

USB3.0A R1V 3.0N2 TY BL

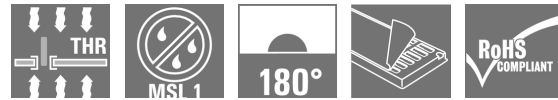
Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

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

Version	OMNIMATE Data - USB jack, female header, 5 Gbps, THT/THR solder connection, 180°, Pitch in mm (P): 2.00 mm, Number of poles: 8, LCP, blue, Tray (manual assembly)
Order No.	1549730000
Type	USB3.0A R1V 3.0N2 TY BL
GTIN (EAN)	4050118356083
Qty.	100 pc(s).
Packaging	Tray (manual assembly)

Creation date March 24, 2021 5:47:19 AM CET

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Technical data
Dimensions and weights

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

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°	Performance-Category	5 Gbps
Pitch in mm (P)	2 mm	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	Soldering process	Reflow soldering, Manual soldering, Wave soldering
Transmission rate	5 Gbps	Type of connection	Socket connector
Wiring	Type A, USB 3.0		

Electrical properties

Dielectric strength, contact / contact	100 V AC	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	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	ECLASS 11.0	27-46-02-01

Data sheet**USB3.0A R1V 3.0N2 TY BL****Weidmüller Interface GmbH & Co. KG**
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Approvals



ROHS	Conform
UL File Number Search	E471884

Downloads

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

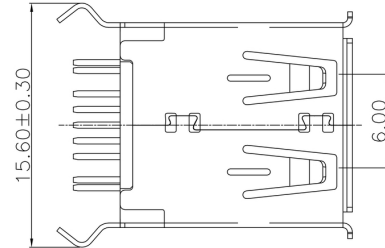
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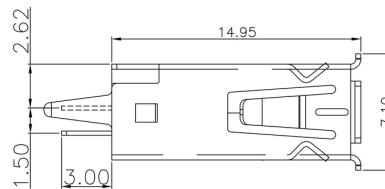
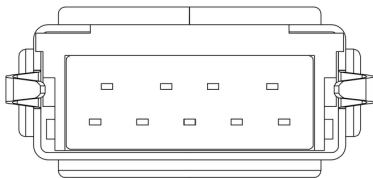
Drawings

Dimensioned drawing



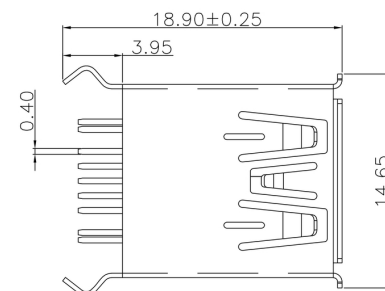
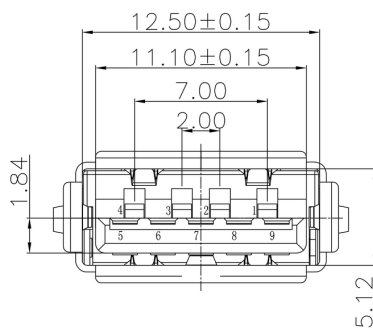
Dimensioned drawing

Dimensioned drawing



Dimensioned drawing

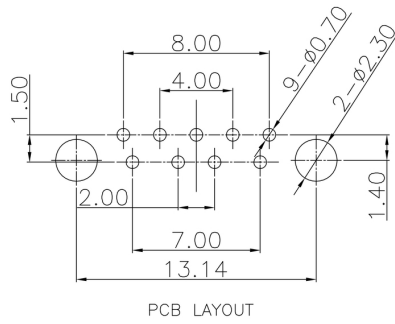
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Drawings**PCB design**

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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.