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

Weidmüller Interface GmbH & Co. KG
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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	PCB plug-in connector, USB jacks, THT/THR solder connection, No. of poles: 8, 180°, Solder pin length (l): 2 mm, Gold over nickel, Black, Tape (Ø 330 mm); Rs = 10^9 - 10^{12} Ω
GTIN (EAN)	4050118572001
Qty.	140 pc(s).
Packaging	Tape (Ø 330 mm); Rs = 10^9 - 10^{12} Ω

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Technical data

Dimensions and weights

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

System specifications

LED	No	Mounting onto the PCB	THT/THR solder connection
No. of poles	8	Number of solder pins per pole	1
Outgoing elbow	180°	Packaging	Tape (Ø 330 mm); Rs = 10^9 - 10^{12} Ω
Plugging cycles	≥ 1500	Product family	OMNIMATE Data - USB jacks
Protection degree	IP20	Shield tabs	none
Shielding	Yes	Solder pin length (l)	2 mm
Transmission rate	5 Gbit/s	Type of connection	Socket
Withdrawal force per pole	10 N	push-in force/pole	35 N

Electrical properties

Dielectric strength, contact / contact	100 V AC	Insulation resistance	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
CTI	≥ 500	Insulation resistance	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		

Classifications

eClass 6.2	27-25-05-04

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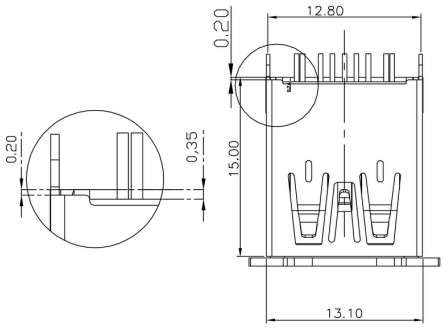
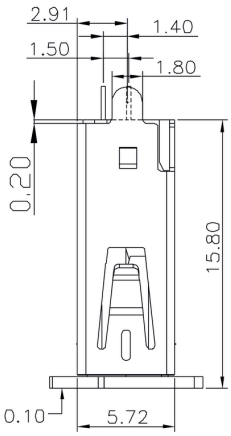
Drawings

