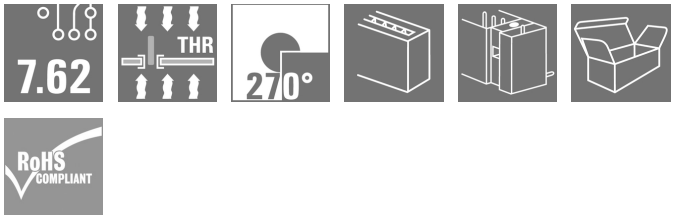
# SV-SMT 7.62HP/05/270MSF3 SC/4 2.6SN BX

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Product image






OMNIMATE Power BV / SV 7.62HP Hybrid – for power, signals and EMC
Three functions in one!
The OMNIMATE Power Hybrid connector provides developers and users with the perfect three-in-one solution. This hybrid motor connector simultaneously unites power, signals and pluggable EMC shield support. Thus you save space on the PCB, on the outer side of the housing, and in the electrical cabinet. The self-snapping one-handed interlock mechanism requires only one plugging step and thus speeds up installation and maintenance procedures. It is easy to handle and interlocks automatically – even in difficult installation positions. The unique shielding shape and slender 30° wire entry enable a space savings of up to 10 cm between rows.

### General ordering data

| | |
|---|---|
| Version | PCB plug-in connector, male header, closed side, Middle screw flange, THT/THR solder connection, 7.62 mm, Number of poles: 5, 270°, Solder pin length (l): 2.6 mm, tinned, black, Box |
| Order No. | 2529660000 |
| Type | SV-SMT 7.62HP/05/270MSF3 SC/4 2.6SN BX |
| GTIN (EAN) | 4050118539936 |
| Qty. | 30 pc(s). |
| Product data | IEC: 1000 V / 41 A<br>UL: 300 V / 33 A |
| Packaging | Box |

# SV-SMT 7.62HP/05/270MSF3 SC/4 2.6SN BX

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Technical data

### Dimensions and weights

| | | | |
|---|---|---|---|
| Depth | 28.3 mm | Depth (inches) | 1.114 inch |
| Height | 14 mm | Height (inches) | 0.551 inch |
| Height of lowest version | 11.4 mm | Width | 54.31 mm |
| Width (inches) | 2.138 inch | Net weight | 2 g |

### System specifications

| | | | |
|---|---|---|---|
| Product family | OMNIMATE Power - series BV/SV 7.62HP | Type of connection | Board connection |
| Mounting onto the PCB | THT/THR solder connection | Pitch in mm (P) | 7.62 mm |
| Pitch in inches (P) | 0.3 " | Outgoing elbow | 270° |
| Number of poles | 5 | Number of solder pins per pole | 2 |
| Solder pin length (l) | 2.6 mm | Solder pin dimensions | 0.8 x 1.0 mm |
| Solder eyelet hole diameter (D) | 1.4 mm | Solder eyelet hole diameter tolerance (D) | + 0,1 mm |
| L1 in mm | 38.1 mm | L1 in inches | 1.5 " |
| L2 in mm | 3.81 mm | L2 in inch | 0.15 " |
| Number of rows | 1 | Pin series quantity | 1 |
| Touch-safe protection acc. to DIN VDE 57 106 | safe to back of hand above the printed circuit board | Touch-safe protection acc. to DIN VDE 0470 | IP 20 |
| Volume resistance | 2.00 mΩ | Can be coded | Yes |
| Tightening torque for screw flange, min. | 0.2 Nm | Tightening torque for screw flange, max. | 0.3 Nm |
| Plugging force/pole, max. | 12 N | Pulling force/pole, max. | 7 N |

