAMETER RANGE | 0.96-1.3 mm |
| COMPLIANCY Δ | 0.24 mm |
| MIN. MATING PIN LENGTH | 3 mm |
| CURRENT RATING | 8 A |



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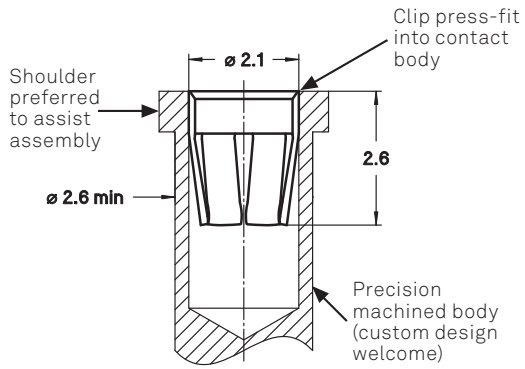
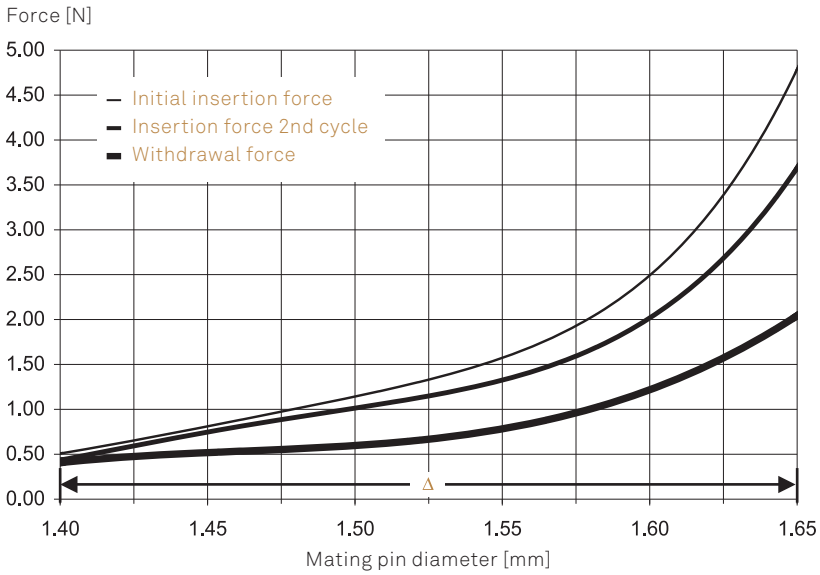
# CONTACT DATA
STANDARD CLIP

## CLIP CODE 4910 — 6-FINGER

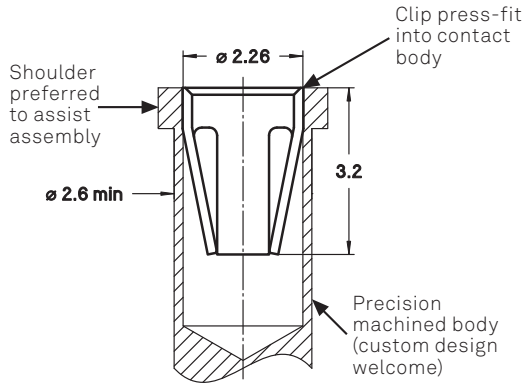
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 1.4-1.65 mm |
| COMPLIANCY Δ | 0.25 mm |
| MIN. MATING PIN LENGTH | 3.4 mm |
| CURRENT RATING | 11 A |

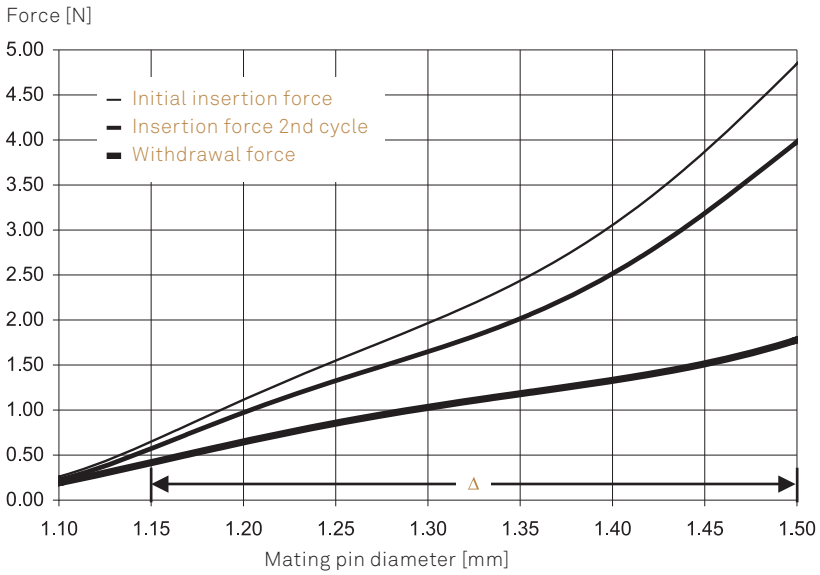



## CLIP CODE 1310 — 4-FINGER

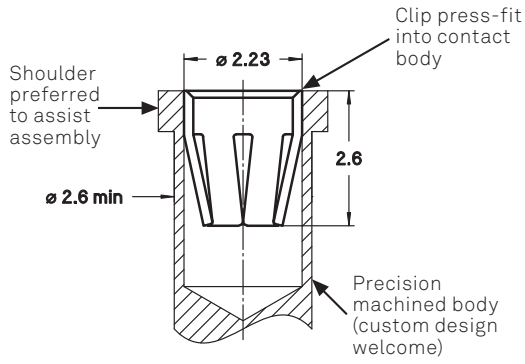
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 1.1-1.5 mm |
| COMPLIANCY Δ | 0.35 mm |
| MIN. MATING PIN LENGTH | 4.2 mm |
| CURRENT RATING | 11 A |

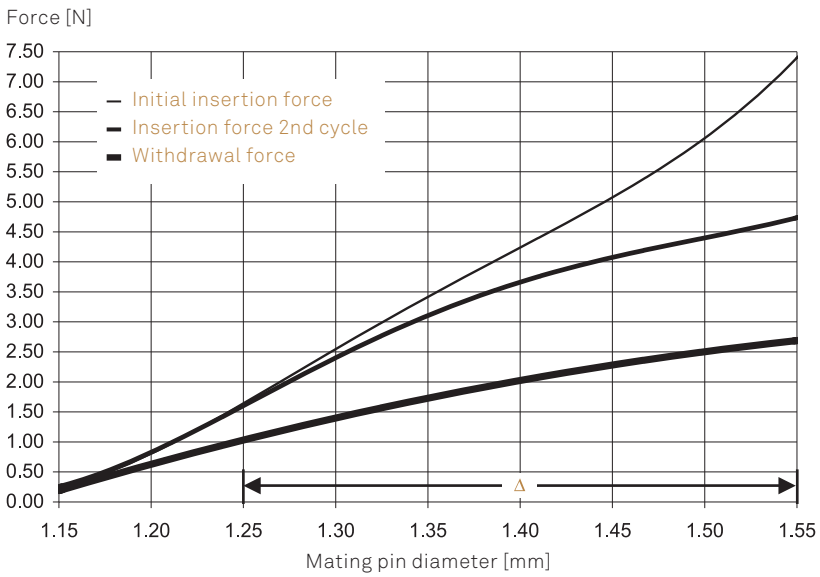



## CLIP CODE 2310 — 6-FINGER

| | |
|---|---|
| MATING PIN DIAMETER RANGE | 1.15-1.55 mm |
| COMPLIANCY Δ | 0.3 mm |
| MIN. MATING PIN LENGTH | 3.5 mm |
| CURRENT RATING | 11 A |





