

RJ45C5 T1D 3.2N4N RL SO

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 solder connection, 90°, Latch option: bottom, Shield tabs: none, 30...80 μm Ni / ≥ 30 μm Au , LED: No, Number of poles: 8, Tape
Order No.	2439040000
Type	RJ45C5 T1D 3.2N4N RL SO
GTIN (EAN)	4050118451573
Qty.	260 pc(s).
Packaging	Tape

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Technical data

Dimensions and weights

Depth	20.54 mm	Depth (inches)	0.809 inch
Height	16.1 mm	Height (inches)	0.634 inch
Height of lowest version	12.9 mm	Width	15.2 mm
Width (inches)	0.598 inch	Net weight	3.312 g

System specifications

Category	Cat. 5	LED	No
Latch option	bottom	Mounting onto the PCB	THT 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
Plugging cycles	750	Product family	OMNIMATE Data - RJ45 modular jack
Protection degree	IP20	Shield surface	nickel-plated
Shield tabs	none	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)	3.2 mm
Soldering process	Manual soldering, Wave soldering	Type of connection	Solder connection

Electrical properties

Dielectric strength, contact / contact	1000 V DC	Dielectric strength, contact / shield	1500 V DC
Insulation strength	≥ 500 MΩ	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 66	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	Insulation strength	≥ 500 MΩ
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

Packing

Packaging	Tape	VPE length	329 mm
VPE width	329 mm	VPE height	60 mm
Tape reel diameter ∅ (A)	330 mm	Surface resistance	Rs = 10 ⁹ - 10 ¹² Ω

Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	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

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Catalogue status 16.12.2022 / We reserve the right to make technical changes.

Data sheet**RJ45C5 T1D 3.2N4N RL SO****Weidmüller Interface GmbH & Co. KG**
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Technical data**Approvals**

Approvals



ROHS	Conform
Certificate No. (UL)	E471884
Certificate No. (cURus)	E471884

Downloads

Approval/Certificate/Document of Conformity	Certificate of Compliance
User Documentation	MAN IE GUIDE DE MAN IE GUIDE EN
Catalogues	Catalogues in PDF-format

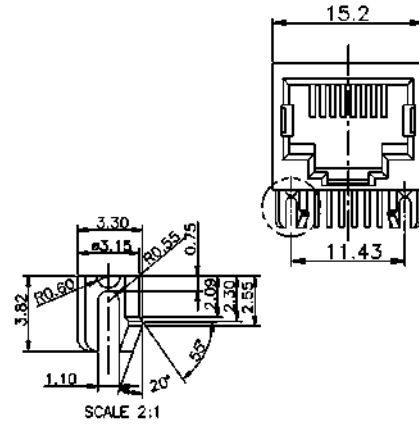
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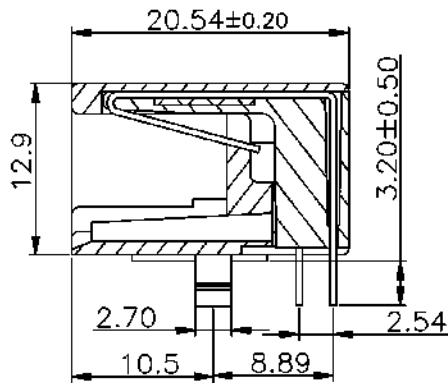
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Drawings

