

## 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    | OMNIMATE Data - RJ45 modular jack, PCB plug-in connector, Cat. 6, THT solder connection, 90°, top, none, No, Plugging cycles: 750, Number of poles: 8, PA 66, 30...80 $\mu\text{m}$ Ni / $\geq 30$ $\mu\text{m}$ Au , Tray |
| Order No.  | <a href="#">1433910000</a>   |
| Type       | RJ45C6 T1U 2.7N4N TY   |
| GTIN (EAN) | 4050118238679  |
| Qty.       | 160 items  |
| Packaging  | Tray   |

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## Technical data

## Approvals

|      |         |
|------|---------|
| ROHS | Conform |
|------|---------|

## Dimensions and weights

|                          |             |                 |             |
|--------------------------|-------------|-----------------|-------------|
| Depth                    | 16.5 mm     | Depth (inches)  | 0.6496 inch |
| Height                   | 20 mm       | Height (inches) | 0.7874 inch |
| Height of lowest version | 16.7 mm     | Width           | 16 mm       |
| Width (inches)           | 0.6299 inch | Net weight      | 3.04 g      |

## Environmental Product Compliance

|                        |                             |
|------------------------|-----------------------------|
| RoHS Compliance Status | Compliant without exemption |
| REACH SVHC             | No SVHC above 0.1 wt%       |

## System specifications

|   |                                  |                                  |                                   |
|---|----------------------------------|----------------------------------|-----------------------------------|
| Number of poles                                   | 8                                | LED                              | No                                |
| Solder pin length (l)                             | 2.7 mm                           | Mounting onto the PCB            | THT solder connection             |
| Pitch in inches (P)                               | 0.050 "                          | Shielding material               | Brass                             |
| Shielding   | Yes                              | Side termination, characteristic | Solder flange                     |
| Solder eyelet hole diameter tolerance (D)± 0.1 mm |                                  | Number of solder pins per pole   | 1                                 |
| Type of connection                                | Solder connection                | Solder eyelet hole diameter (D)  | 0.9 mm                            |
| Category  | Cat. 6                           | Product family                   | OMNIMATE Data - RJ45 modular jack |
| Pitch in mm (P)                                   | 1.27 mm                          | Protection degree                | IP20                              |
| Plugging cycles                                   | 750                              | Wiring                           | 8-core                            |
| Outgoing elbow                                    | 90°                              | Shield surface                   | nickel-plated                     |
| Shield tabs                                       | none                             | Performance-Category             | Cat. 6                            |
| Soldering process                                 | Manual soldering, Wave soldering | Latch option                     | top                               |
| Solder pin dimensions                             | 0.40 x 0.30 mm                   | Tolerance of solder pin position | ± 0.1 mm                          |

## Electrical properties

|                                       |                            |  |           |
|---------------------------------------|----------------------------|--|-----------|
| Dielectric strength, contact / shield | 1500 V DC                  | Dielectric strength, contact / contact | 1000 V DC |
| Volume resistance                     | <25 mΩ                     | Insulation resistance                  | ≥ 500 MΩ  |
| Nominal voltage                       | 125 V                      | Rated current                          | 1.5 A     |
| PoE / PoE+                            | conforming to IEEE 802.3at |  |           |

## Standards

|                    |                 |
|--------------------|-----------------|
| Connector standard | IEC 60603-7-5 1 |
|--------------------|-----------------|

## Material data

|                                  |                   |                                 |                            |
|----------------------------------|-------------------|---------------------------------|----------------------------|
| Insulating material              | PA 66             | Colour                          | black                      |
| Colour chart (similar)           | RAL 9011          | Insulating material group       | II                         |
| Comparative Tracking Index (CTI) | ≥ 500             | Insulation resistance           | ≥ 500 MΩ                   |
| Moisture Level (MSL)             |                   | UL 94 flammability rating       | V-0                        |
| Contact base material            | Phosphorus bronze | Contact material                | Cu-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                      |

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**Technical data****Packing**

|           |           |            |           |
|-----------|-----------|------------|-----------|
| Packaging | Tray      | VPE length | 350.00 mm |
| VPE width | 350.00 mm | VPE height | 129.00 mm |

**Important note**

Notes

**Classifications**

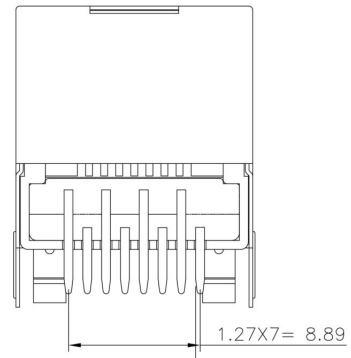
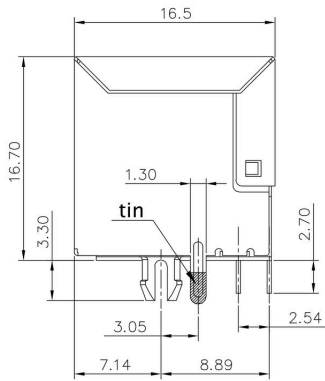
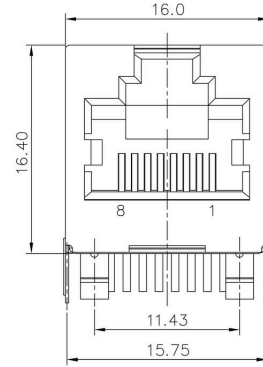
|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 8.0    | EC002637    | ETIM 9.0    | EC002637    |
| ETIM 10.0   | EC002637    | ECLASS 14.0 | 27-46-02-01 |
| ECLASS 15.0 | 27-46-02-01 |             |             |

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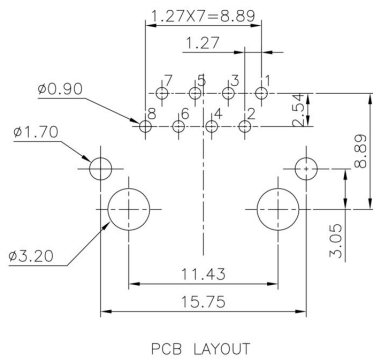
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Drawings

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PCB design



PCB LAYOUT

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Drawings

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| Code                             | Value              | Description                                    |   |   |     |   |   |       |    |                          |
|----------------------------------|--------------------|--|---|---|-----|---|---|-------|----|--------------------------|
| RJ45                             | G1                 | R  | 1 | U | 3.2 | E | 4 | GY/GY | TY | RJ45G1 R1U 3.2E4GY/GY TY |
| <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>T</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>C6e</b>         | Category 6e                                    |   |   |     |   |   |       |    |                          |
|                                  | <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