

SL-SMT 5.08HC/07/90 3.2SN BK BX
Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



High-temperature-resistant, 90° angled, open male header. Packed in box or tape. On tape, with 1.5 mm solder pin, optimised for automatic assembly. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded. HC = High Current.

General ordering data

Version	PCB plug-in connector, male header, open side, THT/THR solder connection, 5.08 mm, Number of poles: 7, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box
Order No.	1780000000
Type	SL-SMT 5.08HC/07/90 3.2SN BK BX
GTIN (EAN)	4032248165322
Qty.	50 pc(s).
Product data	IEC: 400 V / 27.5 A UL: 300 V / 18.5 A
Packaging	Box

Creation date March 25, 2021 6:47:48 AM CET

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Technical data

Dimensions and weights

Depth	12 mm	Depth (inches)	0.472 inch
Height	11.7 mm	Height (inches)	0.461 inch
Height of lowest version	8.5 mm	Net weight	2.54 g
Width	35.56 mm	Width (inches)	1.4 inch

System specifications

Product family	OMNIMATE Signal - series BL/SL 5.08	Type of connection	Board connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	5.08 mm
Pitch in inches (P)	0.2 inch	Outgoing elbow	90°
Number of poles	7	Number of solder pins per pole	1
Solder pin length (l)	3.2 mm	Solder pin length tolerance	0 / -0.3 mm
Solder pin dimensions	d = 1.2 mm, Octagonal	Solder eyelet hole diameter (D)	1.4 mm
Solder eyelet hole diameter tolerance (D)+	0,1 mm	L1 in mm	30.48 mm
L1 in inches	1.2 inch	Number of rows	1
Pin series quantity	1	Volume resistance	≤5 mΩ
Can be coded	Yes	Plugging force/pole, max.	9 N
Pulling force/pole, max.	7 N		

Material data

Insulating material	LCP GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 175	Moisture Level (MSL)	1
UL 94 flammability rating	V-0	Contact material	CuMg
Contact surface	tinned	Layer structure of solder connection	1...3 μm Ni / 2...4 μm Sn matt
Layer structure of plug contact	1...3 μm Ni / 2...4 μm Sn matt	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	100 °C	Temperature range, installation, min.	-30 °C
Temperature range, installation, max.	100 °C		

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	27.5 A
Rated current, max. number of poles (Tu=20°C)	19 A	Rated current, min. number of poles (Tu=40°C)	24 A
Rated current, max. number of poles (Tu=40°C)	16.5 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV		

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Technical data

Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

200039-1176845

Rated voltage (Use group B / CSA) 300 V

Rated voltage (Use group D / CSA) 300 V

Rated current (Use group B / CSA) 18.5 A

Rated current (Use group D / CSA) 18.5 A

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Rated data acc. to UL 1059

Institute (UR)



Certificate No. (UR)

E60693

Rated voltage (Use group B / UL 1059) 300 V

Rated voltage (Use group D / UL 1059) 300 V

Rated current (Use group B / UL 1059) 18.5 A

Rated current (Use group D / UL 1059) 10 A

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Packing

Packaging	Box	VPE length	35 mm
VPE width	115 mm	VPE height	160 mm

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

Important note

IPC conformity

Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.

Notes

- Gold-plated contact surfaces on request
- Rated current related to rated cross-section & min. No. of poles.
- Diameter of solder eyelet D = 1.4+0.1mm
- Solder eyelet diameter D = 1.5 + 0.1 mm, from 9 poles
- P on drawing = pitch
- Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.
- Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

Data sheet**SL-SMT 5.08HC/07/90 3.2SN BK BX****Weidmüller Interface GmbH & Co. KG**
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Technical data**Approvals**

Approvals



ROHS	Conform
UL File Number Search	E60693

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	STEP
Engineering Data	EPLAN, WSCAD

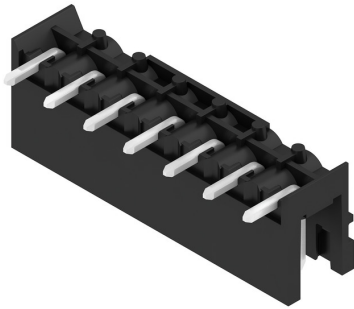
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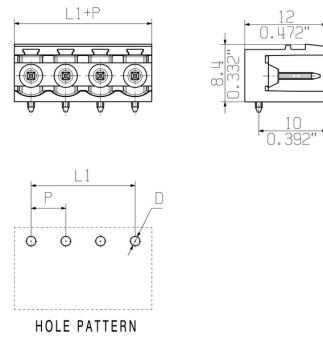
www.weidmueller.com