### Material data

| | | | |
|---|---|---|---|
| Insulating material | PA 9T | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | I |
| Comparative Tracking Index (CTI) | ≥ 600 | Moisture Level (MSL) | 1 |
| UL 94 flammability rating | V-0 | Contact material | Cu-alloy |
| Contact surface | tinned | Layer structure of solder connection | 1...3 µm Ni / 4...6 µm Sn matt |
| Layer structure of plug contact | 1...3 µm Ni / 4...6 µm Sn matt | Storage temperature, min. | -40 °C |
| Storage temperature, max. | 70 °C | Operating temperature, min. | -50 °C |
| Operating temperature, max. | 130 °C | Temperature range, installation, min. | -25 °C |
| Temperature range, installation, max. | 130 °C | | |

### Rated data acc. to IEC

| | | | |
|---|---|---|---|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C) | 41 A |
| Rated current, max. number of poles (Tu=20°C) | 41 A | Rated current, min. number of poles (Tu=40°C) | 41 A |
| Rated current, max. number of poles (Tu=40°C) | 41 A | Rated voltage for surge voltage class / pollution degree II/2 | 1,000 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 630 V | Rated voltage for surge voltage class / pollution degree III/3 | 630 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 6 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 6 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 6 kV | Short-time withstand current resistance | 3 x 1s with 420 A |

# SV-SMT 7.62HP/05/270MSF3 SC/4 2.6SN BX

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Technical data

### Rated data acc. to UL 1059

| | | | |
|---|---|---|---|
| Institute (cURus) |  | Certificate No. (cURus) | E60693 |
| Rated voltage (Use group B / UL 1059) | 300 V | Rated voltage (Use group C / UL 1059) | 300 V |
| Rated voltage (Use group D / UL 1059) | 600 V | Rated current (Use group B / UL 1059) | 33 A |
| Rated current (Use group C / UL 1059) | 33 A | Rated current (Use group D / UL 1059) | 5 A |
| Clearance distance, min. | 6.9 mm | Creepage distance, min. | 9.6 mm |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

### Packing

| | | | |
|---|---|---|---|
| Packaging | Box | VPE length | 338 mm |
| VPE width | 130 mm | VPE height | 33 mm |

### Technical data - hybrid

| | | | | |
|---|---|---|---|---|
| Pitch in mm (hybrid) | Hybrid component | Signal | | |
| | nominal | 3.81 mm | | |
| Pitch in mm (Signal) | 3.81 mm | | | |
| Pitch in inch (hybrid) | Hybrid component | Signal | | |
| | nominal | 0.15 " | | |
| Pitch in inches (Signal) | 0.15 " | | | |
| Pole count (hybrid) | nominal | 4 | | |
| | Hybrid component | Signal | | |
| Number of poles (Signal) | 4 | | | |
| Number of solder pins per pole (hybrid) | Hybrid component | Signal | | |
| | nominal | 1 | | |
| Number of solder pins per pole (Signal) | 1 | | | |
| Solder pin dimensions (hybrid) | Solder pin dimensions | 0.8 x 0.8 mm | | |
| | Hybrid component | Signal | | |
| Solder pin dimensions (Signal) | 0.8 x 0.8 mm | | | |
| Solder pin dimensions = d tolerance (hybrid) | Solder pin dimensions = d tolerance | Lower tolerance with prefix (reveals minimum) | -0,03 | |
| | | Upper tolerance with prefix (reveals maximum) | +0,01 | |
| | | Tolerance, unit | mm | |
| | Hybrid component | Signal | | |
| Solder pin dimensions = d tolerance (Signal) | -0,03 / +0,01 mm | | | |
| Diameter of solder eyelet (hybrid) | Hybrid component | Signal | | |
| | nominal | 1.3 mm | | |
| PCB hole diameter (Signal) | 1.3 mm | | | |
| Tolerance of the diameter of the solder eyelet (hybrid) | Hybrid component | Signal | | |
| | Solder eyelet hole diameter tolerance (D) | ± 0.1 mm | | |
| PCB hole diameter tolerance (Signal) | ± 0.1 mm | | | |
| L2 in mm | 3.81 mm | | | |
| L2 in inch | 0.15 " | | | |
| Number of rows (hybrid) | Hybrid component | Signal | | |
| Number of rows (Signal) | 2 | | | |

