# OMNIMATE Data - USB jack
# USB3.0A R1V 2.0N3 RL BL

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
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www.weidmueller.com


Universal serial bus 2.0 and 3.0 (SuperSpeed); Type A connectors meet the requirements for high resistance and provide reliable connectivity.

- Up to 5000 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

## General ordering data

| | |
|---|---|
| Type | USB3.0A R1V 2.0N3 RL BL |
| Order No. | 2562980000 |
| Version | OMNIMATE Data - USB jack, female header, 5 Gbps, THT/THR solder connection, 180°, ≥ 1500, Pitch in mm (P): 2.00 mm, Number of poles: 8, PA 9T, black, Tape |
| GTIN (EAN) | 4050118572001 |
| Qty. | 140 pc(s). |
| Packaging | Tape |

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## Technical data

### Dimensions and weights

| | | | |
|---|---|---|---|
| Width | 13.1 mm | Width (inches) | 0.516 inch |
| Height | 17 mm | Height (inches) | 0.669 inch |
| Height of lowest version | 15 mm | Depth | 5.72 mm |
| Depth (inches) | 0.225 inch | Net weight | 5 g |

### Temperatures

| | | | |
|---|---|---|---|
| Operating temperature, max. | 85 °C | Operating temperature, min. | -55 °C |
| Storage temperature, max. | 85 °C | Storage temperature, min. | -40 °C |

### Environmental Product Compliance

| | |
|---|---|
| REACH SVHC | Lead 7439-92-1 |

### System specifications

| | | | |
|---|---|---|---|
| LED | No | Mounting onto the PCB | THT/THR solder connection |
| Number of poles | 8 | Number of solder pins per pole | 1 |
| Outgoing elbow | 180° | Pitch in mm (P) | 2 mm |
| Plugging cycles | ≥ 1500 | Plugging force/pole, max. | 35 N |
| Product family | OMNIMATE Data - USB jack | Protection degree | IP20 |
| Pulling force/pole, max. | 10 N | Shield surface | nickel-plated |
| Shield tabs | none | Shielding | Yes |
| Shielding material | Brass | Solder pin length (l) | 2 mm |
| Transmission rate | 5 Gbps | Type of connection | Socket connector |

### Electrical properties

| | | | |
|---|---|---|---|
| Dielectric strength, contact / contact | 100 V AC | Insulation strength | 100 MΩ |
| Rated current | 1.8 A at 250 V AC | Rated voltage | 30 V |

### Material data

| | | | |
|---|---|---|---|
| Insulating material | PA 9T | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | II |
| Comparative Tracking Index (CTI) | ≥ 500 | Insulation strength | 100 MΩ |
| Moisture Level (MSL) | 1 | UL 94 flammability rating | V-0 |
| Contact base material | Phosphorus bronze | Contact surface | Gold over nickel |
| Layer structure of plug contact | 15- µ" Au | Storage temperature, min. | -40 °C |
| Storage temperature, max. | 85 °C | Operating temperature, min. | -55 °C |
| Operating temperature, max. | 85 °C | | |

### Packing

| | | | |
|---|---|---|---|
| Packaging | Tape | VPE length | 0 |
| VPE width | 0 | VPE height | 0 |
| Tape reel diameter ⌀ (A) | 330 mm | Surface resistance | Rs = $10^{9}$ - $10^{12}$ Ω |

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### 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 | | |

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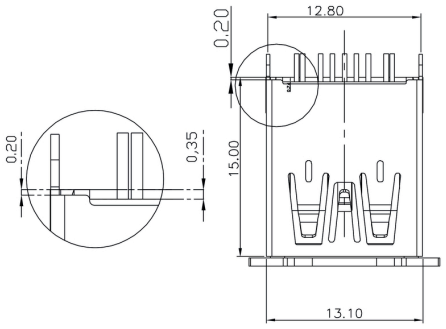
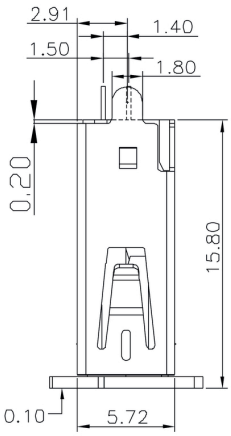
## Drawings

