RJ45C5 S1D 2.7N4N RL

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
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Germany

www.weidmueller.com

The product range encompasses the following designs:
• 90°, lying (horizontal) and 180°, standing (vertical)
• latch up / latch down
• THT, THR or SMD soldering processes
• Wide range of different design types, also with integrated LEDs and shield contact tabs
• Performance category Cat. 3 to Cat. 6
• Packed either in a tray (TY) or on a roll (tape-on-reel, RL)
• Compatible with modular RJ45 connector according to ANSI / TIA-1096-A and IEC 60603
• Dielectric strength ≥1500 V AC RMS (2250 V AC peak value) according to IEEE 802.3
• Dielectric strength ≥1500 V AC (peak value) or ≥1500 V DC according to IEC 60603

Properties and advantages:
• Extended temperature range of –40°C to +85°C for maximum performance
• Reinforced gold layer (30µ") for improved corrosion protection
• At least 0.3mm stand-off ensures a perfect soldering result

General ordering data

Version	PCB plug-in connector, RJ45 jacks, Cat. 5 , SMD solder connection, 90°, Latch option: bottom, Shield tabs: none, 30...80 µ" Ni / ≥ 30 µ" Au , LED: No, Number of poles: 8, Tape
Order No.	1433890000
Type	RJ45C5 S1D 2.7N4N RL
GTIN (EAN)	4050118238471
Qty.	260 pc(s).
Packaging	Tape

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Technical data

Dimensions and weights

Depth	18.7 mm	Depth (inches)	0.736 inch
Height	16.88 mm	Height (inches)	0.665 inch
Height of lowest version	11.8 mm	Width	18.5 mm
Width (inches)	0.728 inch	Net weight	0.007 g

System specifications

Category	Cat. 5	Coplanarity:	100 µm
LED	No	Latch option	bottom
Mounting onto the PCB	SMD solder connection	Number of poles	8
Number of solder pins per pole	1	Outgoing elbow	90°
Performance-Category	Cat. 5	Pitch in inches (P)	0.05 "
Pitch in mm (P)	1.27 mm	Plugging cycles	750
Product family	OMNIMATE Data - RJ45 modular jack	Protection degree	IP20
Shield surface	nickel-plated	Shield tabs	none
Shielding	Yes	Shielding material	Copper alloy
Solder pin dimensions	Octagonal	Solder pin length (l)	3.5 mm
Soldering process	Reflow soldering, Manual soldering	Tolerance of solder pin position	± 0.1 mm
Type of connection	SMD solder connection	Wiring	8-core

Electrical properties

Dielectric strength, contact / contact	1000 V DC	Dielectric strength, contact / shield	1500 V DC
Insulation strength	≥ 500 MΩ	PoE / PoE+	conforming to IEEE 802.3at
Rated current	1.5 A	Rated voltage	125 V

Standards

Connector standard	IEC 60603-7-51

Material data

Insulating material	PA 9T	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	Insulation strength	≥ 500 MΩ
Moisture Level (MSL)	1	UL 94 flammability rating	V-0
Contact base material	Phosphorus bronze	Contact material	Cu-alloy
Contact surface	Gold over nickel	Layer structure of plug contact	30...80 µ" Ni / ≥ 30 µ" Au
Storage temperature, min.	-40 °C	Storage temperature, max.	85 °C
Operating temperature, min.	-40 °C	Operating temperature, max.	85 °C

Packing

Packaging	Tape	VPE length	355 mm
VPE width	346 mm	VPE height	131 mm
Tape reel diameter ⌀ (A)	330 mm	Surface resistance	Rs = 10^{9} - 10^{12} Ω

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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	27-46-02-01	ECLASS 13.0	27-46-02-01

Approvals

ROHS	Conform

Downloads

Approval/Certificate/Document of Conformity	Certificate of Compliance
Engineering Data	CAD data – STEP
User Documentation	MAN IE GUIDE DE MAN IE GUIDE EN
Catalogues	Catalogues in PDF-format
Brochures	MB FREECONCONTACT EN FL FIELDWIRING EN PI PROFINET CABLING EN PI PROFINET CABLING EN