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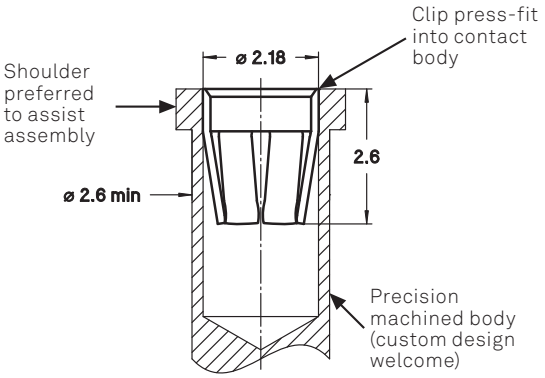
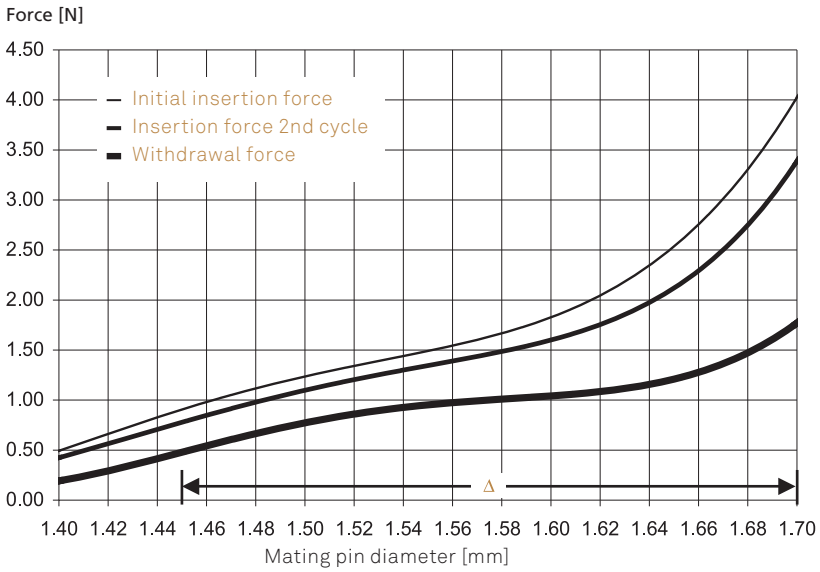
# CONTACT DATA
STANDARD CLIP

## CLIP CODE 3920 — 6-FINGER

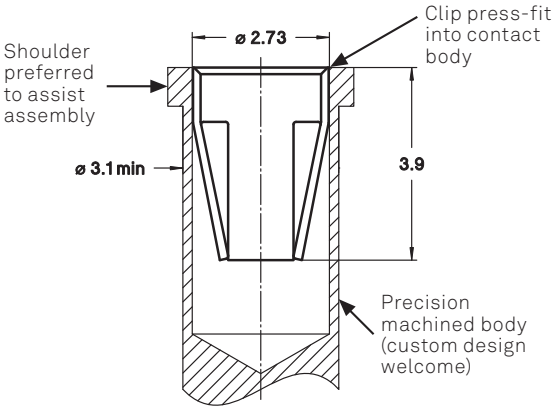
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 1.4-1.7 mm |
| COMPLIANCY Δ | 0.25 mm |
| MIN. MATING PIN LENGTH | 3.5 mm |
| CURRENT RATING | 11 A |

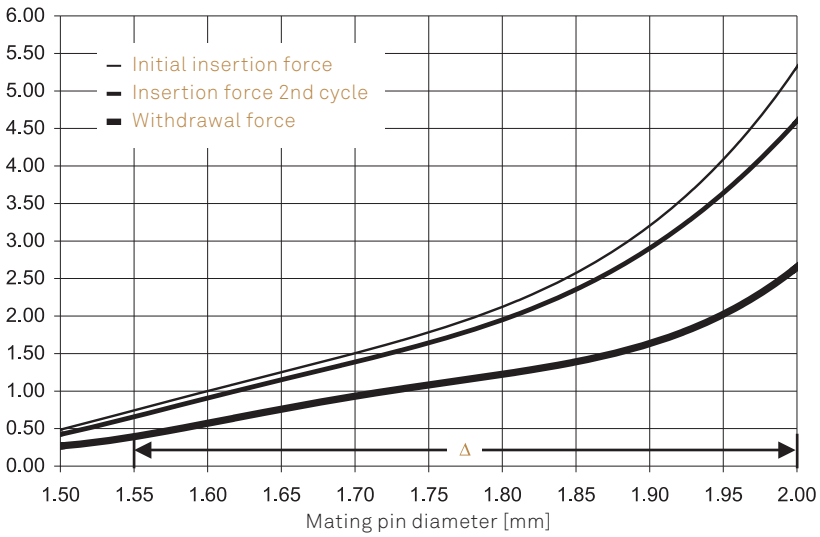



## CLIP CODE 0710 — 4-FINGER

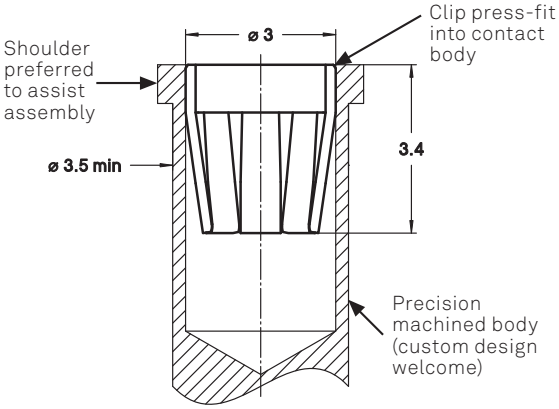
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 1.5-2 mm |
| COMPLIANCY Δ | 0.45 mm |
| MIN. MATING PIN LENGTH | 5 mm |
| CURRENT RATING | 15 A |