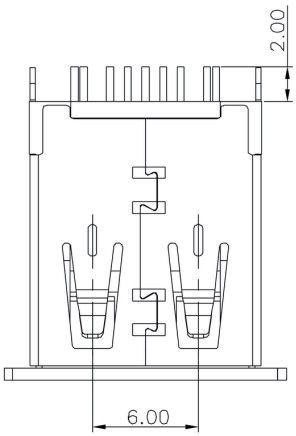
### Dimensioned drawing



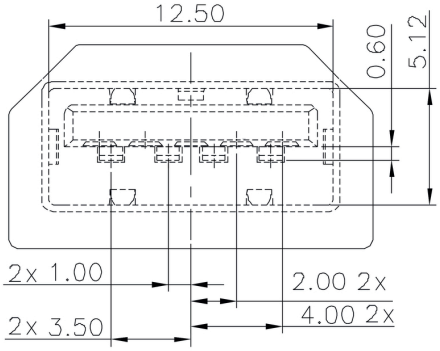

### Dimensioned drawing



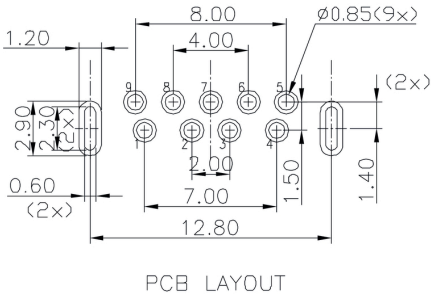

### Dimensioned drawing




### Dimensioned drawing




### PCB design




PCB LAYOUT

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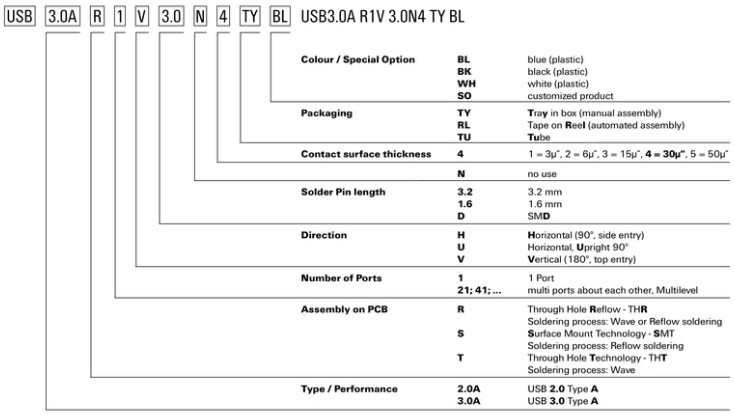
## Drawings

### Legend



# Wave Solder Profile

## Recommended wave solderding profiles

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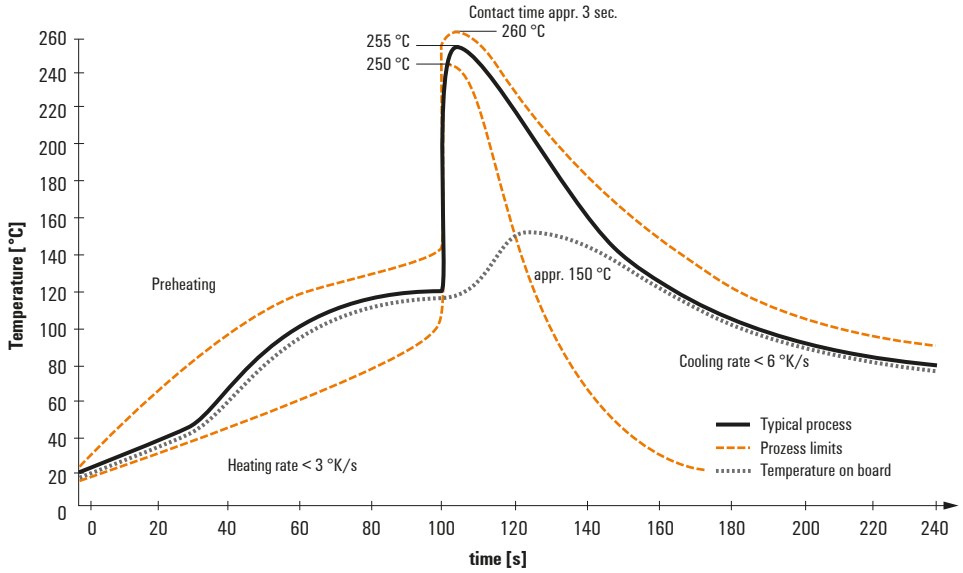
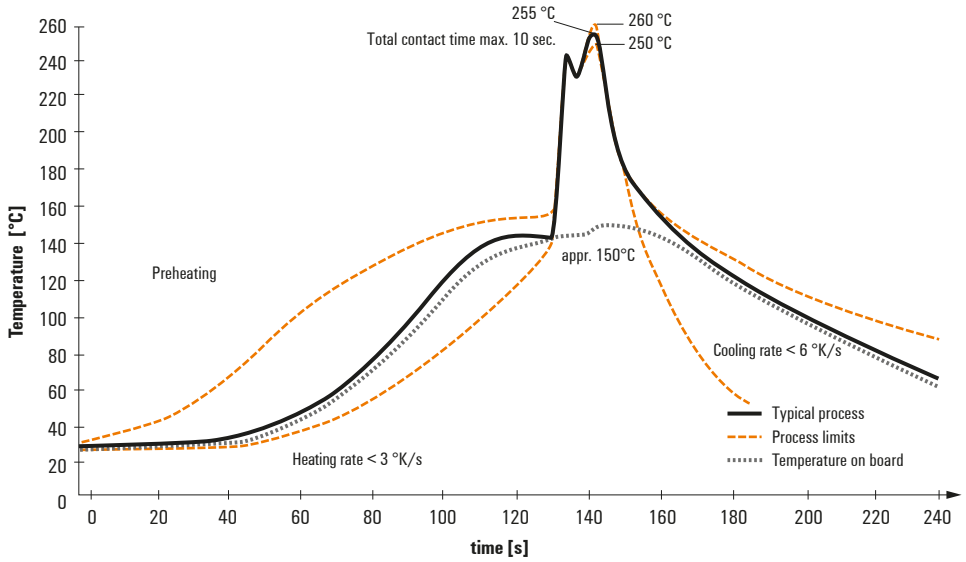
**Single Wave:**