# SV-SMT 7.62HP/05/270MSF3 SC/4 2.6SN BX

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Technical data

| | | | | |
|---|---|---|---|---|
| Contact material (hybrid) | Hybrid component | Signal | | |
| | Contact material | CuMg | | |
| Contact material (Signal) | CuMg | | | |
| Contact surface (hybrid) | Hybrid component | Signal | | |
| | Contact surface | tinned | | |
| Contact surface (Signal) | tinned | | | |
| Layer structure of the solder connection (hybrid) | Layer structure of the solder connection | Material | Ni | |
| | | Layer strength | min. | 1 µm |
| | | | max. | 3 µm |
| | | Material | Sn | |
| | | Layer strength | min. | 4 µm |
| | | | max. | 8 µm |
| | Hybrid component | Signal | | |
| Layer structure of the solder connection (Signal) | 1-3 µm Ni / 4-8 µm Sn | | | |
| Layer structure of the plug contact (hybrid) | Layer structure of the plug contact | Material | Ni | |
| | | Layer strength | min. | 1 µm |
| | | | max. | 3 µm |
| | | Material | Sn | |
| | | Layer strength | min. | 4 µm |
| | | | max. | 8 µm |
| | Hybrid component | Signal | | |
| Layer structure of the plug contact (Signal) | 1-3 µm Ni / 4-8 µm Sn | | | |
| Rated voltage for overvoltage class / pollution severity level II/2 (hybrid) | Hybrid component | Signal | | |
| | nominal | 320 V | | |
| Rated voltage for overvoltage class/pollution severity level II/2 (Signal) | 320 V | | | |
| Rated voltage for overvoltage class / pollution severity level III/2 (hybrid) | Hybrid component | Signal | | |
| | nominal | 160 V | | |
| Rated voltage for overvoltage class/pollution severity level III/2 (Signal) | 160 V | | | |
| Rated voltage for overvoltage class / pollution severity level III/3 (hybrid) | Hybrid component | Signal | | |
| | nominal | 160 V | | |
| Rated voltage for overvoltage class/pollution severity level III/3 (Signal) | 160 V | | | |
| Rated impulse voltage for overvoltage class / pollution severity level II/2 (hybrid) | Hybrid component | Signal | | |
| | nominal | 2.5 kV | | |
| Rated impulse voltage for overvoltage class/pollution severity level II/2 (Signal) | 2.5 kV | | | |
| Rated impulse voltage for overvoltage class / pollution severity level III/2 (hybrid) | Hybrid component | Signal | | |
| | nominal | 2.5 kV | | |
| Rated impulse voltage for overvoltage class/pollution severity level III/2 (Signal) | 2.5 kV | | | |
| Rated impulse voltage for overvoltage class / pollution severity level III/3 (hybrid) | Hybrid component | Signal | | |
| | nominal | 2.5 kV | | |
| Rated impulse voltage for overvoltage class/pollution severity level III/3 (Signal) | 2.5 kV | | | |
| Short-time withstand current capacity (hybrid) | Short-time withstand current resistance | 3 x 1s with 80 A | | |
| | Hybrid component | Signal | | |
| Short-time withstand current resistance (Signal) | 3 x 1s with 80 A | | | |
| Creepage distance (hybrid) | Hybrid component | Signal | | |
| | min. | 4.38 mm | | |

