

USB2.0B T1H 2.8N4 TY BK

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



USB as a reliable data interface for your device in industrial use. Due to the many advantages, USB sockets are always used most in the electrical industry.

The extensive portfolio of USB-A, -B - C and -Micro components enables future-proof device design with speeds of up to 10 Gbit/s. Our USB PCB sockets support the robust standards USB 2.0, 3.0 and 3.1 for fast and easy data transfer.

The individual connectors meet the requirements for high durability and offer reliable connectivity.

- Up to 10.000 plugging cycles
- THT, THR or SMD soldering processes
- Available in design types 180° (vertical/upright) or 90° (horizontal/flat-lying)
- Packed either in a tray (TY) or on a roll (tape-on-reel, RL)
- Reinforced gold layer for improved corrosion protection
- USB 3.1 sockets support data rates of 10 Gbit/s for fast data transfer
- USB-C sockets enable error-free plugging due to a symmetrical design
- Robust plug & play operation - connect and disconnect without shutting down or restarting the system

General ordering data

| | |
|------------|--|
| Version | OMNIMATE Data - USB jack, PCB plug-in connector, Type B, 480 Mbps, THT solder connection, 90°, Plugging cycles: ≥ 1500, Pitch in mm (P): 2.50, Number of poles: 4, PBT, Tray (manual assembly) |
| Order No. | 2698610000 |
| Type | USB2.0B T1H 2.8N4 TY BK |
| GTIN (EAN) | 4050118740912 |
| Qty. | 100 pc(s). |
| Packaging | Tray (manual assembly) |

USB2.0B T1H 2.8N4 TY BK**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data**Dimensions and weights**

| | | | |
|------------|----------|-----------------|------------|
| Depth | 16 mm | Depth (inches) | 0.63 inch |
| Height | 11.05 mm | Height (inches) | 0.435 inch |
| Width | 12.04 mm | Width (inches) | 0.474 inch |
| Net weight | 3.61 g | | |

System specifications

| | | | |
|----------------------------------|--------------------------|--------------------------------|----------------------------------|
| LED | No | Mounting onto the PCB | THT solder connection |
| Number of poles | 4 | Number of solder pins per pole | 1 |
| Outgoing elbow | 90° | Performance-Category | 480 Mbps |
| Pitch in inches (P) | 0.098 " | Pitch in mm (P) | 2.5 mm |
| Plugging cycles | ≥ 1500 | Plugging force/pole, max. | 35 N |
| Product family | OMNIMATE Data - USB jack | Protection degree | IP20 |
| Pulling force / pole, min. | 10 N | Shield surface | nickel-plated |
| Shielding | Yes | Shielding material | Brass |
| Side termination, characteristic | Solder flange | Solder pin dimensions | Octagonal |
| Solder pin length (l) | 2.84 mm | Soldering process | Manual soldering, Wave soldering |
| Tolerance of solder pin position | ± 0.1 mm | Transmission rate | 480 Mbps |
| Type of connection | Socket connector | | |

Electrical properties

| | | | |
|--|----------|---------------------|-----------|
| Dielectric strength, contact / contact | 500 V AC | Insulation strength | ≥ 1000 MΩ |
| Rated voltage | 30 V | | |

Material data

| | | | |
|-----------------------------|----------|-----------------------------|------------------|
| Insulating material | PBT | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulation strength | ≥ 1000 MΩ |
| UL 94 flammability rating | V-0 | Contact base material | Copper alloy |
| Contact material | Cu-alloy | Contact surface | Gold over nickel |
| Storage temperature, min. | -40 °C | Storage temperature, max. | 70 °C |
| Operating temperature, min. | -40 °C | Operating temperature, max. | 60 °C |

Packing

| | | | |
|-----------|------------------------|------------|--------|
| Packaging | Tray (manual assembly) | VPE length | 270 mm |
| VPE width | 221 mm | VPE height | 20 mm |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002637 | ETIM 7.0 | EC002637 |
| ETIM 8.0 | EC002637 | ETIM 9.0 | EC002637 |
| ETIM 10.0 | EC002637 | 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 | ECLASS 15.0 | 27-46-02-01 |

Environmental Product Compliance

| | |
|------------------------|-----------------------|
| RoHS Compliance Status | Compliant |
| REACH SVHC | No SVHC above 0.1 wt% |

Creation date May 11, 2025 10:02:59 PM CEST

Catalogue status 26.04.2025 / We reserve the right to make technical changes.