Drawings

Product image



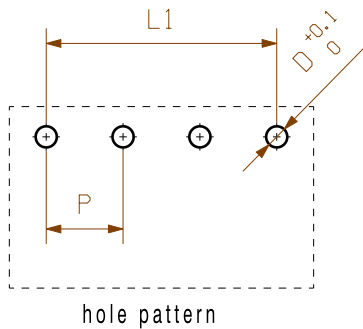
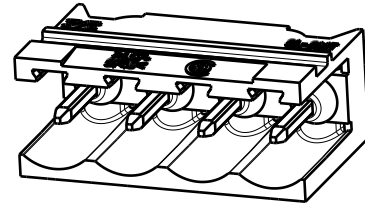
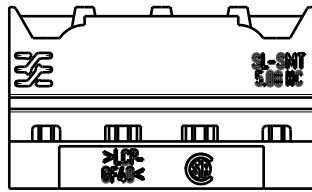
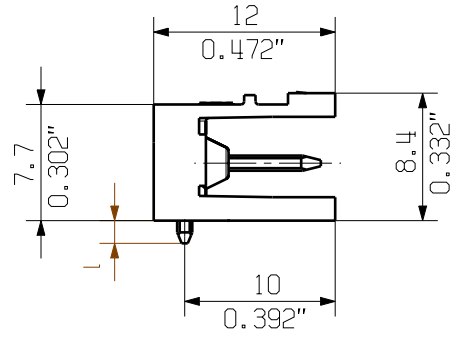
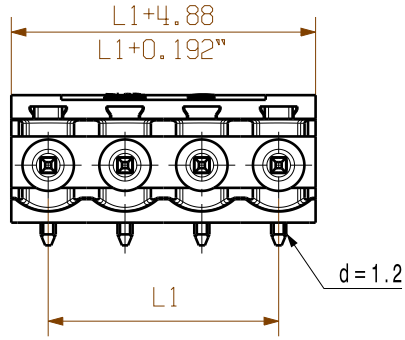
Dimensional drawing



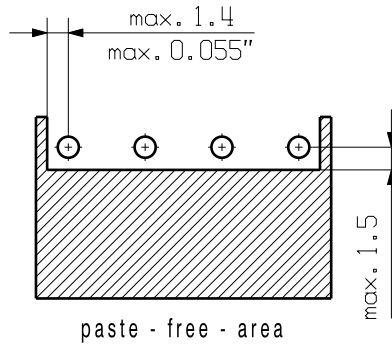
Product benefits



Safe power transmission
Proven properties



hole pattern



paste - free - area

D = 1.4/0.055" or 1.5/0.059" (REFLOW SOLDERING)
 RECOMMENDATION FOR AUTOMATIC ASSEMBLY
 (1.4mm FOR n=2...8 / 1.5mm for n=9...24)

n = Polzahl / no of poles
 P = Raster / pitch

For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone.

The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.

The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application. Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

shown: SL-SMT 5.08HC/04/90

24	116.84	4.600	+/- 0.2
23	111.76	4.400	
22	106.68	4.200	
21	101.60	4.000	
20	96.52	3.800	
19	91.44	3.600	
18	86.36	3.400	
17	81.28	3.200	+/- 0.15
16	76.20	3.000	
15	71.12	2.800	
14	66.04	2.600	
13	60.96	2.400	
12	55.88	2.200	
11	50.80	2.000	
10	45.72	1.800	+/- 0.1
9	40.64	1.600	
8	35.56	1.400	
7	30.48	1.200	
6	25.40	1.000	
5	20.32	0.800	
4	15.24	0.600	
3	10.16	0.400	
2	5.08	0.200	
1	tolerance		

4.5	0.1/-0.3
3.2	0.1/-0.3
2.1	0.1/-0.3
1.5	-0.3
1	tolerance

	DIN ISO 2768-m			Cat.no.: .	
	106339/4 30.07.18 HERTEL_S 00			2 33262 31	
Modification		Drawing no. 2 33262 Issue no.		Sheet 01 of 04 sheets	
	Date	Name	SL-SMT 5.08HC/.../90... STIFTLISTE MALE HEADER		
	Drawn	29.11.2007			
Responsible		HERTEL_S			
Checked	01.08.2018	KOCH_JG			
Supersedes: .	Approved	LANG_T	Product file: SL-SMT 5.08		7280

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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.