# SV-SMT 7.62HP/05/270MSF3 SC/4 2.6SN BX

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Technical data

| | | |
|---|---|---|
| Clearance distance (hybrid) | Hybrid component | Signal |
| | min. | 3.6 mm |
| Rated voltage (Use group B / CSA) (Hybrid) | Hybrid component | Signal |
| | nominal | 300 V |
| Rated voltage (Use group B / CSA) (Signal) | 300 V | |
| Rated voltage (Use group C / CSA) (Hybrid) | Hybrid component | Signal |
| | nominal | 50 V |
| Rated voltage (Use group C / CSA) (Signal) | 50 V | |
| Rated current (Use group B / CSA) (Hybrid) | Hybrid component | Signal |
| | nominal | 9 A |
| Rated current (Use group B / CSA) (Signal) | 9 A | |
| Rated current (Use group C / CSA) (Hybrid) | Hybrid component | Signal |
| | nominal | 9 A |
| Rated current (Use group C / CSA) (Signal) | 9 A | |
| Rated current (Use group D / CSA) (Hybrid) | Hybrid component | Signal |
| | nominal | 9 A |
| Rated current (Use group D / CSA) (Signal) | 9 A | |
| Rated voltage (Use group B / UL 1059) (Hybrid) | Hybrid component | Signal |
| | nominal | 300 V |
| Rated voltage (Use group B / UL 1059] (Signal) | 300 V | |
| Rated voltage (Use group C / UL 1059) (Hybrid) | Hybrid component | Signal |
| | nominal | 50 V |
| Rated voltage (Use group C / UL 1059] (Signal) | 50 V | |
| Rated voltage (Use group D / UL 1059) (Hybrid) | Hybrid component | Signal |
| | nominal | 300 V |
| Rated voltage (Use group D / UL 1059] (Signal) | 300 V | |
| Rated current (Use group B / UL 1059) (Hybrid) | Hybrid component | Signal |
| | nominal | 5 A |
| Rated current (Use group B / UL 1059) (Signal) | 5 A | |
| Rated current (Use group C / UL 1059) (Hybrid) | Hybrid component | Signal |
| | nominal | 5 A |
| Rated current (Use group C / UL 1059) (Signal) | 5 A | |
| Rated current (Use group D / UL 1059) (Hybrid) | Hybrid component | Signal |

### Classifications

| | | | |
|---|---|---|---|
| ETIM 6.0 | EC002637 | ETIM 7.0 | EC002637 |
| ETIM 8.0 | EC002637 | ETIM 9.0 | EC002637 |
| ECLASS 9.0 | 27-44-04-02 | ECLASS 9.1 | 27-44-04-02 |
| ECLASS 10.0 | 27-44-04-02 | ECLASS 11.0 | 27-46-02-01 |
| ECLASS 12.0 | 27-46-03-01 | ECLASS 13.0 | 27-46-03-01 |
| ECLASS 14.0 | 27-46-03-01 | | |

### Environmental Product Compliance

| | |
|---|---|
| REACH SVHC | / |
| RoHS Compliance Status | Compliant without exemption |

Creation date August 19, 2024 5:01:48 AM CEST

# SV-SMT 7.62HP/05/270MSF3 SC/4 2.6SN BX

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

## Technical data

### Important note

| | |
|---|---|
| IPC conformity | Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request. |
| Notes | • Technical specifications refer to the power contacts<br>• Technical data of signal contacts: 50V / 5A, stripping length 8mm<br>• Rated current related to rated cross-section & min. No. of poles.<br>• Specifications of diagram: P1=7.62 mm; P2=3.81 mm<br>• Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.<br>• MFX and MSFX: X= Position of the middle flange e.g. MF2, MSF3<br>• In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load<br>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months |

### Approvals

| | |
|---|---|
| Approvals | |
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate No. (cURus) | E60693 |

### Downloads

| | |
|---|---|
| Engineering Data | CAD data – STEP |
| Product Change Notification | 20220105 Material change SV-SMT 7.62<br>20220105 Materialänderung SV-SMT |
| Catalogues | Catalogues in PDF-format |

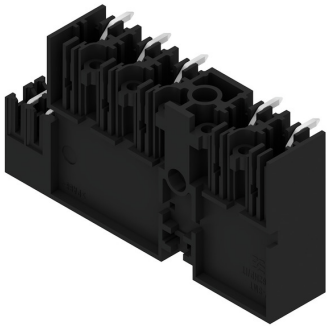
# SV-SMT 7.62HP/05/270MSF3 SC/4 2.6SN BX