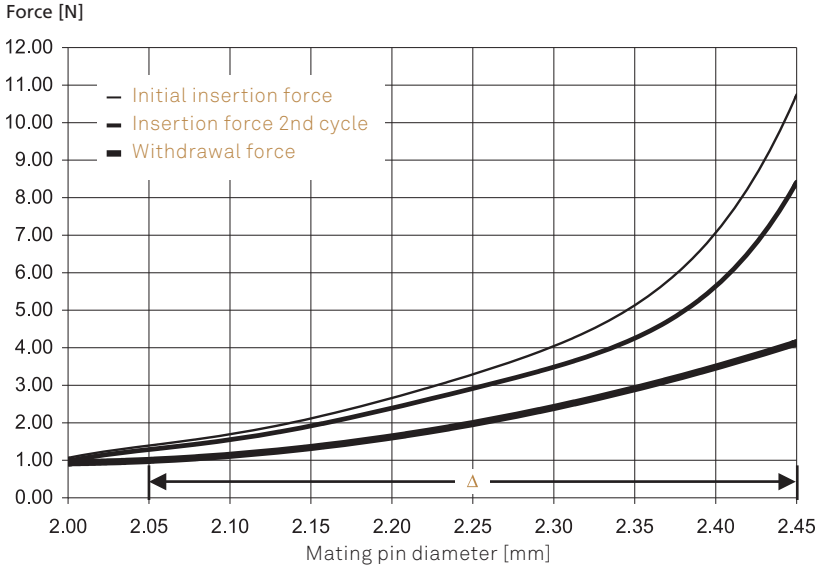


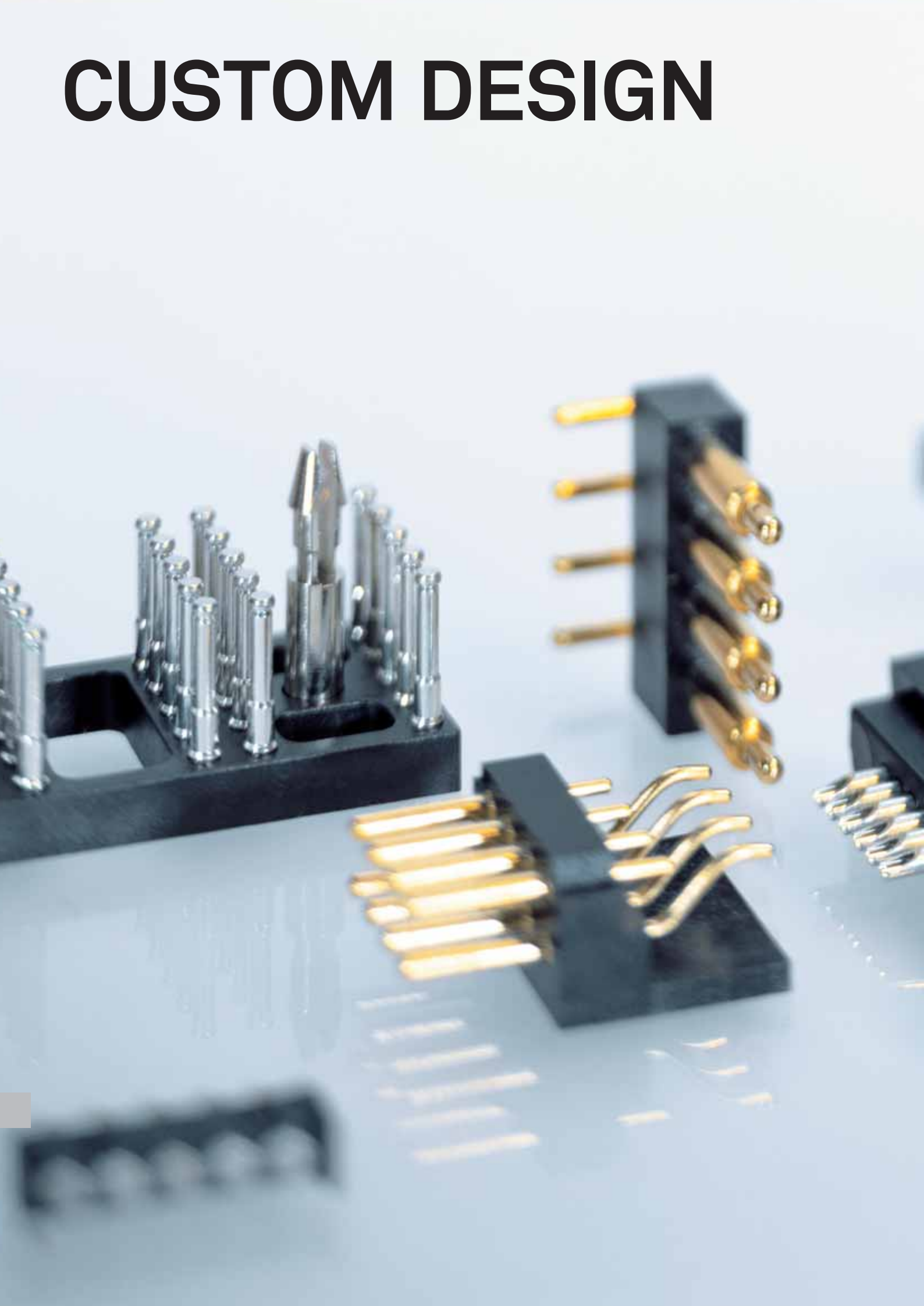

## CLIP CODE 4010 — 8-FINGER

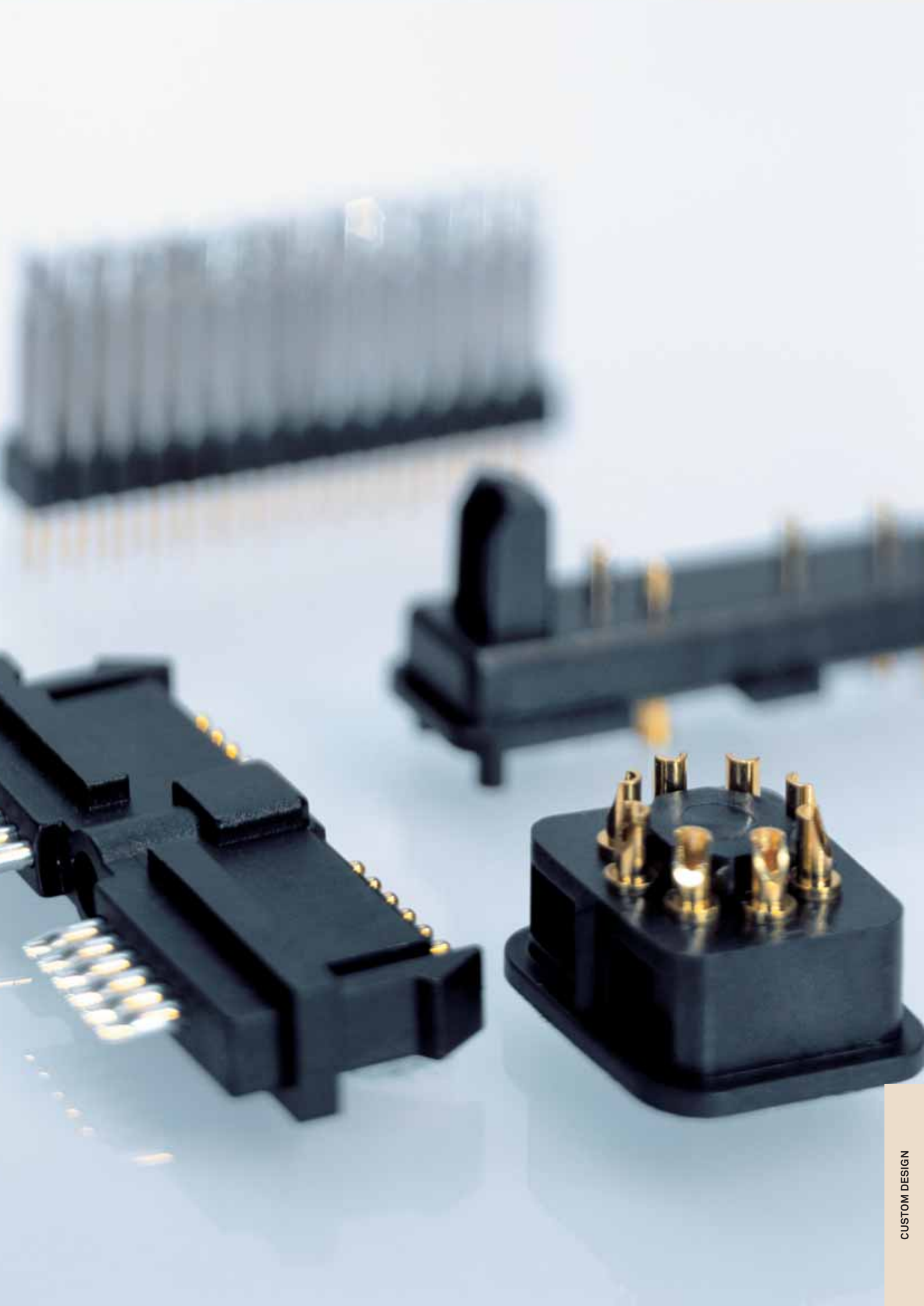
| | |
|---|---|
| MATING PIN DIAMETER RANGE | 2-2.45 mm |
| COMPLIANCY Δ | 0.4 mm |
| MIN. MATING PIN LENGTH | 4.7 mm |
| CURRENT RATING | 18 A |