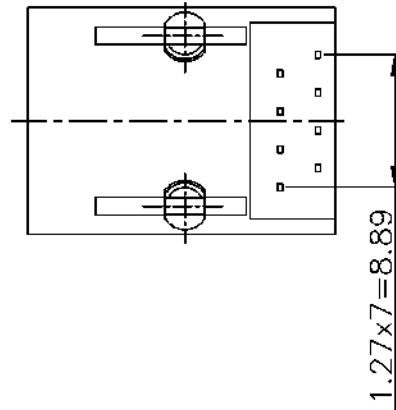
Dimensional drawing



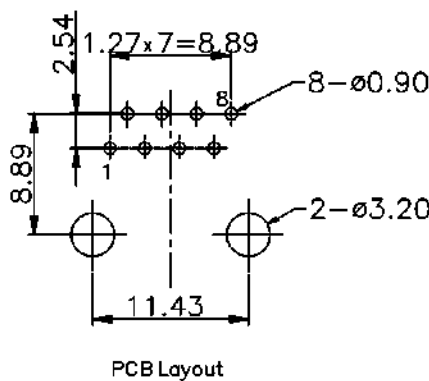
Dimensioned drawing



Dimensional drawing



PCB design



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Drawings

Code	Description	Value	Notes
RJ45	Category	1	10/100/1000 Mbps
G1	Shielding	Shielded	Shielded twisted pair
R	Shielding	Shielded	Shielded twisted pair
T1	Shielding	Shielded	Shielded twisted pair
D	Shielding	Shielded	Shielded twisted pair
3.2	Shielding	Shielded	Shielded twisted pair
N4	Shielding	Shielded	Shielded twisted pair
N	Shielding	Shielded	Shielded twisted pair
RL	Shielding	Shielded	Shielded twisted pair
SO	Shielding	Shielded	Shielded twisted pair
GY/GY	Color	Yellow/White	Yellow/White twisted pair
TY	Color	Yellow/White	Yellow/White twisted pair

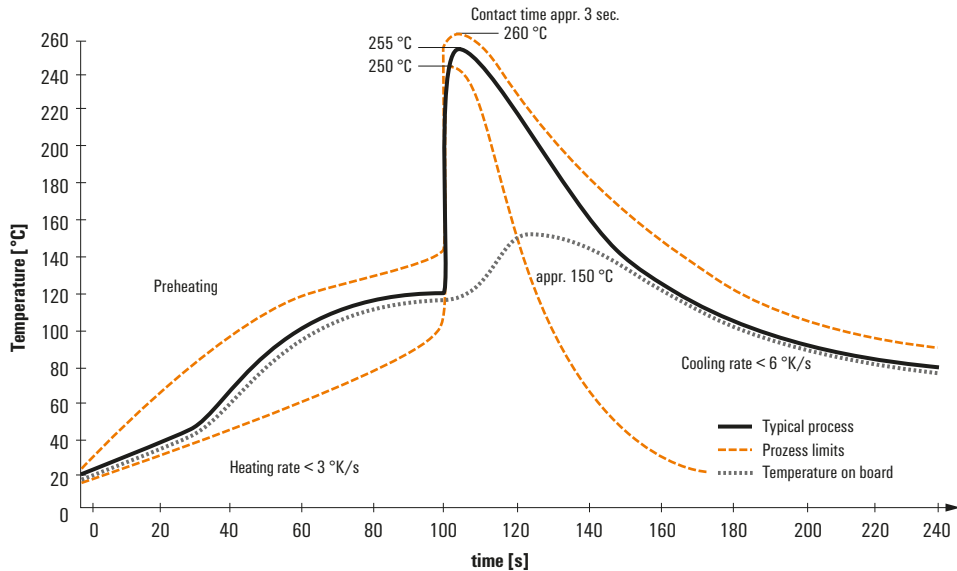
Parameter	Value	Notes
Packaging	TY RL	TY in box (limited availability) RL in reel (not available)
LED	Y/W G/Y O/G R/W - N	Yellow/White Green/Yellow (standard) Orange/Green Red/White - (without illumination possible) with LED
Contact surface thickness	A	1 = 5µm, 2 = 1µm, 3 = 15µm, 4 = 50µm, 5 = 50µm
BMI tabs (grounding tabs)	B N	B = with BMI tabs N = without BMI tabs
Solder Pin length	3.2 1.8 D	3.2 mm 1.8 mm SMD
Direction, latch style	U V Y	U = 0° (0° / 0°) face up V = 180° (0° / 0°) face down Y = 90° (180° / 0°) up
Number of Ports	1 2, 1+2 ... 2, 4, 8 ...	1 Port multiple side by side, Multiport multiple side by side, Multiport
Assembly on PCB	R B T	Through Hole (THT) Soldering process: Wave or Reflow soldering Soldering process: Reflow soldering Through Hole Technology (THT) Soldering process: Wave
Performance Category	C6 C8 C8A C8B M8 d1 d10 U MP MP+	Category 6 Category 8 Category 8A Category 8B 10/100 Mbit 10/100/1000 Mbit 10 Gbit Unshielded 10/100 Mbit with PoE 10/100 Mbit with PoE+

Legend

Recommended wave soldering profiles

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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.