

RJ45C5 R1U 2.8N4G/Y 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: top, Shield tabs: none, 30...80 μm Ni / $\geq 30 \mu\text{m}$ Au , LED: Yes, green, yellow, Number of poles: 12, Tape
Order No.	2562950000
Type	RJ45C5 R1U 2.8N4G/Y RL
GTIN (EAN)	4050118571974
Qty.	200 pc(s).
Packaging	Tape

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Technical data

Dimensions and weights

Depth	15.7 mm	Depth (inches)	0.618 inch
Height	16.74 mm	Height (inches)	0.659 inch
Height of lowest version	13.44 mm	Width	16.4 mm
Width (inches)	0.646 inch	Net weight	4.075 g

System specifications

Category	Cat. 5
Colour of left LED	green
Colour of right LED	yellow
LED	Yes
Latch option	top
Mounting onto the PCB	THT/THR solder connection
Number of poles	12
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)	2.75 mm
Solder pin length tolerance	Lower tolerance with prefix (reveals minimum) -0.2
	Upper tolerance with prefix (reveals maximum) +0.2
	Tolerance, unit mm
Solder pin length tolerance	+0.2 / -0.2 mm
Soldering process	Reflow soldering, Manual soldering, Wave soldering
Tolerance of solder pin position	± 0.15 mm
Type of connection	Socket connector
Wiring	8-core

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 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	Phosphor bronze 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	333 mm
VPE width	333 mm	VPE height	47 mm
Tape reel diameter Ø (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

Approvals

Approvals



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

Downloads

Approval/Certificate/Document of Conformity	Certificate of Compliance
Engineering Data	CAD data – STEP
Catalogues	Catalogues in PDF-format

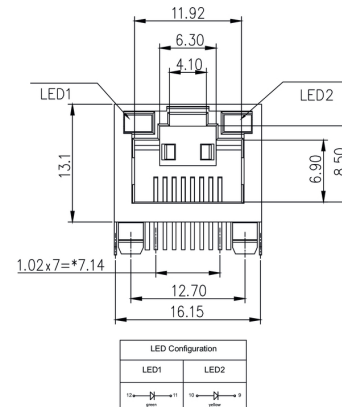
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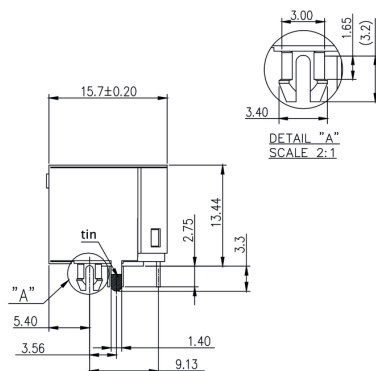
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Drawings

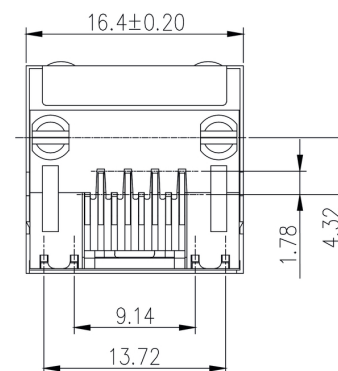
Dimensioned drawing



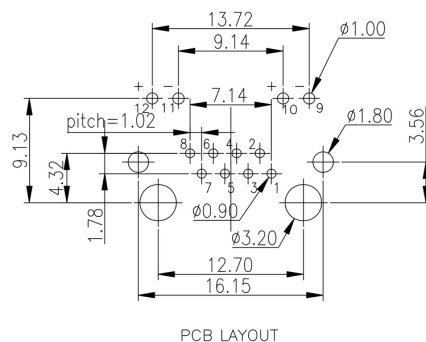
Dimensioned drawing



Dimensioned drawing



PCB design



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Drawings

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

We reserve the right to make technical changes.

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 $\leq +3\text{K/s}$. 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.

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