# CUSTOM DESIGN



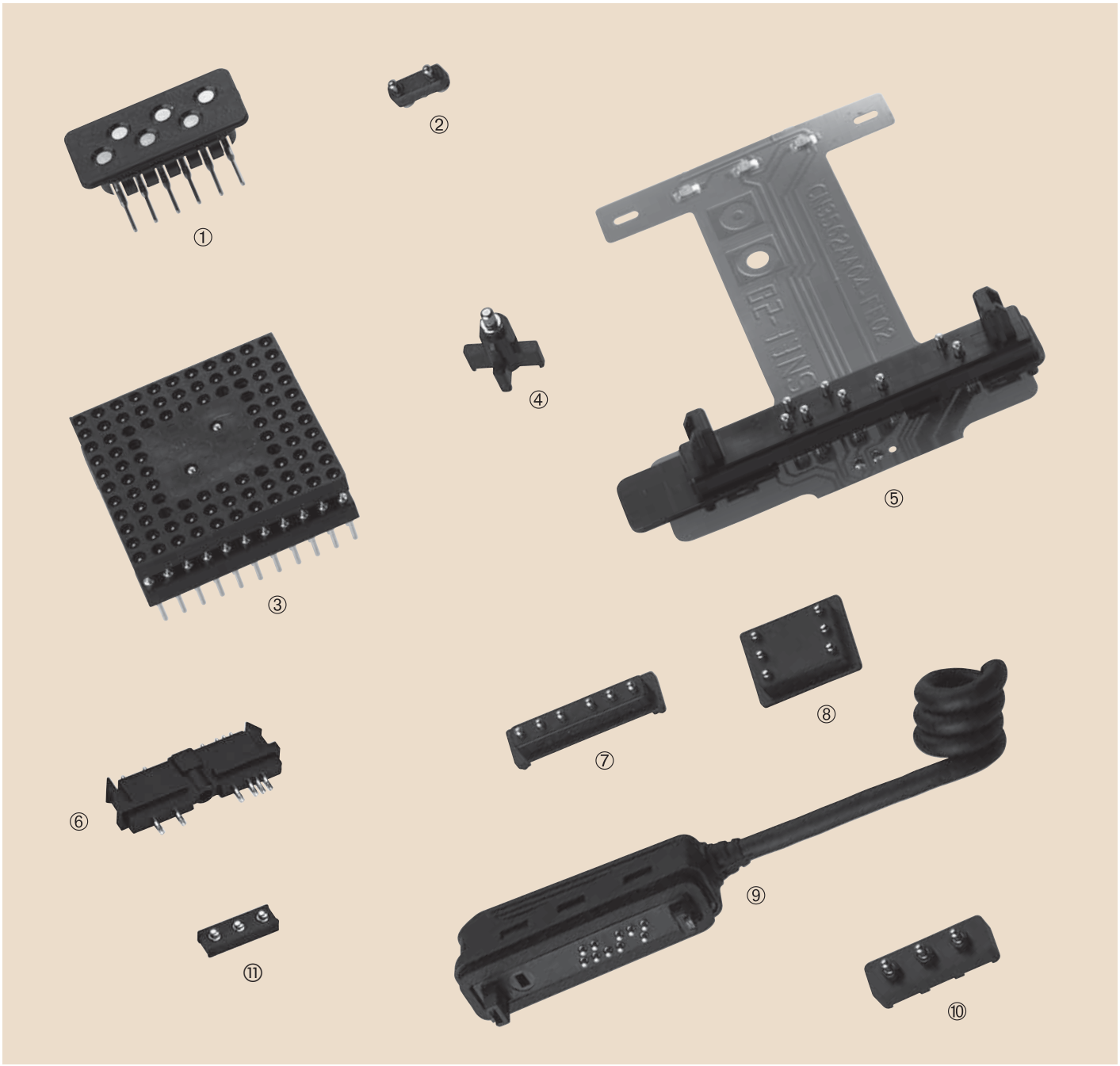


# APPLICATION FIELD

**TELECOMMUNICATION**

## EXAMPLES

1. Dead connector system interface, professional mobile radio
2. SMD connector for automatic assembly for mobile phone loudspeaker
3. Flex-print connector with orientation pins and protective cover, GSM base station
4. Double action connector, cover position detector on mobile phone
5. Connector with integrated guiding system for docking station for professional mobile radio
6. System interface connector with locking device for professional mobile radio
7. SMD spring-loaded board-to-board connector for blind assembly on professional mobile radio
8. SIM card connector in mobile phones and professional mobile radios
9. Connector with holding bracket for remote microphone and control unit for mobile radio
10. Connector for sealed assembly for mobile phone battery
11. Miniature spring-loaded connector, very low profile with less than 2.5 mm working height



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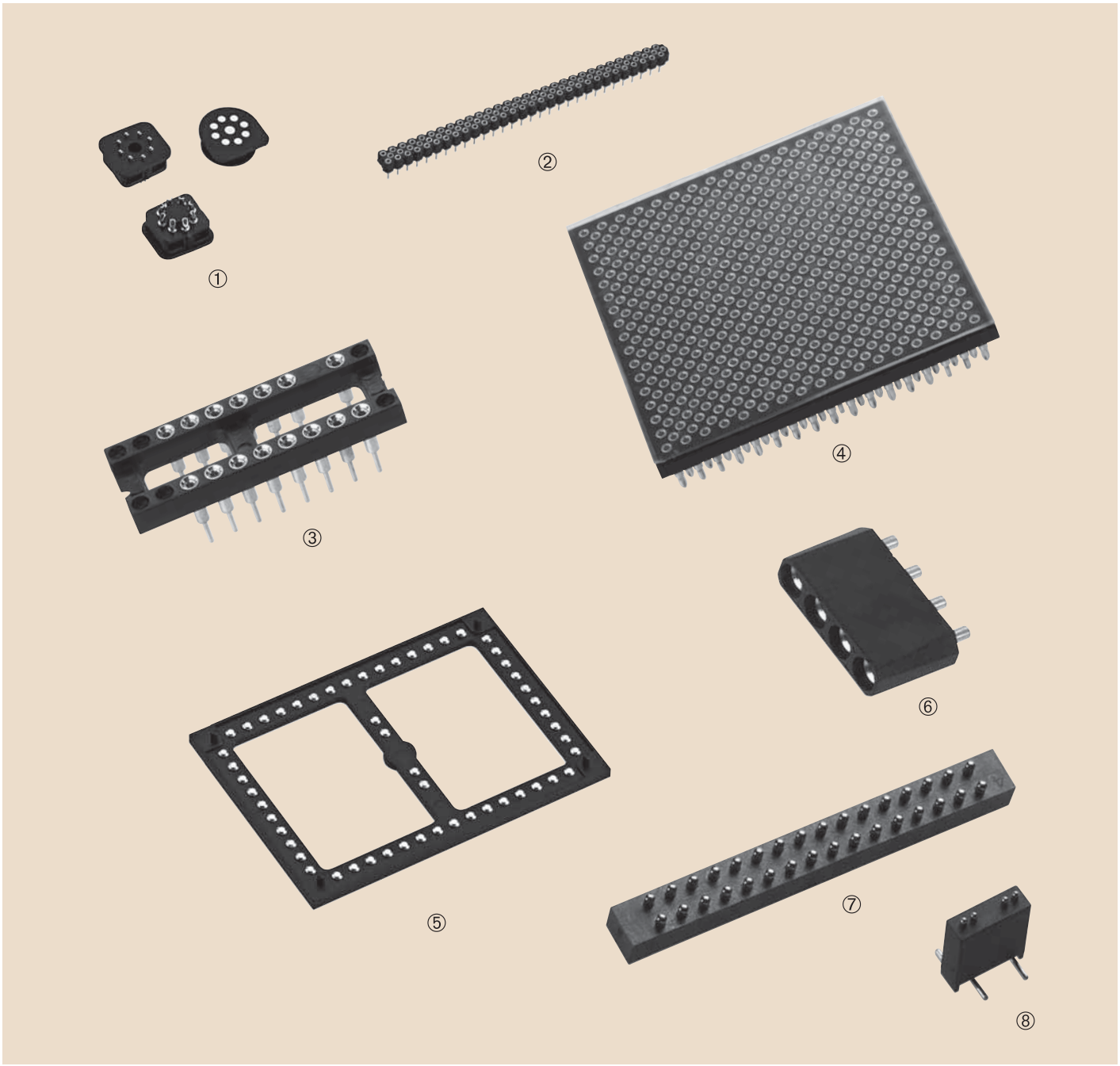
# APPLICATION FIELDS

DATA PROCESSING AND ACQUISITION

## EXAMPLES

1. Spring-loaded and pad connectors for portable voice directed data acquisition terminal
2. Miniature high density connector for single board industrial processor
3. LED display socket control panel
4. 545 way interstitial PGA socket with compliant press-fit terminations, multi-processor, parallel computing, mainframe computer
5. PCB interconnect component for electronic banking terminal
6. Power connector hard-disk drive
7. SMD connector for docking station for tablett-PC, PDA and bar code readers
8. Connector for security control loop on automatic cash dispenser, banking and vending machines



