

**RJ45C5 T1D 3.3E4N 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. 5 , THT solder connection, 90°, Latch option: bottom, Shield tabs: 6 tabs, 30...80 $\mu\text{m}$ Ni / $\geq 30 \mu\text{m}$ Au , LED: No, Number of poles: 8, Tray (manual assembly) |
| Order No.  | <a href="#">2562900000</a>   |
| Type       | RJ45C5 T1D 3.3E4N TY   |
| GTIN (EAN) | 4050118571929  |
| Qty.       | 120 pc(s).   |
| Packaging  | Tray (manual assembly)   |

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## Technical data

## Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 21.3 mm    | Depth (inches)  | 0.839 inch |
| Height                   | 17.06 mm   | Height (inches) | 0.672 inch |
| Height of lowest version | 13.76 mm   | Width           | 15.7 mm    |
| Width (inches)           | 0.618 inch | Net weight      | 7.533 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 "  |      |
| 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                               | 6 tabs  |      |
| Shielding                                 | Yes   |      |
| Shielding material                        | Brass   |      |
| Solder eyelet hole diameter (D)           | 0.9 mm  |      |
| Solder eyelet hole diameter tolerance (D) | ± 0.1 mm                                      |      |
| Solder pin dimensions                     | Octagonal                                     |      |
| Solder pin length (l)                     | 3.3 mm  |      |
| Solder pin length tolerance               | +0.5 / -0.5 mm                                |      |
| Solder pin length tolerance               | Lower tolerance with prefix (reveals minimum) | -0.5 |
|   | Upper tolerance with prefix (reveals maximum) | +0.5 |
|   | Tolerance, unit                               | 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 | Dielectric strength, contact / shield | 1500 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 60603-7-51 |
|--------------------|----------------|

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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 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                      |                             |                   |

## Packing

|           |                        |            |        |
|-----------|------------------------|------------|--------|
| Packaging | Tray (manual assembly) | VPE length | 319 mm |
| VPE width | 192 mm                 | VPE height | 69 mm  |

## 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 | 27-46-02-01 |
| ECLASS 14.0 | 27-46-02-01 |             |             |

## Environmental Product Compliance

|                        |                             |
|------------------------|-----------------------------|
| REACH SVHC             | /                           |
| RoHS Compliance Status | Compliant without exemption |

## Approvals

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

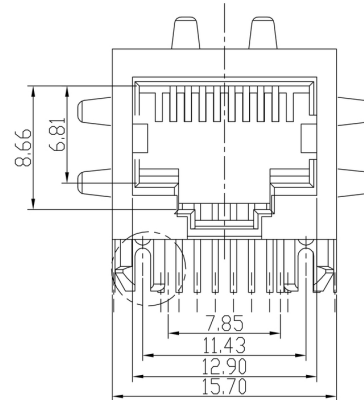
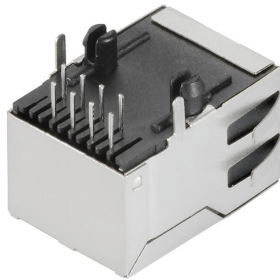
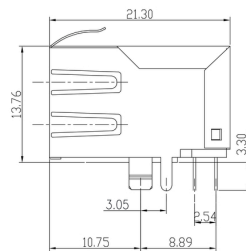
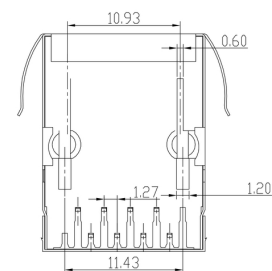
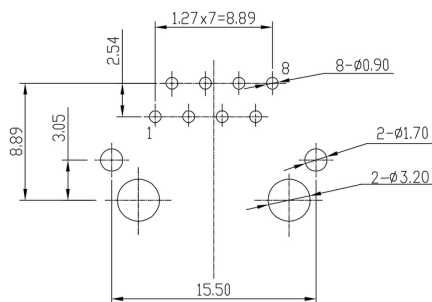
## Downloads

|   |   |
|---|---|
| Approval/Certificate/Document of Conformity | <a href="#">Certificate of Compliance</a> |
| Engineering Data                            | <a href="#">CAD data – STEP</a>           |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>  |

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**Drawings**
**Dimensioned drawing**

**Dimensioned drawing**

**Dimensioned drawing**

**PCB design**


PCB LAYOUT

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**Drawings**

|      |    |   |   |   |     |   |   |       |    |  |
|------|----|---|---|---|-----|---|---|-------|----|--|
| 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)                  |
|      |    |   |   |   |     |   |   |       |    | Tape on <b>Reel</b> (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                                     |
|      |    |   |   |   |     |   |   |       |    | ... (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                      |
|      |    |   |   |   |     |   |   |       |    | Soldering process: Wave or Reflow soldering    |
|      |    |   |   |   |     |   |   |       |    | <b>S</b>                                       |
|      |    |   |   |   |     |   |   |       |    | Surface Mount Technology - SMT                 |
|      |    |   |   |   |     |   |   |       |    | Soldering process: Reflow soldering            |
|      |    |   |   |   |     |   |   |       |    | <b>T</b>                                       |
|      |    |   |   |   |     |   |   |       |    | Through Hole Technology - THT                  |
|      |    |   |   |   |     |   |   |       |    | 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

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Catalogue status 28.09.2024 / We reserve the right to make technical changes.

## 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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