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

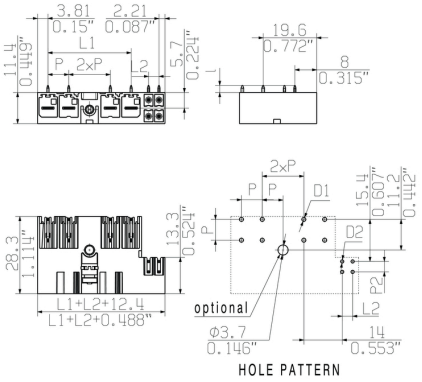
www.weidmueller.com

## Drawings

### Product image

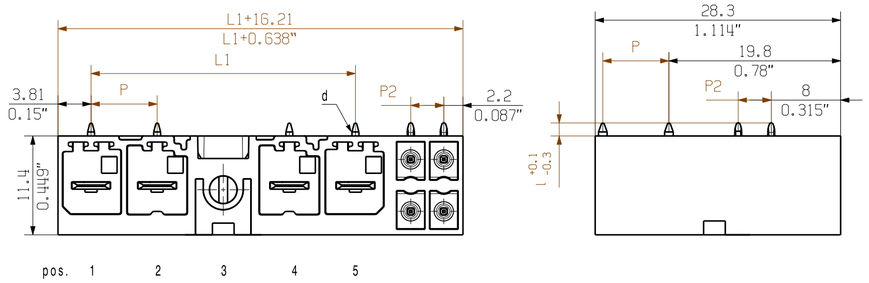


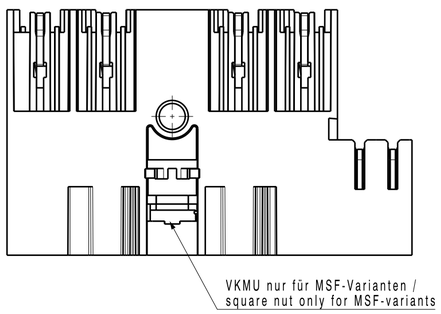
### Dimensional drawing



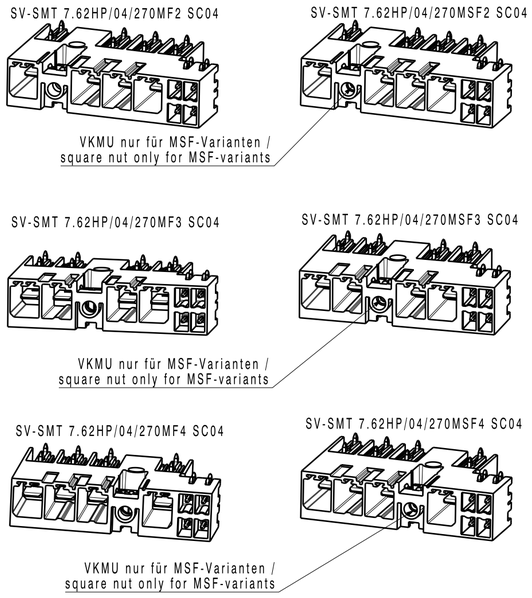
The reproduction, distribution and utilization of this document as well as the communication of its contents to others without explicit authorization is prohibited.
Offenders will be held liable for the payment of damages. Weidmueller exclusively reserves the right to file for patents, utility models or designs.
© Weidmueller Interface GmbH & Co. KG