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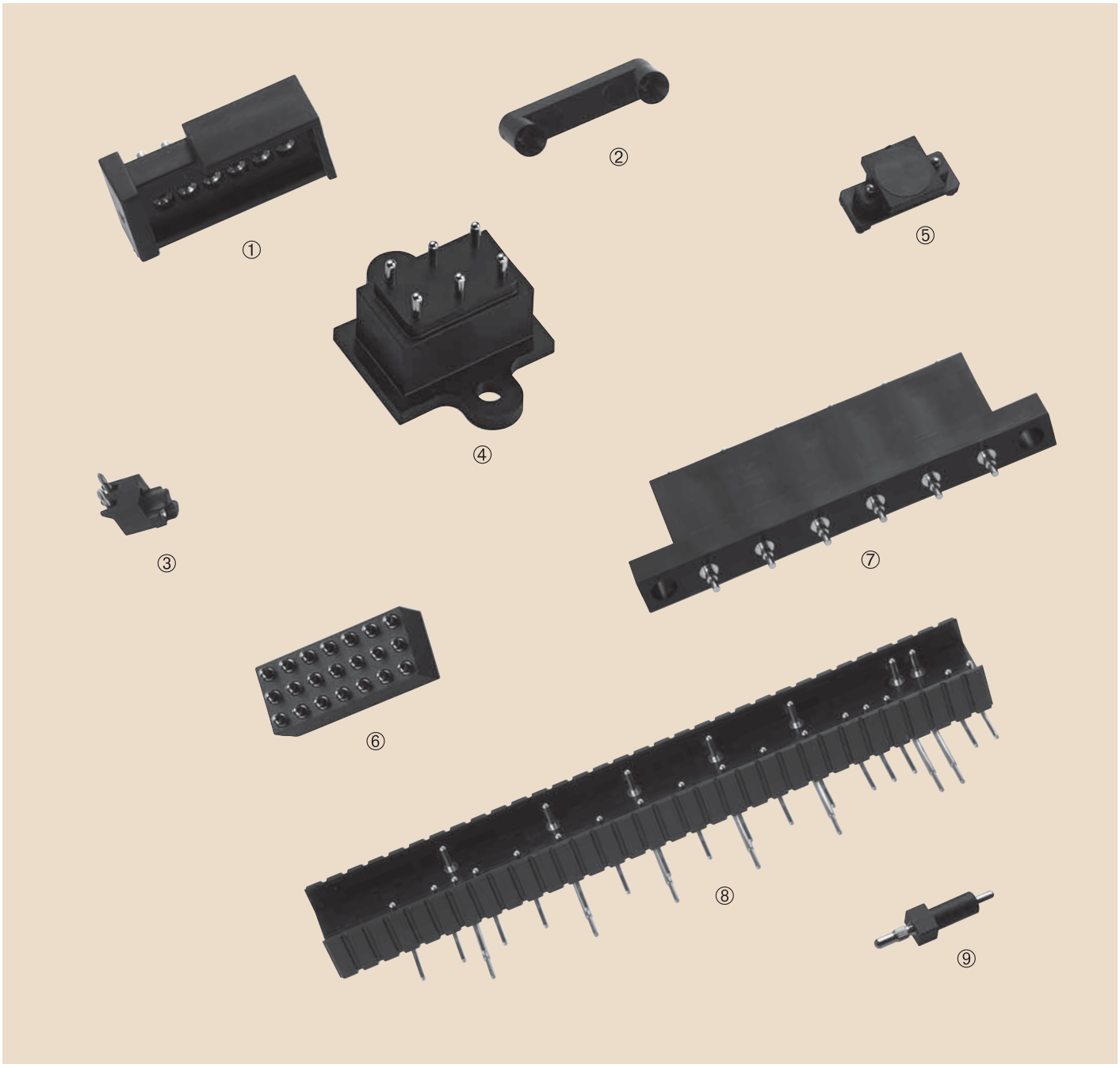
# APPLICATION FIELD

**TRANSPORTATION**

## EXAMPLES

1. Connector for car dash-board instrument
2. Car dash-board connector for blind mating
3. LED lamp socket for back-lighting, car radio
4. Spring-loaded connector for vehicles for secured cash transport
5. SMD connector for internal dash board connection
6. SMD spring-loaded and pad connector for dash board add-on for telecommunication equipment
7. Spring-loaded connector for food conveyor trolley
8. Card connectors air conditioning control equipment, railway
9. Connector for press-fit assembly and connection to removable operation panel for car radio



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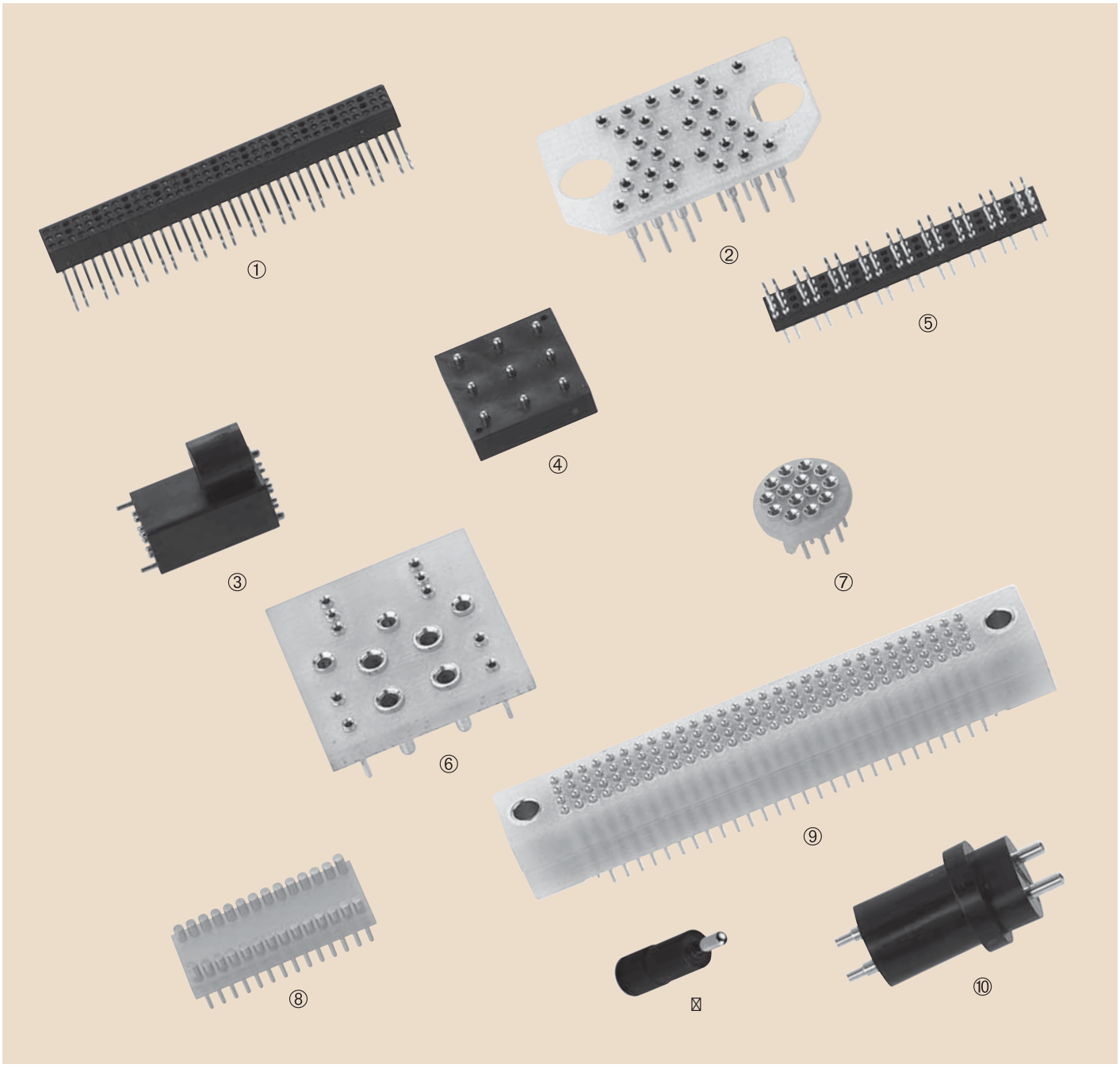
# APPLICATION FIELDS

**AIRCRAFT, AEROSPACE AND MILITARY**

## EXAMPLES

1. Miniature board to board connectors avionics equipment
2. Interface socket PCB to ARINC connector
3. Board-to-board connection in tactical manpack radio
4. Radar equipment of military helicopter
5. Miniature board to board connectors avionics equipment
6. Interface socket PCB to ARINC connector
7. Interface socket PCB to MIL connector
8. Miniature pad connector used in test systems for satellite navigation system
9. High-stiffness 2 mm-pitch connector for avionics equipment
10. Sealed connector with very high contact pressure for avionics equipment, electronic defence systems
11. Floating spring-loaded contact with insulator body for electronic defense systems



