

OMNIMATE Data - USB jack USB3.0A R1V 3.0N2 TY BL

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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 3.0N2 TY BL
Order No.	1549730000
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, LCP, blue, Tray (manual assembly)
GTIN (EAN)	4050118356083
Qty.	100 pc(s).
Packaging	Tray (manual assembly)

Creation date May 4, 2020 12:55:11 AM CEST

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Technical data
Dimensions and weights

Width	14.65 mm	Width (inches)	0.577 inch
Height	18.9 mm	Height (inches)	0.744 inch
Height of lowest version	14.95 mm	Depth	7.1 mm
Depth (inches)	0.28 inch	Net weight	2.46 g

Temperatures

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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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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	Product family	OMNIMATE Data - USB jack
Protection degree	IP20	Shield surface	nickel-plated
Shield tabs	none	Shielding	Yes
Shielding material	Brass	Solder eyelet hole diameter (D)	0.7 mm
Solder pin length (l)	3 mm	Transmission rate	5 Gbps
Type of connection	Socket connector	Wiring	Type A, USB 3.0

Electrical properties

Dielectric strength, contact / contact	100 V AC	Insulation strength	≥ 1000 MΩ
Rated current	1.5 A	Rated voltage	30 V

Material data

Insulating material	LCP	Colour	blue
Colour chart (similar)	RAL 5012	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	Insulation strength	≥ 1000 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	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	0 m
VPE width	0 m	VPE height	0 m

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		

Data sheet**OMNIMATE Data - USB jack
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Technical data**Approvals**

Approvals



ROHS

Conform

Downloads

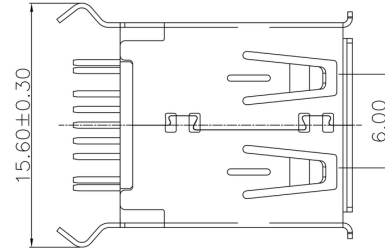
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Engineering Data	STEP
User Documentation	MAN IE GUIDE DE MAN IE GUIDE EN

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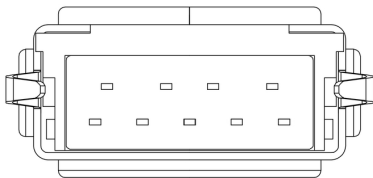
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Drawings

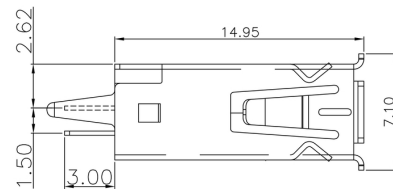
Dimensioned drawing



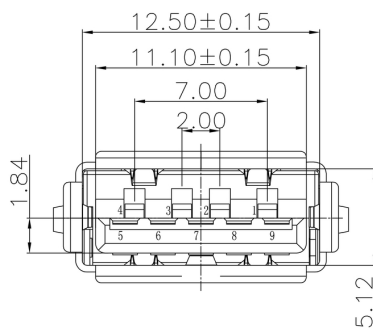
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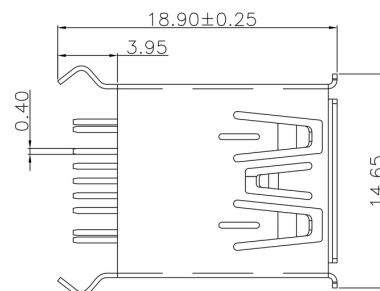
Dimensioned drawing



Dimensioned drawing

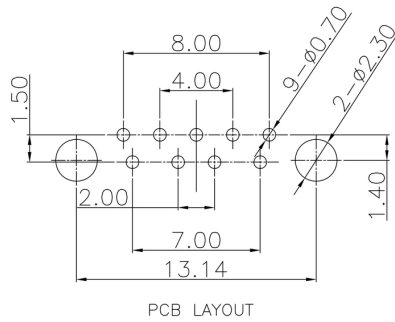


Dimensioned drawing



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Drawings**PCB design**

Data sheet

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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

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.

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 $\leq +3\text{K/s}$. 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 $\geq -6\text{K/s}$ solder is cured. Board and components cool down while avoiding cold cracks.