

## RJ45C6 T1U 2.7N4N TY

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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  $\geq 1500$  V AC RMS (2250 V AC peak value) according to IEEE 802.3
- Dielectric strength  $\geq 1500$  V AC (peak value) or  $\geq 1500$  V DC according to IEC 60603

Properties and advantages:

- Extended temperature range of  $-40^{\circ}\text{C}$  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. 6 , THT solder connection, 90°, Latch option: top, Shield tabs: none, 30...80 $\mu\text{m}$ Ni / $\geq 30$ $\mu\text{m}$ Au , LED: No, Number of poles: 8, Tray
Order No.	<a href="#">1433910000</a>
Type	RJ45C6 T1U 2.7N4N TY
GTIN (EAN)	4050118238679
Qty.	160 pc(s).
Packaging	Tray

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## Technical data

### Dimensions and weights

Depth	16.5 mm	Depth (inches)	0.65 inch
Height	20 mm	Height (inches)	0.787 inch
Height of lowest version	16.7 mm	Width	16 mm
Width (inches)	0.63 inch	Net weight	3.044 g

### Temperatures

Operating temperature, min.	-40 °C	Operating temperature, max.	85 °C
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### System specifications

Category	Cat. 6	LED	No
Latch option	top	Mounting onto the PCB	THT solder connection
Number of poles	8	Number of solder pins per pole	1
Outgoing elbow	90°	Performance-Category	Cat. 6
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	Copper alloy	Solder eyelet hole diameter (D)	0.9 mm
Solder eyelet hole diameter tolerance (D)± 0.1 mm		Solder pin dimensions	0.40 x 0.30 mm
Solder pin length (l)	2.7 mm	Soldering process	Manual soldering, Wave soldering
Tolerance of solder pin position	± 0.1 mm	Type of connection	Solder connection
Wiring	8-core		

### Electrical properties

Dielectric strength, contact / contact	≥ 1000 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 60603-7-5 1
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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	Tray	VPE length	319 mm
VPE width	191 mm	VPE height	68 mm

Creation date October 30, 2023 7:58:37 PM CET

Catalogue status 14.10.2023 / We reserve the right to make technical changes.

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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	27460201

## Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E471884

## Downloads

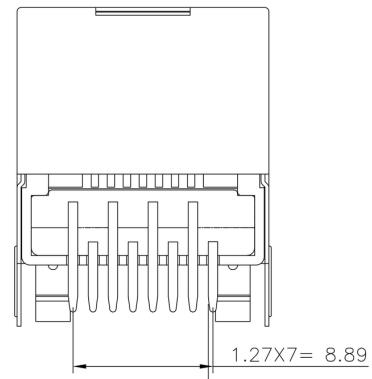
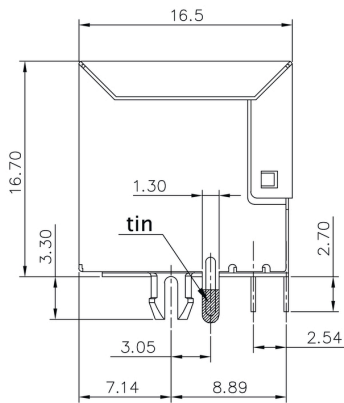
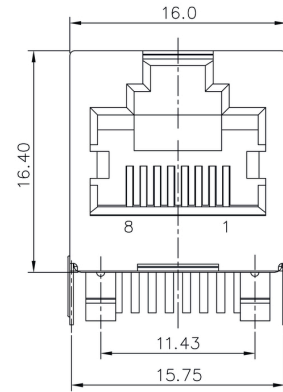
Approval/Certificate/Document of Conformity	<a href="#">Certificate of Compliance</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Product Change Notification	<a href="#">PCN</a> <a href="#">PCN</a>
User Documentation	<a href="#">MAN IE GUIDE DE</a> <a href="#">MAN IE GUIDE EN</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	<a href="#">MB FREECONTACT EN</a> <a href="#">FL FIELDWIRING EN</a> <a href="#">PI PROFINET CABLING EN</a> <a href="#">PI PROFINET CABLING EN</a>

**RJ45C6 T1U 2.7N4N TY**

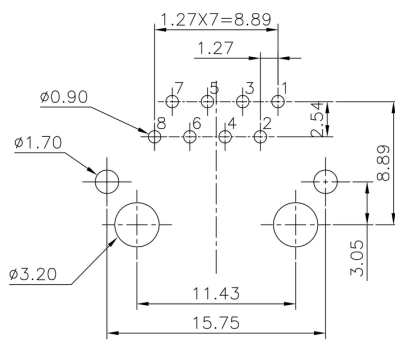
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**Drawings**



**PCB design**



PCB LAYOUT

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Drawings

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