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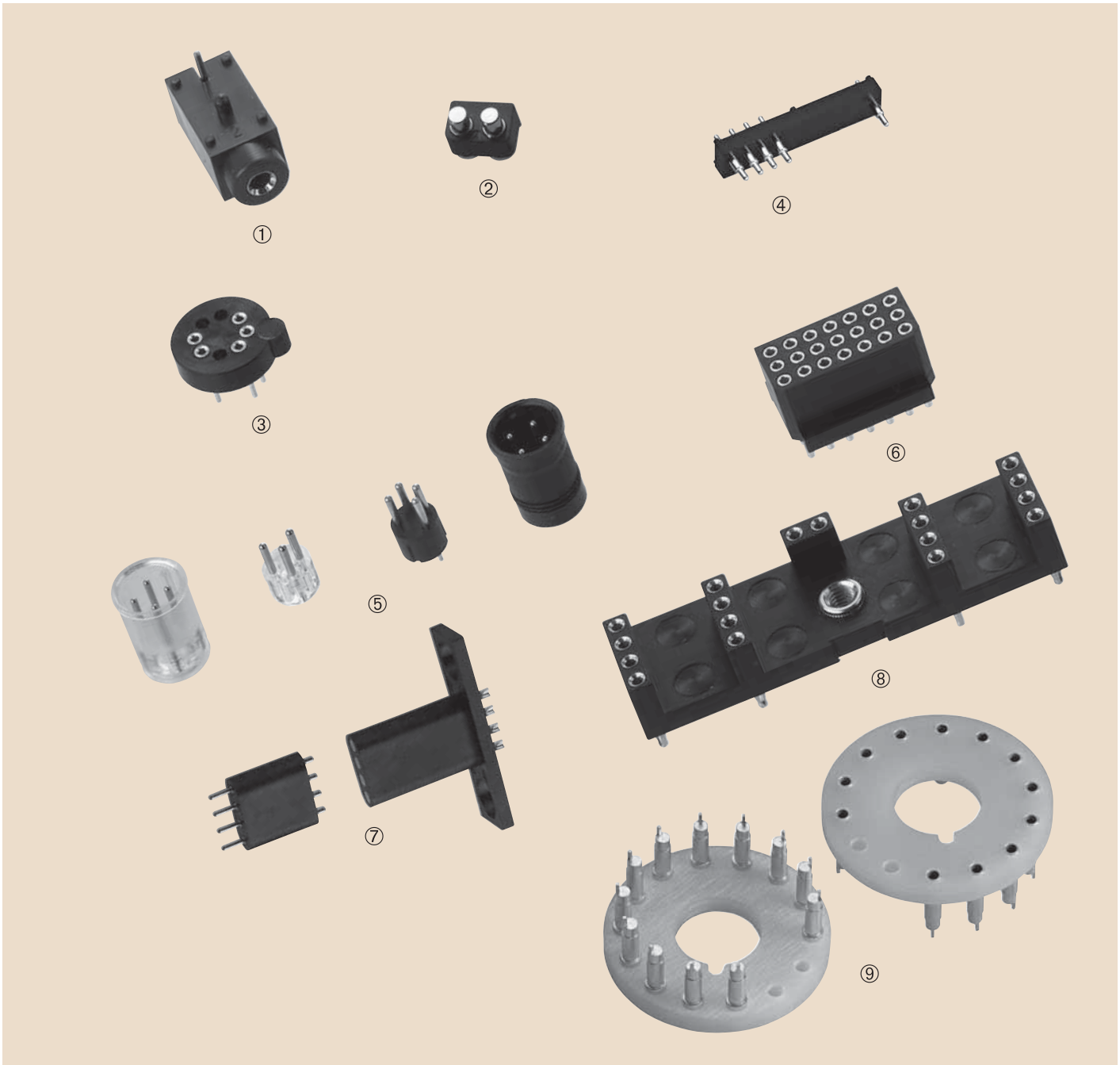
# APPLICATION FIELDS

## AUTOMATION AND INDUSTRIAL EQUIPMENT

### EXAMPLES

1. Test jack for calibration of industrial transmitter
2. SMD connector for industrial sensor
3. Socket for gas pressure sensor
4. Spring-loaded connector for programming module for industrial sensor
5. Pin connectors for industrial position sensor
6. Polarized PCB socket connector, controller for building automation system
7. Spring-loaded and dead connector for gate control on automatic conveyor system
8. Press-fit socket for coding module in industrial control unit
9. Socket for photomultiplier tube for industrial measurement system



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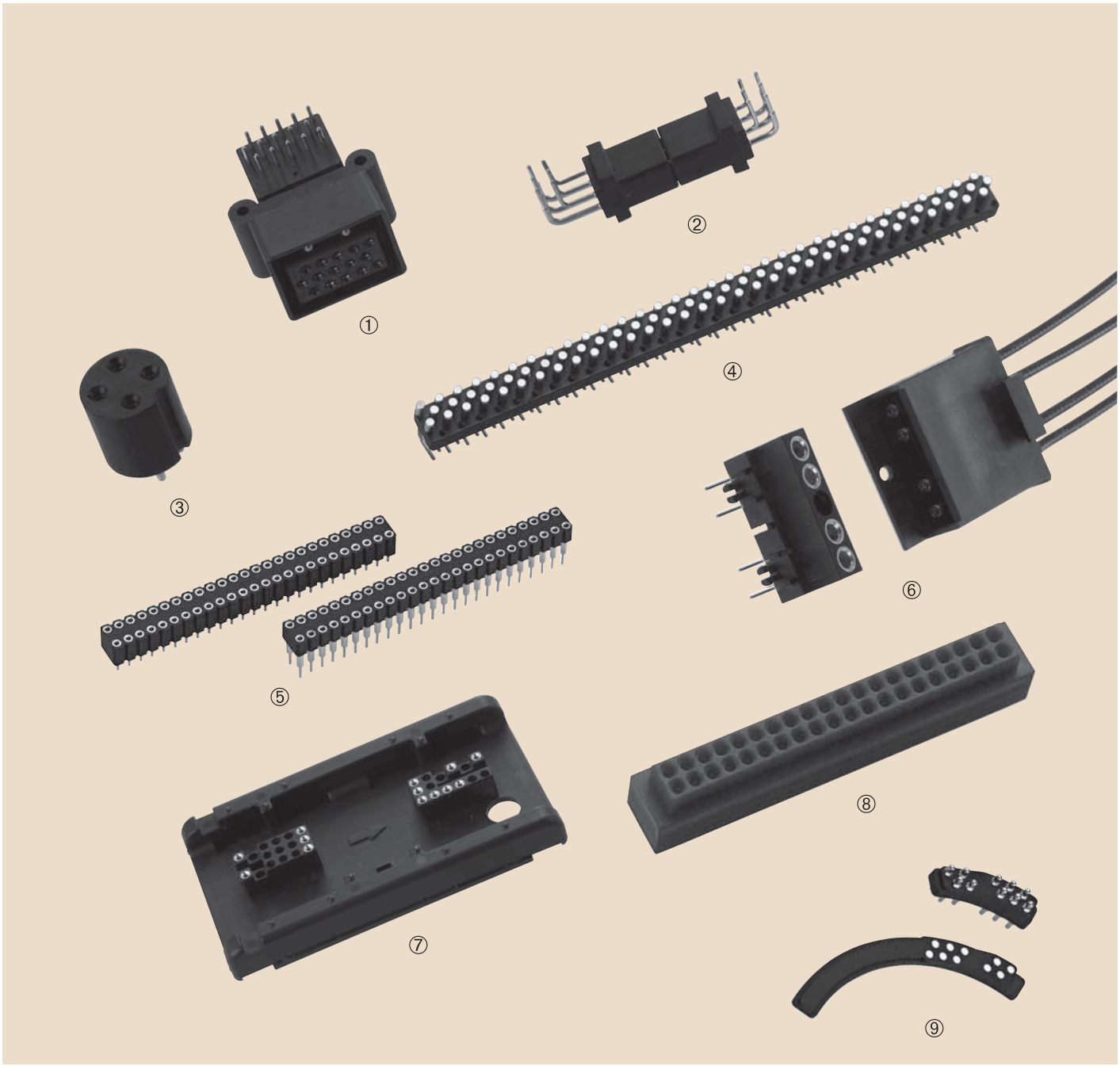
# APPLICATION FIELDS