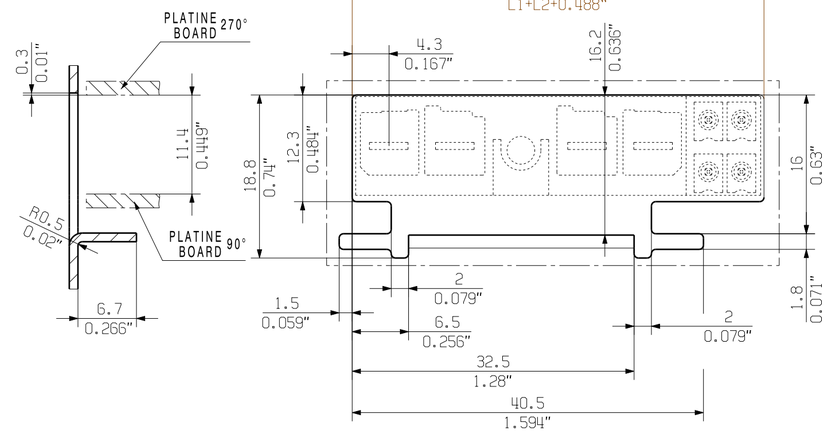
## SV-SMT 7.62HP/04/270M(S)F...SC04



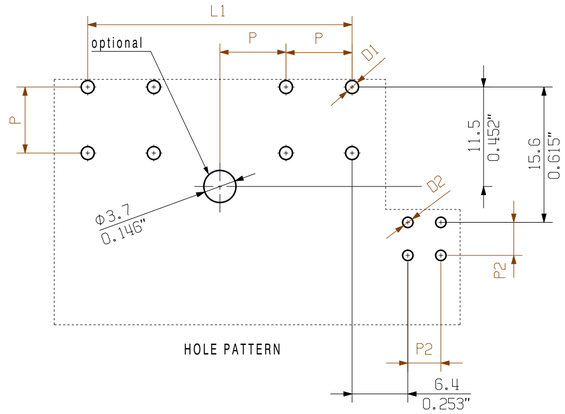




1:1

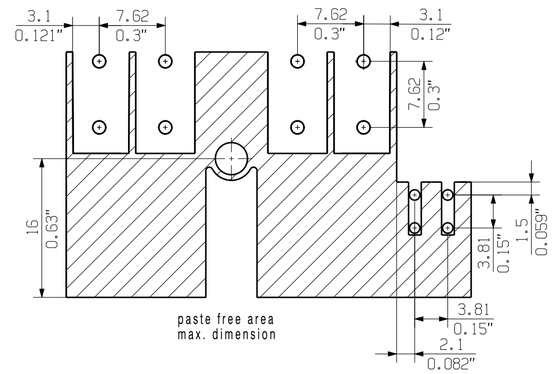



MIN. FRONT PLATE CUT-OUT




HOLE PATTERN




paste free area
max. dimension

D1 = Ø1.4+0.1/-0.05
D2 = Ø1.2+0.1/-0.05
d = 0.8x1.0

P = Raster/pitch 7.62
P2 = Raster/pitch 3.81

MF= Mittelflansch
middle flange

MSF= Mittelschraubflansch
middle flange with screw

GENERAL TOLERANCE:
DIN ISO 2768-m

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 05 M(S)F 4 | 38.1 | 1.495 | POL | POL | POL | M(S)F | POL | POL |
| 05 M(S)F 3 | 38.1 | 1.495 | POL | POL | M(S)F | POL | POL | POL |
| 04 M(S)F 4 | 30.48 | 1.196 | POL | POL | POL | M(S)F | POL | |
| 04 M(S)F 3 | 30.48 | 1.196 | POL | POL | M(S)F | POL | POL | |
| 03 M(S)F 3 | 22.86 | 0.897 | POL | POL | M(S)F | POL | | |
| 03 M(S)F 2 | 22.86 | 0.897 | POL | M(S)F | POL | POL | | |
| 02 M(S)F 2 | 15.24 | 0.598 | POL | M(S)F | POL | | | |
| no of poles | L1 [mm] | L1 [inch] | 1 | 2 | 3 | 4 | 5 | 6 |
| | | | POSITION | | | | | |

| |
|---|
| 1.5 |
| 2.6 |
| 3.5 |
| I [mm] |

For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone.
The neccessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.
The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application. Provided that the components are used to the intended purpose, all requirements with respect to the occuring of electrical, mechanical, thermic and corrosive stress will be satisfied.

