

USB2.0A S1H 1.4N4 TY BK

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, 480 Mbps, THT/THR solder connection, 90°, Pitch in mm (P): 2.00 mm, Number of poles: 4, LCP, black, Tray (manual assembly)
Order No.	2563720000
Type	USB2.0A S1H 1.4N4 TY BK
GTIN (EAN)	4050118572339
Qty.	100 pc(s).
Packaging	Tray (manual assembly)

Creation date March 29, 2021 7:36:33 PM CEST

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Technical data**Dimensions and weights**

Depth	14 mm	Depth (inches)	0.551 inch
Height	11.22 mm	Height (inches)	0.442 inch
Height of lowest version	7.12 mm	Net weight	0.001 g
Width	14.5 mm	Width (inches)	0.571 inch

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	4	Number of solder pins per pole	1
Outgoing elbow	90°	Performance-Category	480 Mbps
Pitch in mm (P)	2 mm	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)	1.4 mm
Soldering process	Reflow soldering, Manual soldering, Wave soldering	Transmission rate	480 Mbps
Type of connection	Socket connector		

Electrical properties

Dielectric strength, contact / contact	750 V AC	Rated current	1.5 A
Rated voltage	30 V		

Material data

Insulating material	LCP	Colour	black
Colour chart (similar)	RAL 9011	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.	60 °C
Operating temperature, min.	-40 °C	Operating temperature, max.	60 °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**USB2.0A S1H 1.4N4 TY BK**

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Technical data**Approvals**

Approvals



ROHS	Conform
UL File Number Search	E471884

Downloads

Engineering Data	STEP
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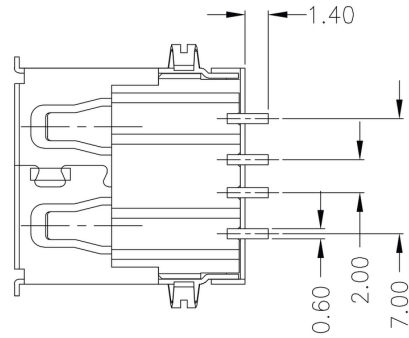
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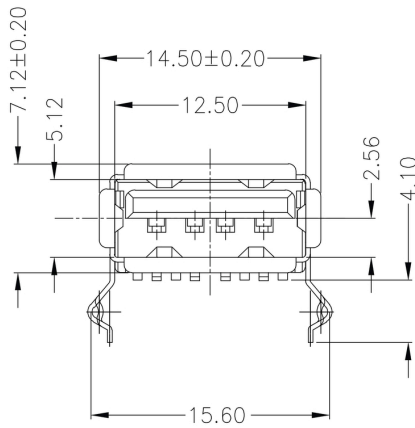
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Drawings

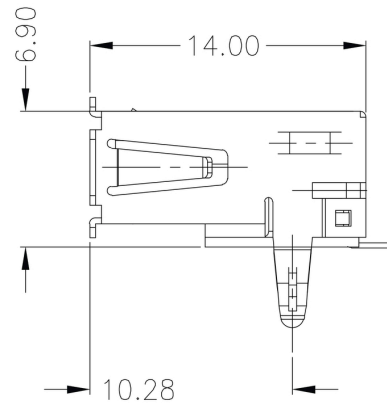
Dimensioned drawing



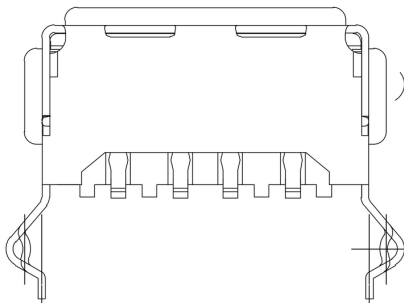
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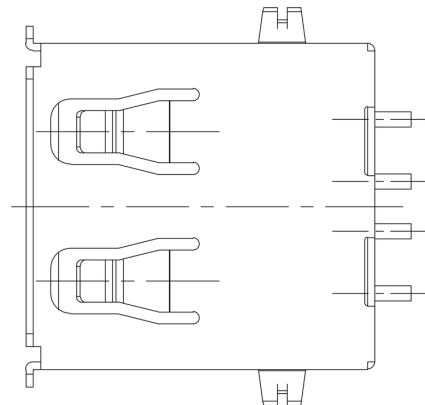
Dimensioned drawing



Dimensioned drawing



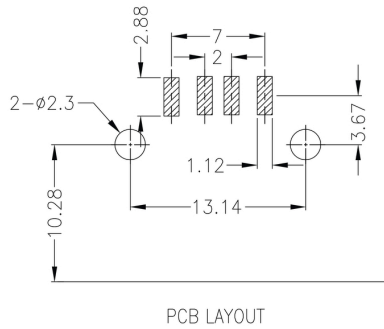
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Drawings**PCB design**

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Drawings

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Legend

Code	Description	Value	Meaning
USB	USB3.0A R1V 3.0N4 TY BL		
3.0A	Colour / Special Option	BL	blue (plastic)
		BK	black (plastic)
		WH	white (plastic)
		SO	customized product
R	Packaging	TY	Tray in box (manual assembly)
		RL	Tape on Reel (automated assembly)
		TU	Tube
1	Contact surface thickness	4	1 = 3µ, 2 = 6µ, 3 = 15µ, 4 = 30µ, 5 = 50µ
V	Solder Pin length	N	no use
		3.2	3.2 mm
		1.6	1.6 mm
		D	SMD
3.0	Direction	H	Horizontal (90°, side entry)
		U	Horizontal Upright 90°
		V	Vertical (180°, top entry)
N	Number of Ports	1	1 Port
		2; 4; ...	multi ports about each other, Multilevel
4	Assembly on PCB	R	Through Hole Reflow - THR
		S	Soldering process: Wave or Reflow soldering
		T	Surface Mount Technology - SMT
			Soldering process: Reflow soldering
			Through Hole Technology - THT
			Soldering process: Wave
TY	Type / Performance	2.0A	USB 2.0 Type A
		3.0A	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.