

RJ45C5 R1U 2.8E4N RL

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

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 $+85^{\circ}\text{C}$ for maximum performance
- Reinforced gold layer ($30\mu\text{m}$) 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 , THT/THR solder connection, 90°, Latch option: bottom, Shield tabs: 6 tabs, 30...80 μm Ni / ≥ 30 μm Au , LED: No, Number of poles: 8, Tape
Order No.	2562930000
Type	RJ45C5 R1U 2.8E4N RL
GTIN (EAN)	4050118571950
Qty.	200 pc(s).
Packaging	Tape

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Technical data

Dimensions and weights

Depth	15.71 mm	Depth (inches)	0.619 inch
Height	15.86 mm	Height (inches)	0.624 inch
Height of lowest version	13.11 mm	Net weight	8.59 g
Width	16.41 mm	Width (inches)	0.646 inch

System specifications

Category	Cat. 5	
LED	No	
Latch option	bottom	
Mounting onto the PCB	THT/THR 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 inch	
Pitch in mm (P)	1.27 mm	
Product family	OMNIMATE Data - RJ45 modular jack	
Protection degree	IP20	
Shield surface	nickel-plated	
Shield tabs	6 tabs	
Shielding	Yes	
Shielding material	Brass	
Solder eyelet hole diameter (D)	0.9 mm	
Solder eyelet hole diameter tolerance (D)	± 0.1 mm	
Solder pin length (l)	2.75 mm	
Solder pin length tolerance	+0.2 / -0.2 mm	
Solder pin length tolerance	Lower tolerance with prefix (reveals minimum)	-0.2
	Upper tolerance with prefix (reveals maximum)	+0.2
	Tolerance, unit	mm
Soldering process	Reflow soldering, Manual soldering, Wave soldering	
Type of connection	Socket connector	
Wiring	8-core	

Electrical properties

Dielectric strength, contact / contact	1000 V AC	Rated current	1.5 A
Rated voltage	125 V		

Standards

Connector standard	IEC 60603-7-51
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Material data

Insulating material	PA 9T	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	Moisture Level (MSL)	1
UL 94 flammability rating	V-0	Contact base material	Phosphorus bronze
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

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www.weidmueller.com**Technical data****Packing**

Packaging	Tape	VPE length	0 m
VPE width	0 m	VPE height	0 m
Tape reel diameter $\varnothing$ (A)	330 mm	Surface resistance	$R_s = 10^9 - 10^{12} \Omega$

Classifications

ETIM 6.0	EC002637	ETIM 7.0	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

Approvals

Approvals



ROHS	Conform
UL File Number Search	E471884

Downloads

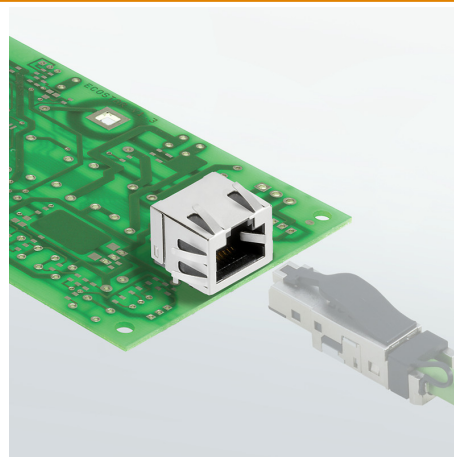
Engineering Data	STEP
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Drawings