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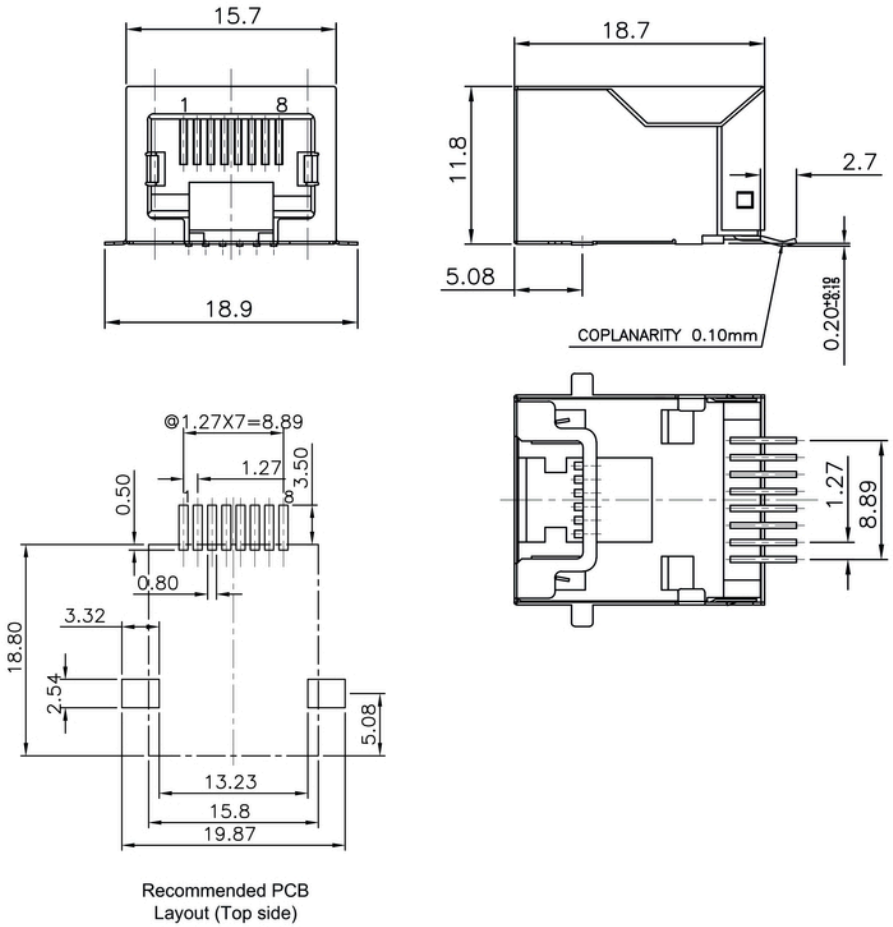
Drawings

Dimensional drawing



Recommended PCB Layout (Top side)

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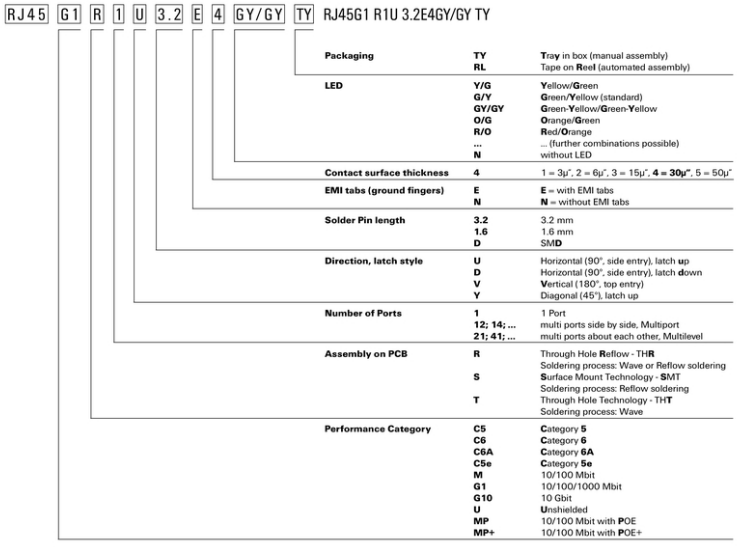