## TESTING AND MEASURING

### EXAMPLES

1. Data interface connector for weighing and counting systems
2. Test probe connector
3. Sensor connector for liquid analysis
4. Connector with mixed SMD and throughhole terminations for bare-board test systems
5. Connector for test systems for hard-disk drives
6. Shielded contacts connector pair for industrial flow rate measuring systems
7. Base plate / connector system between sensor system and transmitter
8. Spring-loaded connector with recessed pistons for functional test systems for disk drives
9. Spring-loaded and pad connector for IR thermography camera



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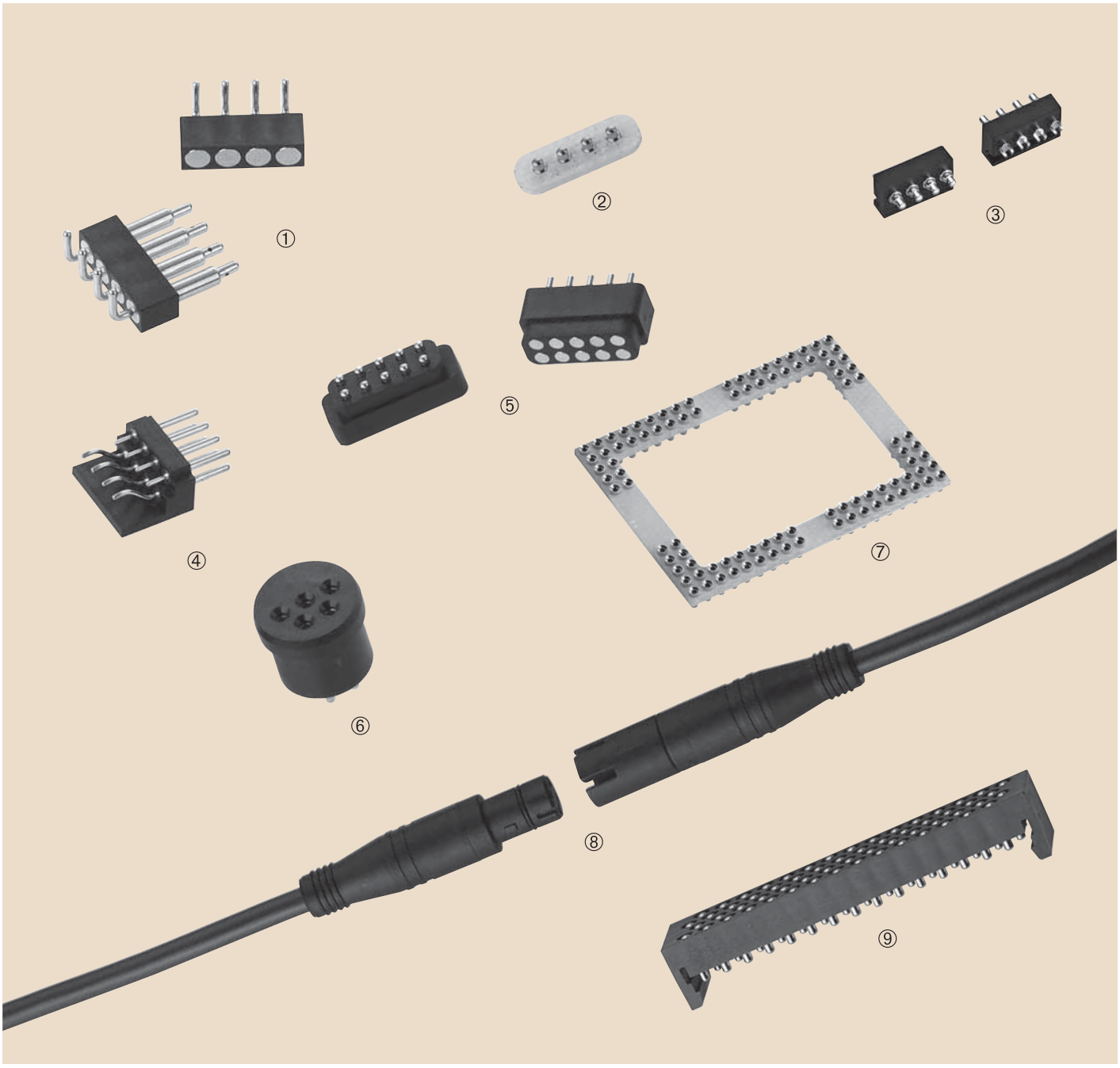
# APPLICATION FIELD

MEDICAL

## EXAMPLES

1. Spring-loaded + pad connector for breathing assistance equipment
2. Battery connector for portable blood pressure measuring equipment
3. Spring-loaded connector for removable display module
4. Electrode connector for muscular electro-stimulation systems
5. Spring-loaded and pad connector data exchange from portable patient monitoring unit into computer system
6. Socket for gas sensor
7. Socket for CCD image sensor for digital radiography
8. Overmoulded miniature connectors with high degree of protection IP 67 for patient monitoring systems
9. Floating-pin spring-loaded connector with integrated snap-in bracket for motherboard to mezzanine board connection



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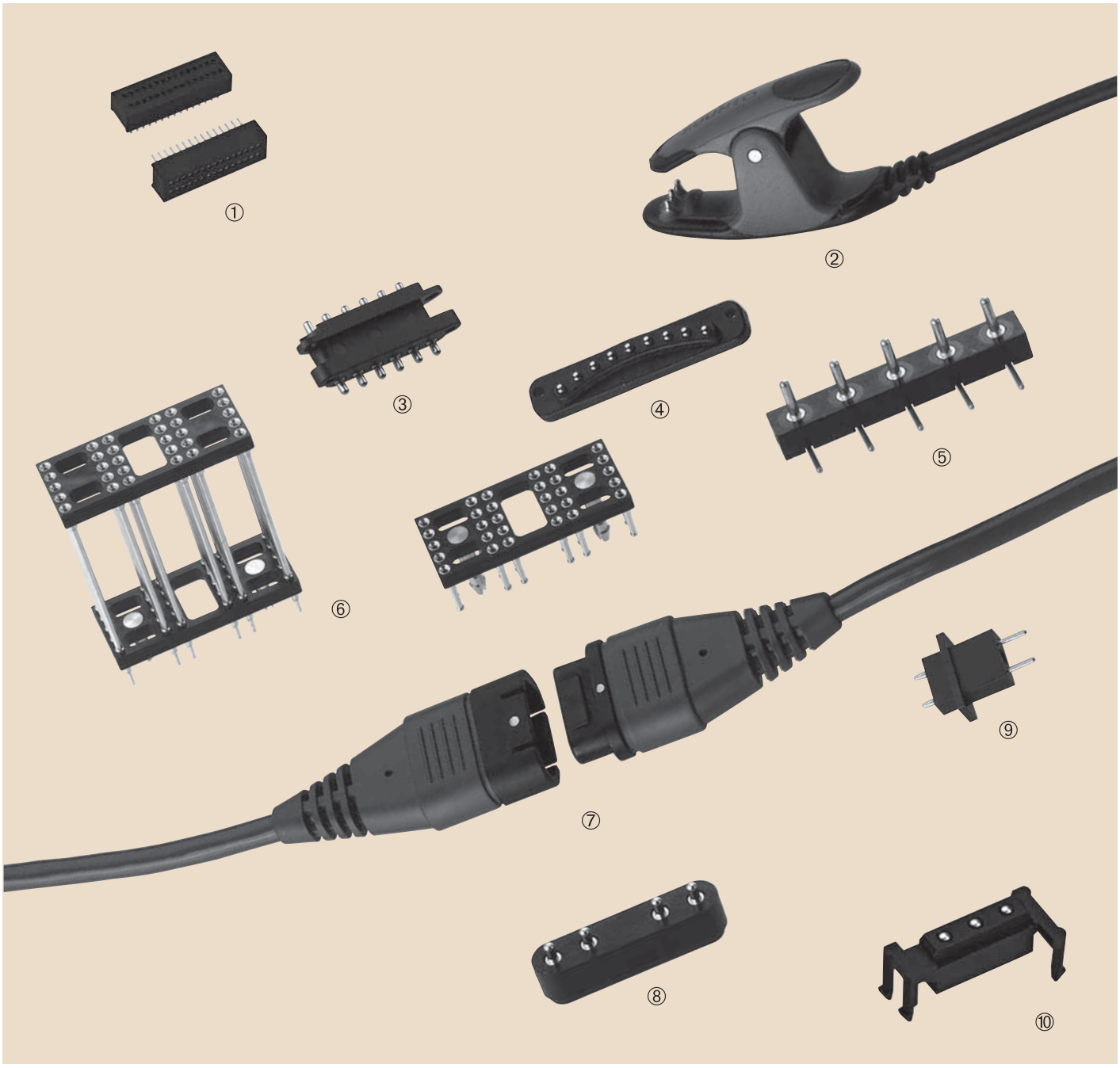
# APPLICATION FIELDS