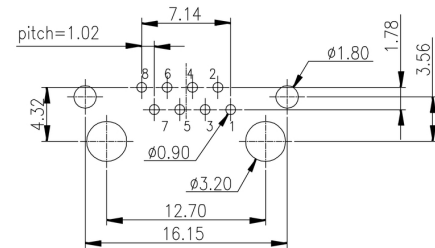
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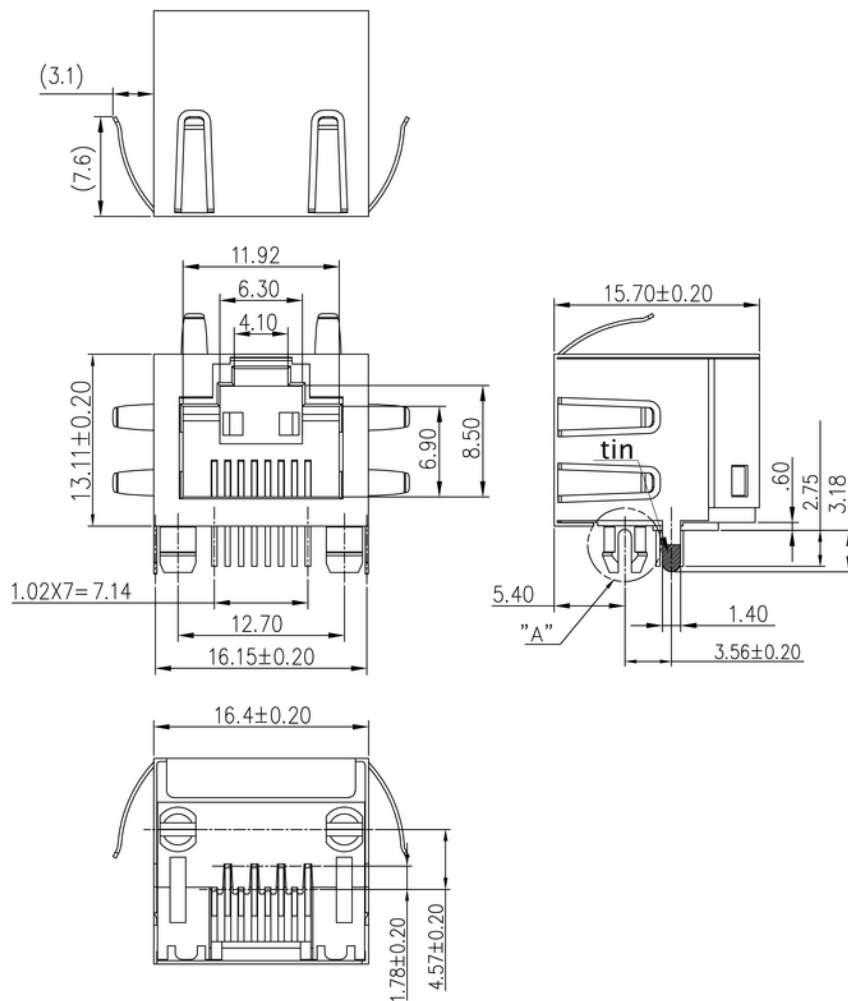
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Drawings

PCB design



PCB LAYOUT



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Drawings

RJ45	G1	R	1	U	3.2	E	4	GY/GY	TY	RJ45G1 R1U 3.2E4GY/GY TY

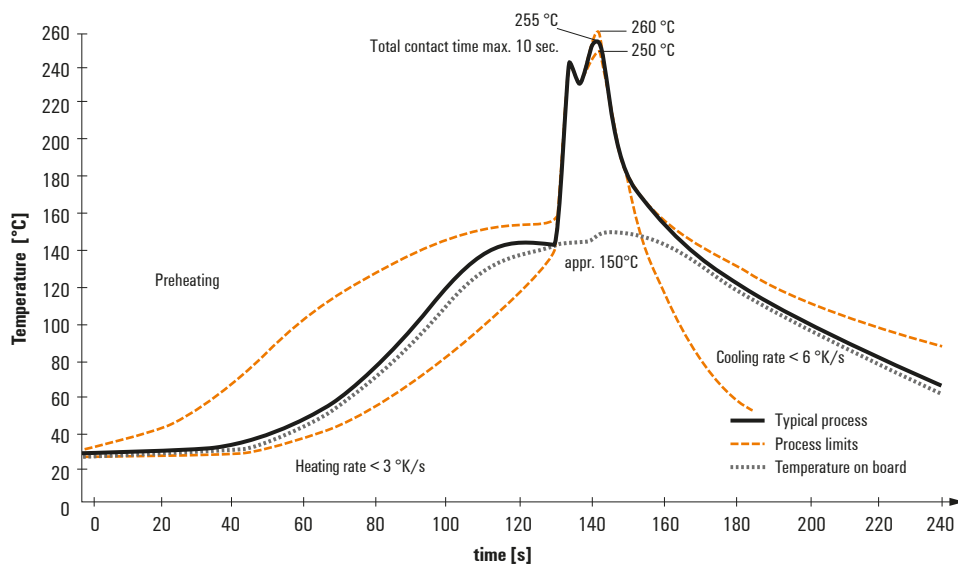
Recommended wave soldering profiles

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.

