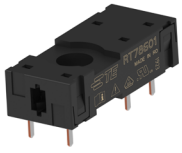
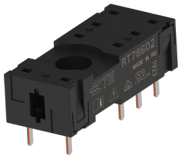
PCB Accessories Industrial Power Relays RZ, RT, RP and SR2M

Sockets for PCB mount

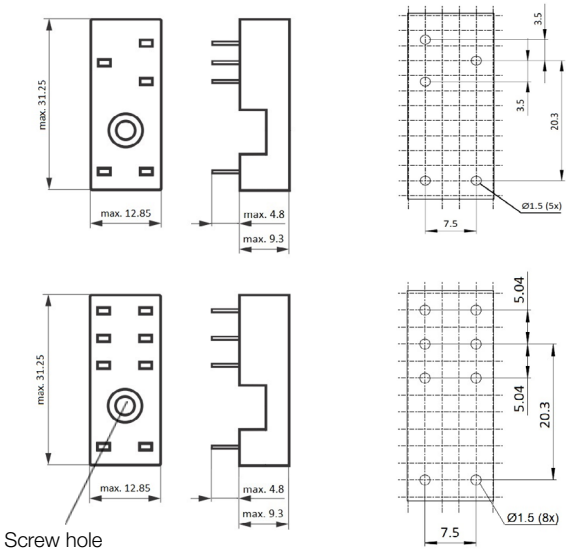
RT78601, Socket with PCB terminals, pinning 3.5 mm



RT78602, Socket with PCB terminals, pinning 5 mm



PCB layout
Bottom view on solder pins



Approvals

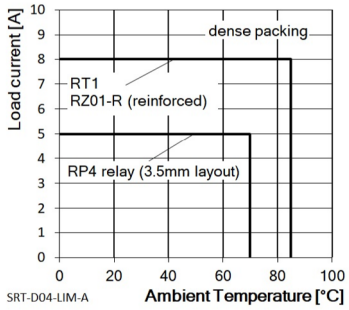
cULus E135149, VDE: 40007571 (in combination with RT), 40023970 (in combination with RZ), 40025448 (in combination with RP), 116064 (in combination with SR2M)

Technical data	RT78601/RT78602
Rated voltage	250VAC
Rated current	see following table
Limiting continous current	see derating curves beside

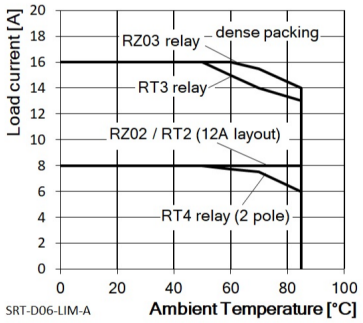
RATED CURRENT	1860990-1 / RT78601 Single Pinning (bottom view on solder pins)	1860991-1 / RT78602 Double Pinning [1] (bottom view on solder pins)
16A		▪ RZ03-...-....-R (reinforced flux proof version) ▪ RT 1pole version (RT3)
10A		▪ RP 1pole version (RP3)
8A	▪ RZ01-...-....-R (reinforced flux proof version) ▪ RT 1pole version (RT1)	▪ RZ02-...-....-R (reinforced flux proof version) ▪ RT 1pole version (RT2)
2 x 8A		▪ RT 2pole version (RT4)
2 x 6A		▪ SR2M Plug-In (P1 version)
5A	▪ RP 1pole version (RP4)	▪ RP 1pole version (RP4)
2 x 5A		▪ RP 2pole version (RP4)

1) for 1pole relays with load current greater than 8A the relay terminals 11-21, 12-22 and 14-24 have to be bridged on the PCB

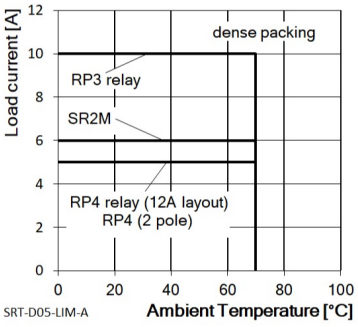
Derating curve RT78601



Derating curve RT78602



Derating curve RT78602



04-2024, Rev. 0424
www.te.com
© 2015 Tyco Electronics Corporation,
a TE Connectivity Ltd. company

Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.

Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at http://relays.te.com/definitions

Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.

PCB Accessories Industrial Power Relays RZ, RT, RP and SR2M (continued)

Technical data (continued)	**RT78601/RT78602**
Initial dielectric strength	
coil-contact circuit	4000 V_{ms}
open contact circuit	1000 V_{ms}
adjacent contact circuits	2500 V_{ms}
Clearance / creepage	
coil-contact circuit	≥ 8/8mm
coil-contact circuit without mounting screw	≥ 10/10mm
Material group of insulation parts	IIIa
Insulation to IEC 60664-1	
Type of insulation	
coil-contact circuit	reinforced
open contact circuit	functional
adjacent contact circuits	functional
Rated Insulation voltage	250 V
Pollution degree	2
Overvoltage category	III
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter	
Ambient temperature range	-40…+85°C (relay dependent)
Terminals	PCB
Insertion cycles	A (10)
Max. Insertion Force total	100 N
Mounting distance	≥ 0, dense packing
Resistance to soldering heat	270°C / 10 s
Weight	3 g
Packaging unit	100 pcs

Combination of relay and socket, insulation requirements and thermal characteristics

The relay standard IEC 61810-1 has an important impact on the combination of a relay and the respective socket. The relay sockets have to comply with the requirements of IEC 61984 and the insulation requirements of the IEC 61810-1. Even if the socket alone fullfills or exceeds the insulation requirements as clearance/creepage for the relay, the combination of a relay with a socket may reduce the creepage and lead to a lower rated insulation voltage. Hence restrictions for the combination relay-socket may be the consequence, e.g. a reduction of the voltage range or of the pollution degree. Especially for miniature multi-pole relay and respective sockets with small distance between the contact circuits, these restrictions have a big impact.

Apart from the insulation properties, the thermal characteristics of the combination relay and socket are of utmost importance (see > 'Derating curves'). Especially the operations conditions like multiple heat up and cool down cycles could have significant impact on the long-term stability of the contact resistance of the combination contact tulip and terminal, and may thereby cause risk of overheating and fire hazard. It is strongly recommended that such conditions are considered in the design and usage of the device and that the devices are thoroughly tested under real conditions.

As sockets from different sources are not directly comparable, the compliance with the technical specification can only be informed for an approved combination relay-socket. As design details and characteristics for non TE products are beyond our control, confirmations for technical parameters and characteristics regarding such combinations is not possible. Risks as reduced dielectric strenght, fire hazard, etc. due to use based on unclear or omitted data, limitations or restrictions must not be underestimated.

NOTE: We only confirm the characteristics and parameters for the approved combinations of relays and sockets as indicated in the catalog and datasheets.

Sockets with PCB terminals

Type		Part Number
RT78601	Socket with PCB terminals, pinning 3.5 mm	1860990-1
RT78602	Socket with PCB terminals, pinning 5 mm	1860991-1

Accessories for RT78601, RT78602

Type		Part Number
RT16C01	Plastic retaining clip, relay height 15.7 mm	1860995-1
RT28516	Metal retaining clip RT, relay height 15.7 mm	1419108-7
RP16C01	Plastic retaining clip, relay height 25.5 mm	1860996-1
RP28500	Metal retaining clip, relay height 25.5 mm	1-1393161-9

Recommended mounting screw: M3 cylinder-head screw with internal hexagon according DIN 912

04-2024, Rev. 0424
www.te.com
© 2015 Tyco Electronics Corporation,
a TE Connectivity Ltd. company

Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.

Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at http://relays.te.com/definitions

Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.