**PROFESSIONAL AND CONSUMER ELECTRONIC**

## EXAMPLES

1. Miniature connector for ink-jet printing unit
2. Clamp-on connector to load data from wristwatch type diving computer into PC
3. Double-action connector for modular system of professional camera
4. Connection in bayonet mating for camera with interchangeable lenses
5. PCB connector for add-on modules
6. LED display sockets for household washing machine
7. Cable-to-cable connector for audio professional headset
8. Battery connector for portable media player
9. Board-to-board connection for model train
10. Spring-loaded connector for boiler control panel



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Yelloz
www.yellozgroup.com

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www.arrowne.com
Avnet Abacus
www.avnet-abacus.eu
CAB
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Ekontor
www.ekontor.de
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www.avnet-abacus.eu

**HUNGARY**
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www.arrowce.com
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Lomex
www.lomex.hu
Rutronik
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**IRELAND**
Arrow Electronics
www.arrowne.com

**ISRAEL**
Am Components
www.amcomp.co.il
Arrow Israel
www.arrow-israel.co.il

**ITALY**
Arrow Electronics
www.arrowitaly.it
Avnet Abacus
www.avnet-abacus.eu
Comprel
www.comprel.it
Rutronik
www.rutronik.com

**LATVIA**
Arrow
www.arrowne.com

**LITHUANIA**
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www.avnet-abacus.eu
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**NETHERLANDS**
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Rutronik
www.rutronik.com

**NORWAY**
Acte
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Rutronik
www.rutronik.com

**POLAND**
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Rutronik
www.rutronik.com
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**PORTUGAL**
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Rutronik
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**ROMANIA**
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**RUSSIA**
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www.rutronik.com

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Rutronik
www.rutronik.com

**SLOVAKIA**
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www.avnet-abacus.eu
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www.rutronik.com
Official Electronic
www.official.cz

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Avnet Abacus
www.avnet-abacus.eu
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www.electronica21.com
Rutronik
www.rutronik.com

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www.rutronik.com

**SWITZERLAND**
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Avnet Abacus
www.avnet-abacus.eu
Precimation
www.precimation.ch
Rutronik
www.rutronik.com

**TURKEY**
Arrow Electronics
www.arrow.com
Avnet Abacus
www.avnet-abacus.eu

**UNITED KINGDOM**
Arrow Electronics
www.arrow.com
Avnet Abacus
www.avnet-abacus.eu
Flint
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Inelco Hunter
www.inelcohunter.co.uk
Rutronik
www.rutronik.com

**UKRAINE**
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www.avnet-abacus.eu

### USA AND CANADA

**USA**
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www.ebyelectro.com
LCL Electronics Corporation
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www.spacecraft.com
TTi Inc.
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www.nrcelectronics.com
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Beyond Components
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### ASIA

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Arrow Asia
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Kansai Electronics
www.kansai-sz.com
Avnet Abacus
www.avnet.com
Hongda Success
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www.memec-hlc.com
Quanma Electronics
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Rutronik
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www.sinolink-china.com
Westwick
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**JAPAN**
Global Electronics Corp.
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K. Tokiwa
www.k-tokiwa.co.jp
Katotek
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Kaga Electronics
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**KOREA**
Britestone
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**MALAYSIA**
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Le Champ
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**TAIWAN**
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**VIETNAM**
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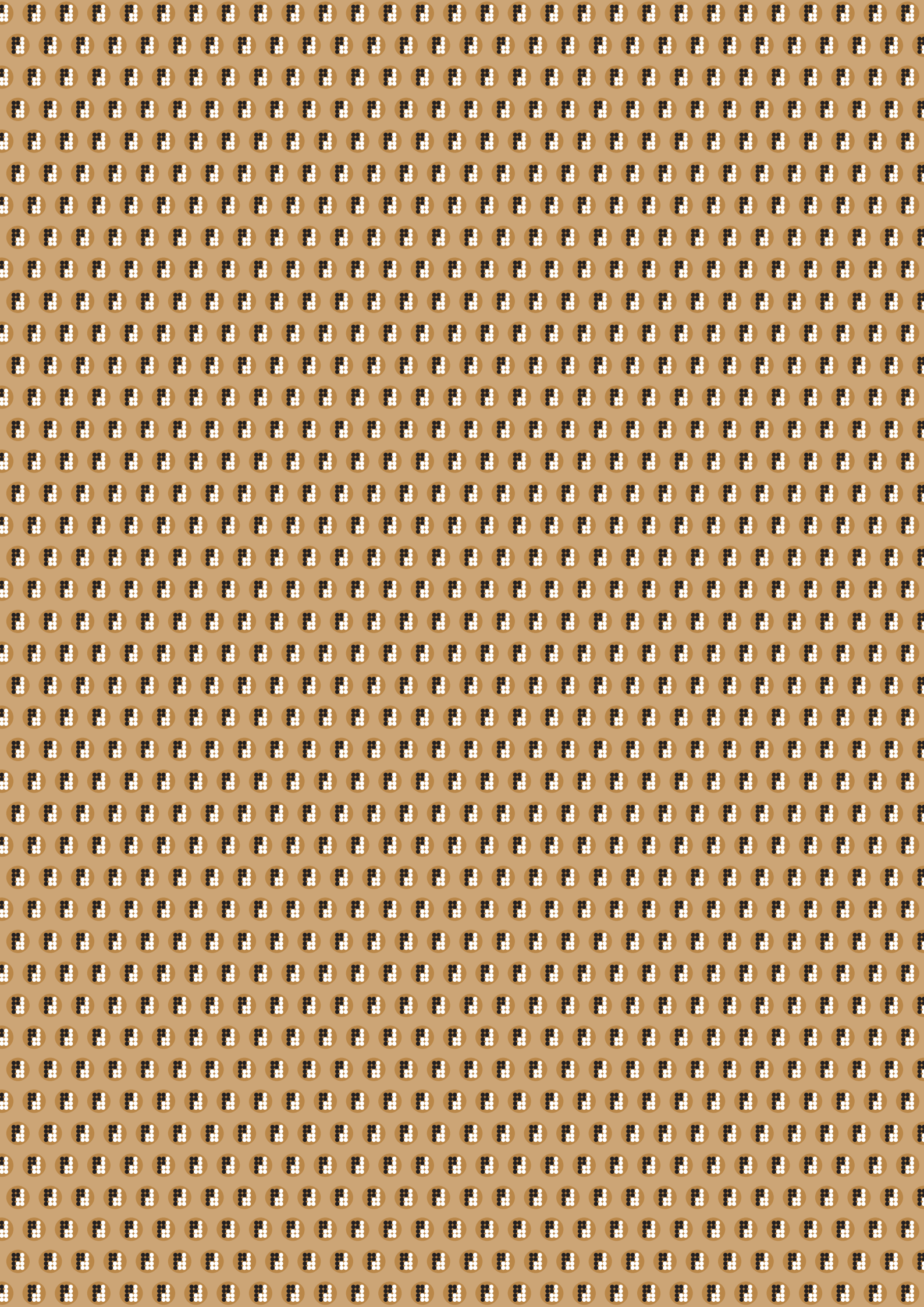

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