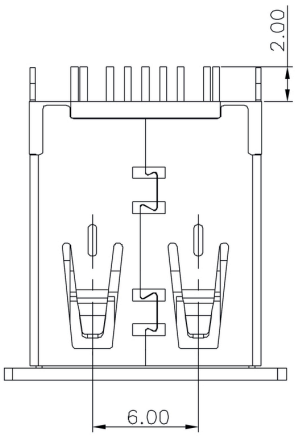
Dimensioned drawing



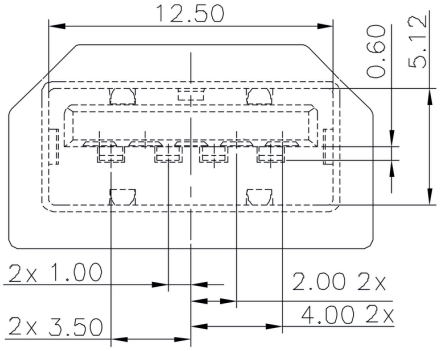
Dimensioned drawing



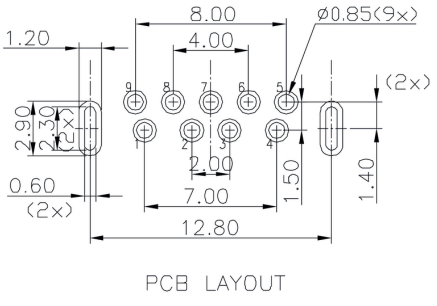
Dimensioned drawing



Dimensioned drawing



PCB design



PCB LAYOUT

Wave Solder Profile

Recommended wave solderding profiles

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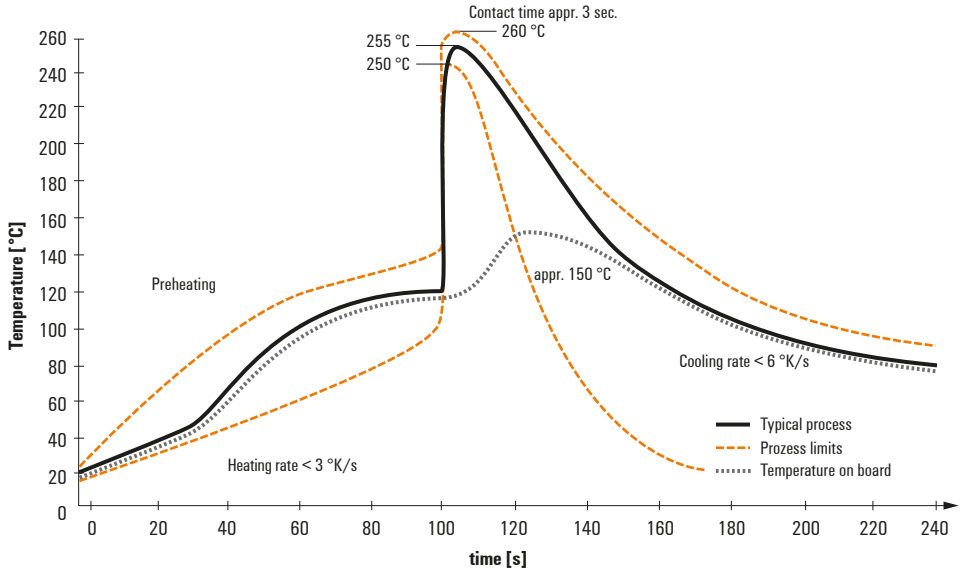
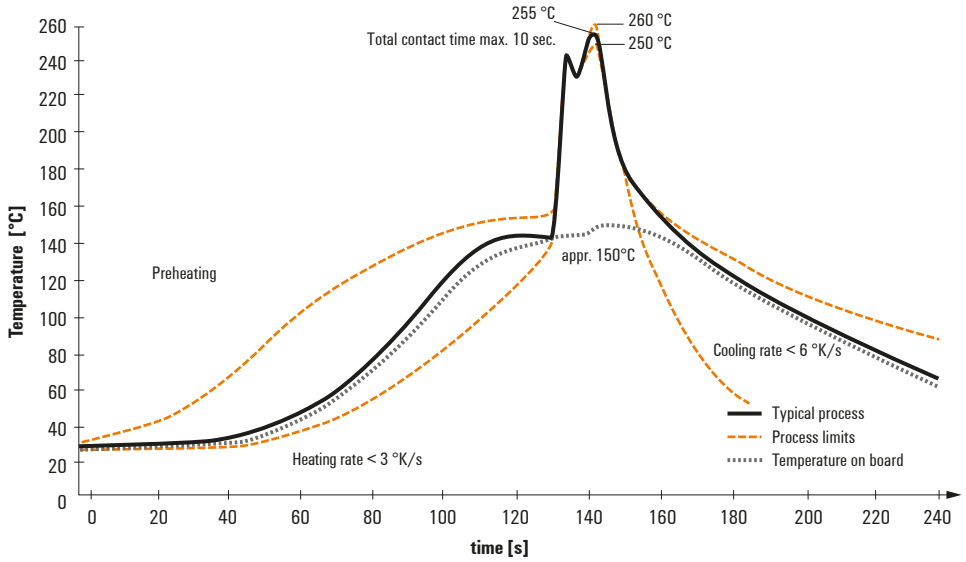
Single Wave:



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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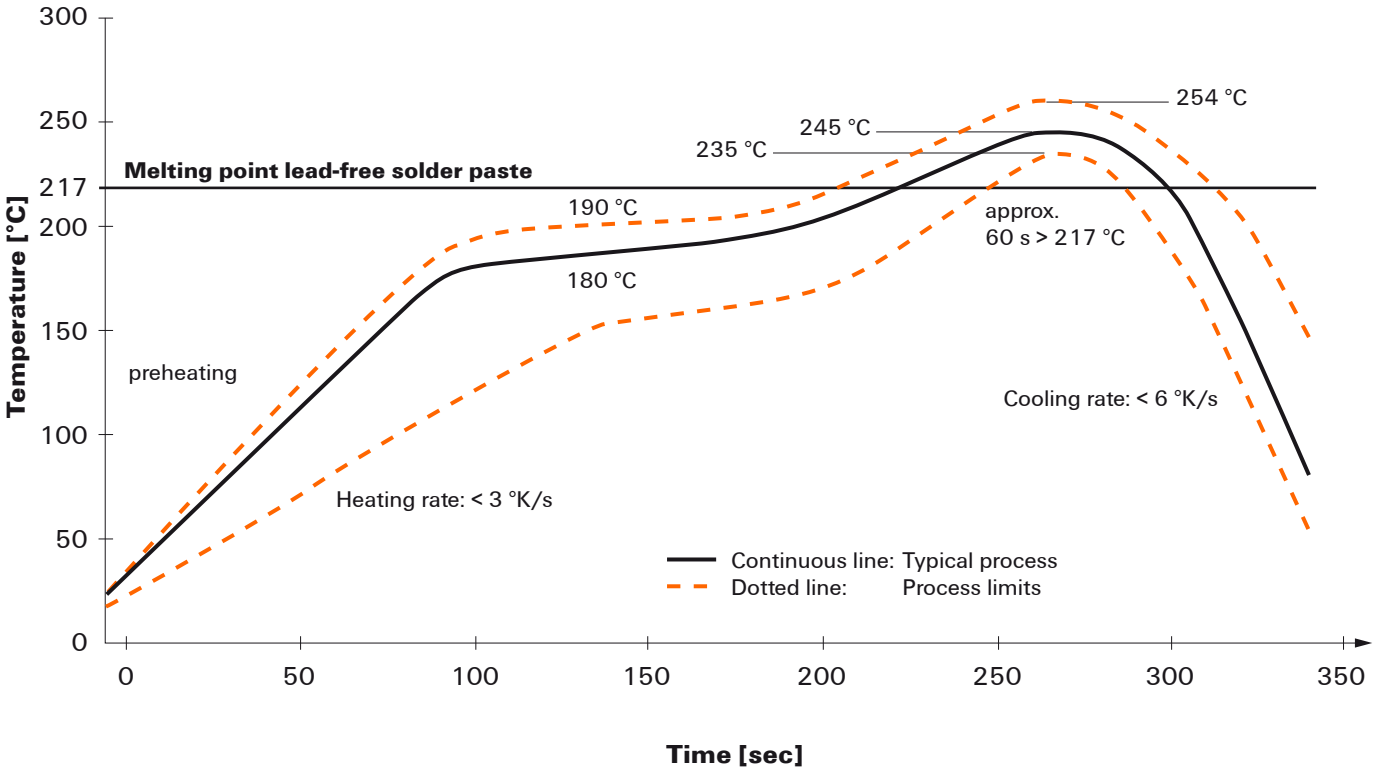

Reflow soldering profile

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.