RoHS COMPLIANT
EC00002212
First Issue Date 14.11.2016
Max. nos.
Modification

Prim PLM Part No.: 225880
Prim ERP Part No.: 2499550000

Weidmüller
63450 (Drawing no.) 4 (Issue no.)
Sheet 17 of 17 sheets

| | Date | Name |
|---|---|---|
| Drawn | 30.08.2019 | Helis, Maria |
| Responsible | | Döhrer, Karl |
| Approved | 09.10.2019 | Lang, Thomas |

Scale: 2:1 Size: A2
Drawings Assembly

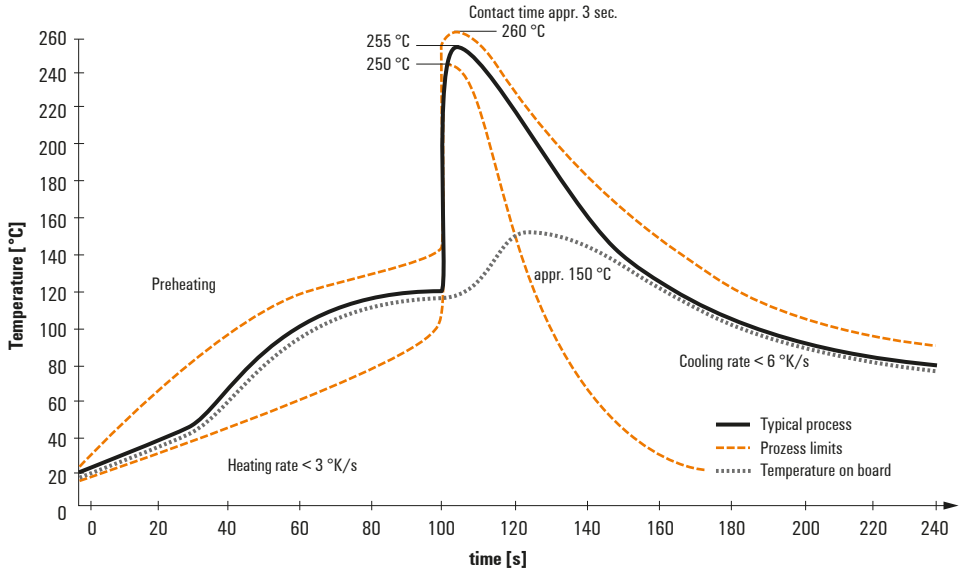
SV-SMT 7.62HP/IT/../90/270...
STISTLEISTE
MALE HEADER
Product file: 7407 BLF 7.50HP

# Wave Solder Profile

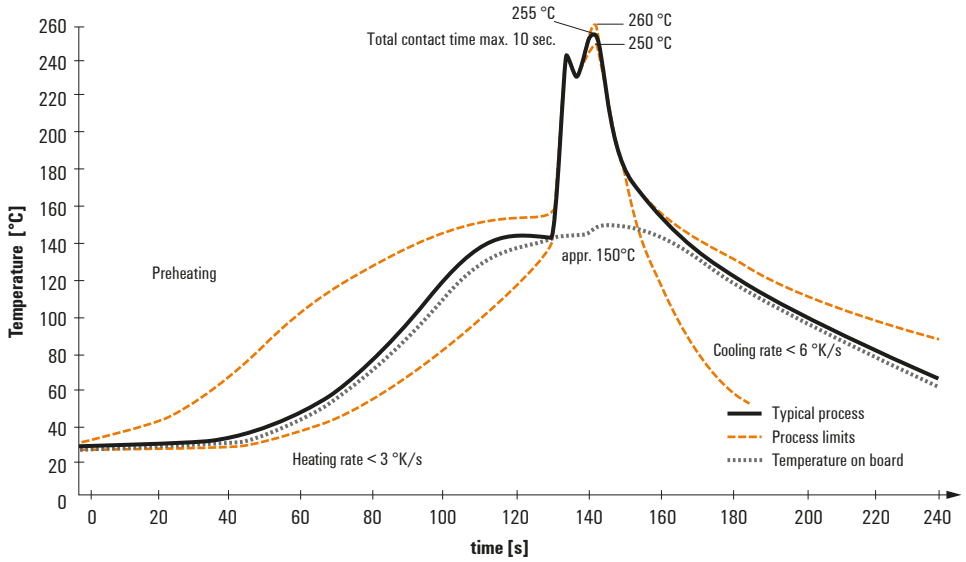
## Recommended wave solderding profiles

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

**Single Wave:**




**Double Wave:**




**Wave soldering profiles**

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:
- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