2

Data sheet**USB2.0B T1H 2.8N4 TY BK**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Technical data**Approvals**

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

Downloads

| | |
|------------------|--|
| Engineering Data | CAD data – STEP |
| Catalogues | Catalogues in PDF-format |

Data sheet

USB2.0B T1H 2.8N4 TY BK

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Drawings

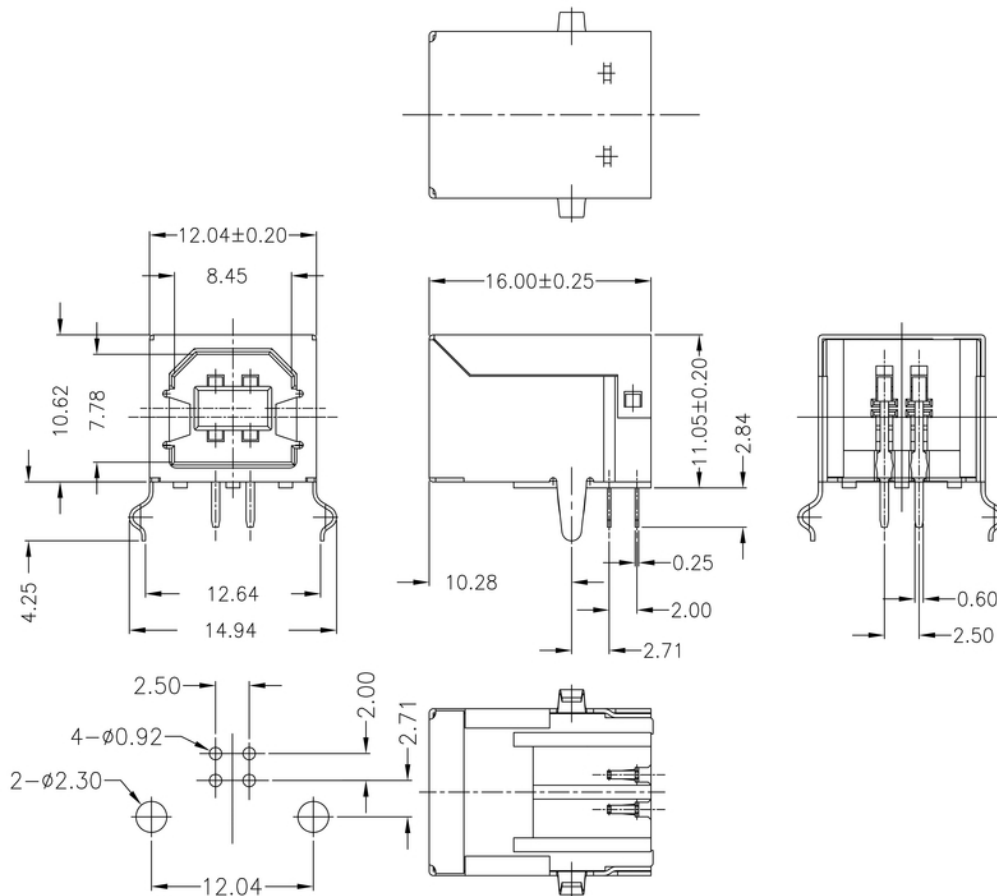


USB2.0B T1H 2.8N4 TY BK

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

Drawings

www.weidmueller.com



USB2.0B T1H 2.8N4 TY BK

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Drawings

Legend

| Code | Description | Options | Options Description |
|------|---------------------------|----------------------|---|
| USB | USB3.0A R1V 3.0N4 TY BL | | |
| 3.0A | Colour / Special Option | BL BK WH SO | blue (plastic) black (plastic) white (plastic) customized product |
| R | Packaging | TY RL TU | Tray in box (manual assembly) Tape on Reel (automated assembly) Tube |
| 1 | Contact surface thickness | 4 | 1 = 3µ', 2 = 6µ', 3 = 15µ', 4 = 30µ', 5 = 50µ' |
| V | Solder Pin length | N 3.2 1.6 D | no use 3.2 mm 1.6 mm SMD |
| 3.0 | Direction | H U V | Horizontal (90°, side entry) Horizontal Upright 90° Vertical (180°, top entry) |
| N | Number of Ports | 1 2; 4; ... | 1 Port multi ports about each other, Multilevel |
| 4 | Assembly on PCB | R S T | Through Hole Reflow - THR Soldering process: Wave or Reflow soldering Surface Mount Technology - SMT Soldering process: Reflow soldering Through Hole Technology - THT Soldering process: Wave |
| TY | Type / Performance | 2.0A 3.0A | USB 2.0 Type A USB 3.0 Type A |
| BL | | | |

Recommended wave soldering profiles

Weidmüller Interface GmbH & Co. KG
 Klängenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com

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.