**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.

# Reflow Solder Profile

## Recommended reflow soldering profile

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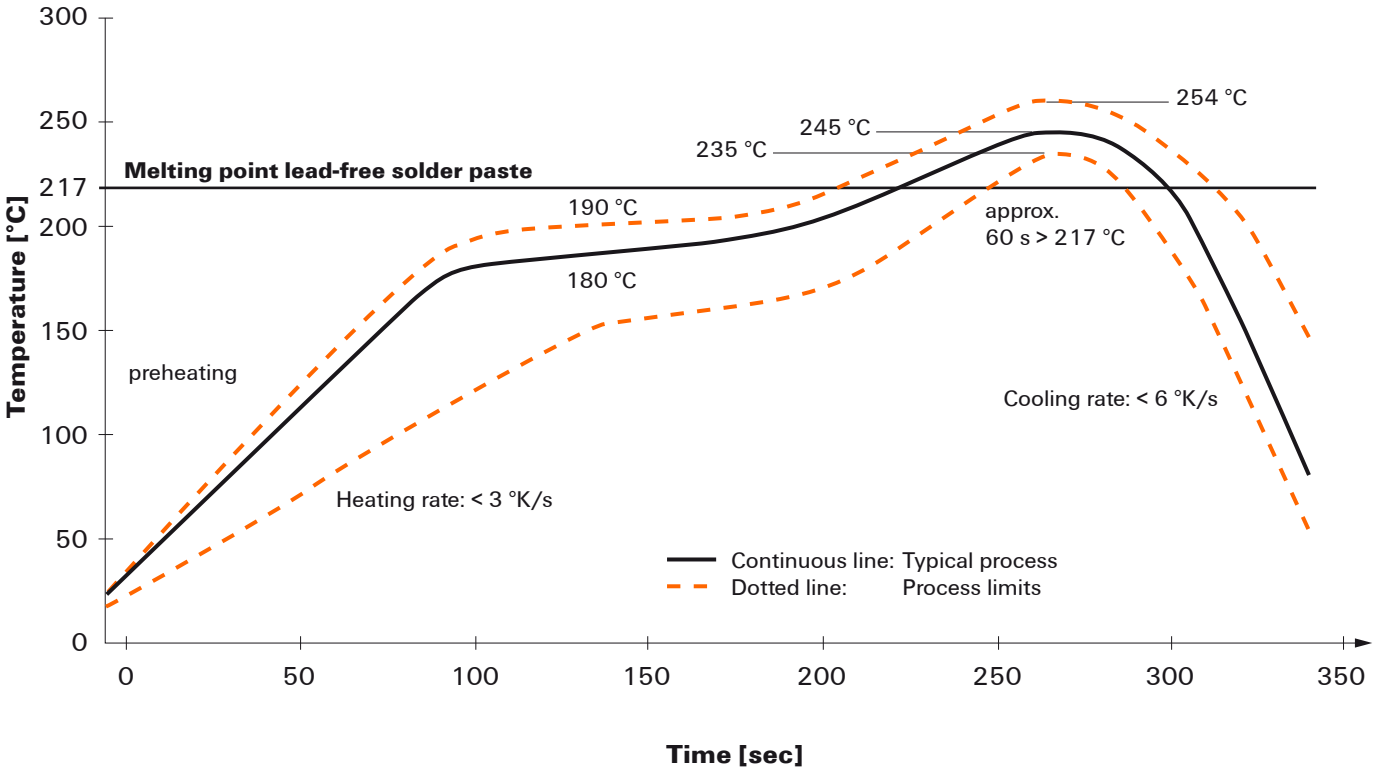


**Reflow soldering profile**

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 ≤ +3K/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 ≥ -6K/s solder is cured. Board and components cool down while avoiding cold cracks.