Recommended reflow soldering profile

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Klingenbergstraße 16

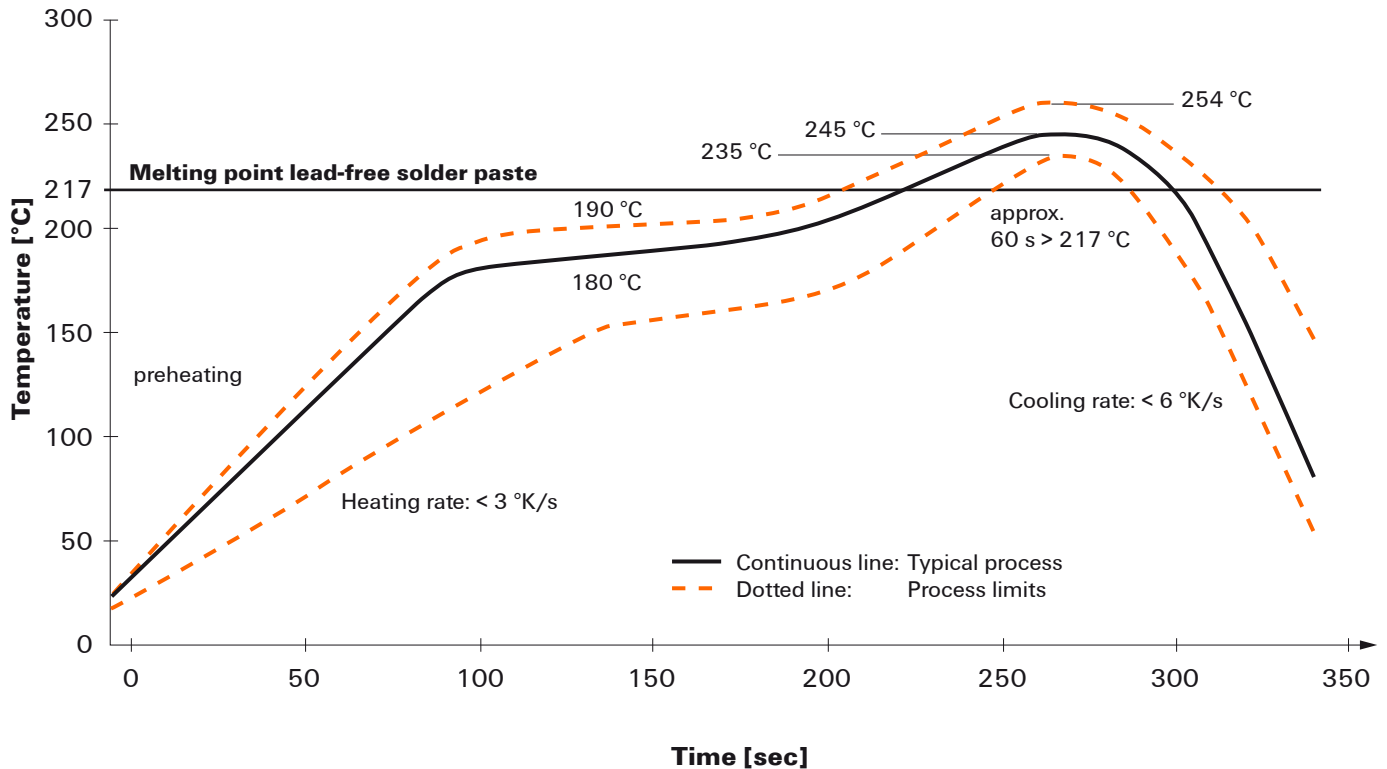
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Reflow soldering profile

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 $\leq +3\text{K/s}$. 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 $\geq -6\text{K/s}$ solder is cured. Board and components cool down while avoiding cold cracks.