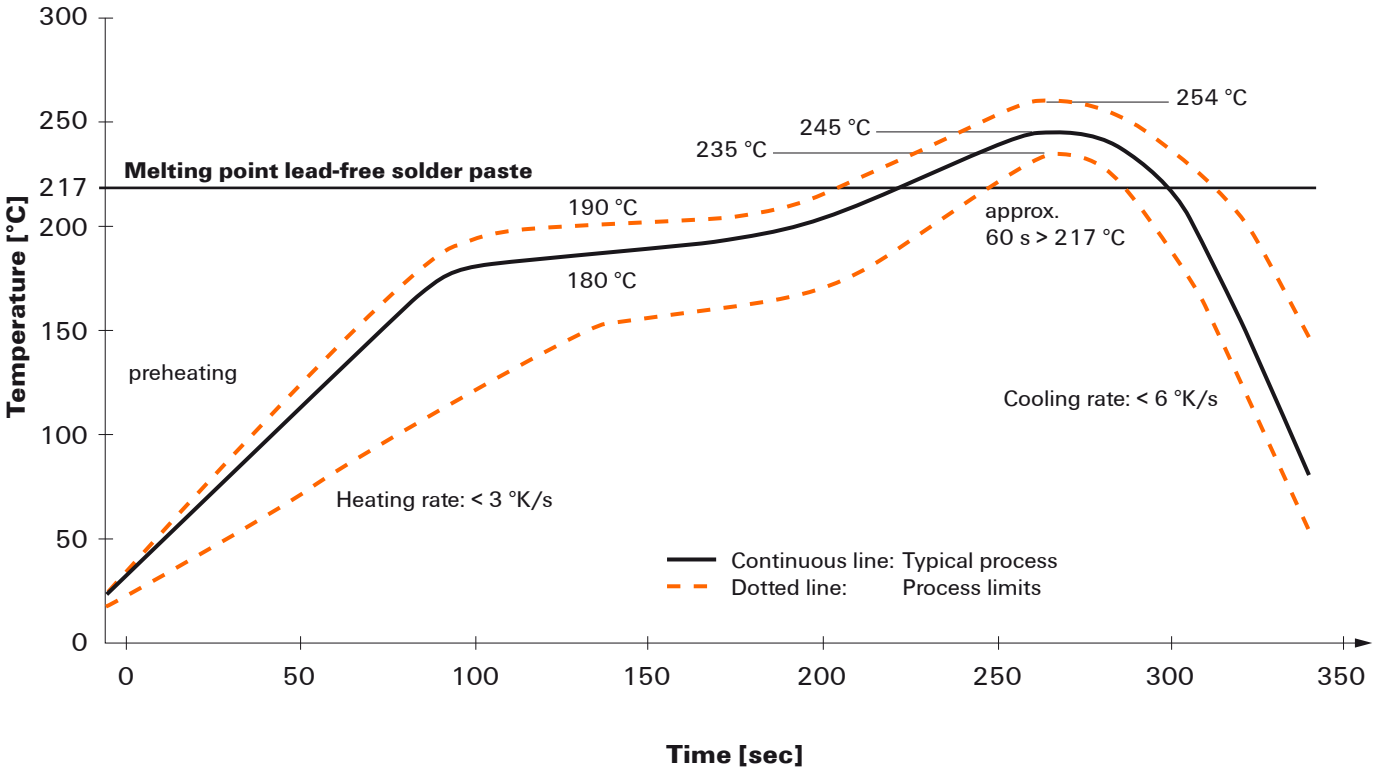
The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.

# Reflow Solder Profile

## Recommended reflow soldering profile

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com




**Reflow soldering profile**

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:
- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically ≤ +3K/s. In parallel the solder paste is ‚activated'. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at ≥ -6K/s solder is cured. Board and components cool down while avoiding cold cracks.

We reserve the right to make technical changes.