Legend

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Reflow Solder Profile

Recommended reflow soldering profile

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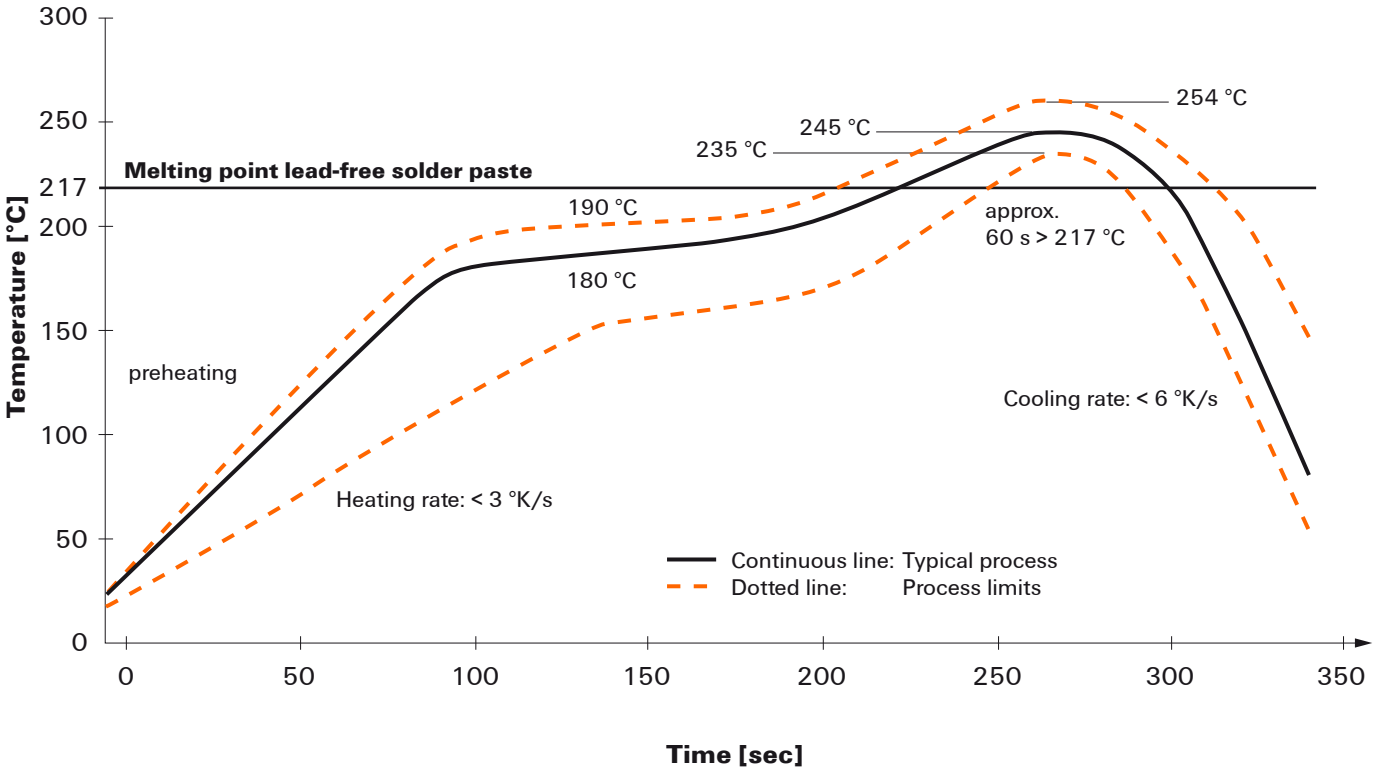

Reflow soldering profile

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.