

RJ45C5 R12U 1.7N4G/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 μm) 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: none, LED: Yes, green, yellow, Number of poles: 16, Reel
Order No.	2661430000
Type	RJ45C5 R12U 1.7N4G/Y RL
GTIN (EAN)	4050118674651
Qty.	240 pc(s).
Packaging	Reel

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Technical data

Dimensions and weights

Depth	15.7 mm	Depth (inches)	0.618 inch
Height	13.1 mm	Height (inches)	0.516 inch
Height of lowest version	13.1 mm	Net weight	12.904 g
Width	32.2 mm	Width (inches)	1.268 inch

System specifications

Category	Cat. 5	Colour of left LED	green
Colour of right LED	yellow	LED	Yes
Latch option	bottom	Mounting onto the PCB	THT/THR solder connection
Number of poles	16	Outgoing elbow	90°
Performance-Category	Cat. 5	Pitch in mm (P)	1.02 mm
Product family	OMNIMATE Data - RJ45 modular jack	Protection degree	IP20
Shield surface	nickel-plated	Shield tabs	none
Shielding	Yes	Solder pin length (l)	1.7 mm
Soldering process	Reflow soldering, Manual soldering, Wave soldering		

Electrical properties

Dielectric strength, contact / contact	1000 V DC	Dielectric strength, contact / shield	1500 V DC
Rated current	1.5 A	Rated voltage	125 V

Material data

Insulating material	PA 9T	Colour	black
Colour chart (similar)	RAL 9011	Moisture Level (MSL)	1
UL 94 flammability rating	V-0	Contact surface	Gold over nickel
Operating temperature, min.	-40 °C	Operating temperature, max.	85 °C

Packing

Packaging	Reel	VPE length	0 m
VPE width	0 m	VPE height	0 m

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

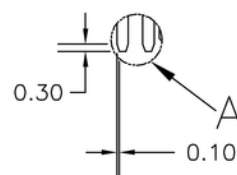
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Downloads

Engineering Data	STEP
Brochure/Catalogue	Catalogues in PDF-format

Weidmüller Interface GmbH & Co. KG
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Drawings



RJ45C5 R12U 1.7N4G/Y RL

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Drawings

RJ45	G1	R	1	U	3.2	E	4	GY/GY	TY	RJ45G1 R1U 3.2E4GY/GY TY
										Packaging
										TY
										RL
										Tray in box (manual assembly)
										Tape on Reel (automated assembly)
										LED
										Y/G
										Yellow/Green
										G/Y
										Green/Yellow (standard)
										GY/GY
										Green-Yellow/Green-Yellow
										O/G
										Orange/Green
										R/O
										Red/Orange
										...
										... (further combinations possible)
										N
										without LED
										Contact surface thickness
										4
										1 = 3µ", 2 = 6µ", 3 = 15µ", 4 = 30µ", 5 = 50µ"
										EMI tabs (ground fingers)
										E
										E = with EMI tabs
										N
										N = without EMI tabs
										Solder Pin length
										3.2
										3.2 mm
										1.6
										1.6 mm
										D
										SMD
										Direction, latch style
										U
										Horizontal (90°, side entry), latch up
										D
										Horizontal (90°, side entry), latch down
										V
										Vertical (180°, top entry)
										Y
										Diagonal (45°), latch up
										Number of Ports
										1
										1 Port
										12; 14; ...
										multi ports side by side, Multiport
										21; 41; ...
										multi ports about each other, Multilevel
										Assembly on PCB
										R
										Through Hole Reflow - THR
										Soldering process: Wave or Reflow soldering
										S
										Surface Mount Technology - SMT
										Soldering process: Reflow soldering
										T
										Through Hole Technology - THT
										Soldering process: Wave
										Performance Category
										C5
										Category 5
										C6
										Category 6
										C6A
										Category 6A
										C5e
										Category 5e
										M
										10/100 Mbit
										G1
										10/100/1000 Mbit
										G10
										10 Gbit
										U
										Unshielded
										MP
										10/100 Mbit with POE
										MP+
										10/100 Mbit with POE+

Legend

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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.

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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.