

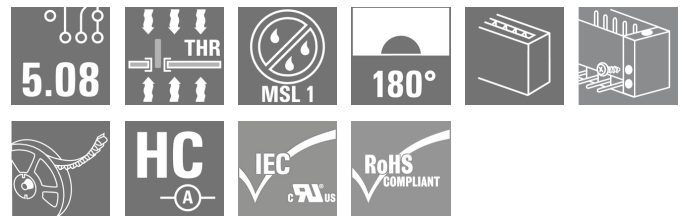
**SL-SMT 5.08HC/03/180F 3.2SN BK RL****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

High-temperature-resistant pin 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, Flange, THT/THR solder connection, 5.08 mm, Number of poles: 3, 180°, Solder pin length (l): 3.2 mm, tinned, black, Tape
Order No.	<a href="#">1137260000</a>
Type	SL-SMT 5.08HC/03/180F 3.2SN BK RL
GTIN (EAN)	4032248918874
Qty.	250 pc(s).
Product data	IEC: 400 V / 27.5 A UL: 300 V / 18.5 A
Packaging	Tape

Creation date July 3, 2024 12:51:08 AM CEST

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## Technical data

## Dimensions and weights

Depth	8.5 mm	Depth (inches)	0.335 inch
Height	15.2 mm	Height (inches)	0.598 inch
Height of lowest version	12 mm	Width	25.24 mm
Width (inches)	0.994 inch	Net weight	3.001 g

## 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 "		
Outgoing elbow	180°		
Number of poles	3		
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	10.16 mm		
L1 in inches	0.4 "		
Number of rows	1		
Pin series quantity	1		
Touch-safe protection acc. to DIN VDE 57 106	finger-safe unplugged/ back-of-hand-safe plugged		
Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 unplugged		
Protection degree	IP20		
Volume resistance	≤5 mΩ		
Can be coded	Yes		
Plugging force/pole, max.	9 N		
Pulling force/pole, max.	7 N		
Tightening torque	Torque type	Mounting screw, PCB	
	Usage information	Tightening torque	min. 0.15 Nm max. 0.2 Nm
		Recommended screw	Part number <a href="#">PTSC KA 2.2X4.5 WN1412</a>

## 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	Cu-alloy
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		

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## 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		

## 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 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

ESD Level packaging	static dissipative	Packaging	Tape
VPE length	342 mm	VPE width	338 mm
VPE height	67 mm	Tape depth (T2)	17.5 mm
Tape width (W)	44 mm	Tape pocket depth (K0)	17 mm
Tape pocket height (A0)	8.2 mm	Tape pocket width (B0)	34 mm
Tape pocket separation (P1)	16 mm	Tape hole separation (E)	1.75 mm
Tape pocket separation (F)	20.2 mm	Tape reel diameter Ø (A)	330 mm
Surface resistance	$R_s = 10^9 - 10^{12} \Omega$	Width Pick & Place Pad (W <sub>PPP</sub> )	9.6 mm
Length Pick & Place Pad (L <sub>PPP</sub> )	12.36 mm	Diameter of the withdrawal surface (Ø D <sub>max</sub> )	8.5 mm
Protrusion 1 Pick & Place Pad (L <sub>01</sub> (PPP))	2.3 mm	Protrusion 2 Pick & Place Pad (P <sub>02</sub> (PPP))	2 mm

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[www.weidmueller.com](http://www.weidmueller.com)**Technical data****Classifications**

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	EC002637	ETIM 9.0	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
ECLASS 12.0	27-46-02-01	ECLASS 13.0	27-46-02-01

**Environmental Product Compliance**

REACH SVHC

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**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	<ul style="list-style-type: none"><li>• Gold-plated contact surfaces on request</li><li>• Rated current related to rated cross-section &amp; min. No. of poles.</li><li>• Diameter of solder eyelet <math>D = 1.4 \pm 0.1 \text{ mm}</math></li><li>• Solder eyelet diameter <math>D = 1.5 \pm 0.1 \text{ mm}</math>, from 9 poles</li><li>• P on drawing = pitch</li><li>• 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.</li><li>• In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load</li><li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li></ul>

**Approvals**

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (UR)	E60693

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Approval/Certificate/Document of Conformity	<a href="#">CB Certificate</a> <a href="#">CB Testreport</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Product Change Notification	<a href="#">PCN_2015_208_PL30X_SC-SMT_SL_SMT_3.xx_5.xx_neue_Tapeverpackung_Step_4_DE</a> <a href="#">PCN_2015_208_PL30X_SC-SMT_SL_SMT_3.xx_5.xx_new_Tape_Packaging_Step_4_EN</a> <a href="#">Changeover to ESD bags for "Tape on Reel" products</a> <a href="#">Umstellung auf ESD-Beutel bei „Tape on Reel“ Produkten</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	<a href="#">FL DRIVES EN</a> <a href="#">FL DRIVES DE</a>
White paper surface mount technology	<a href="#">Download Whitepaper</a>

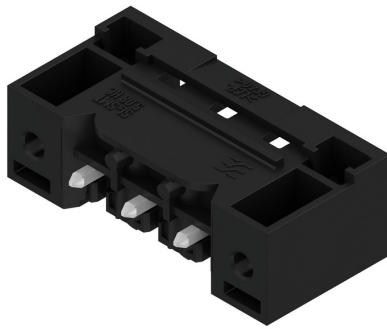
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## Drawings

### Product image



### Dimensional drawing



### Dimensional drawing



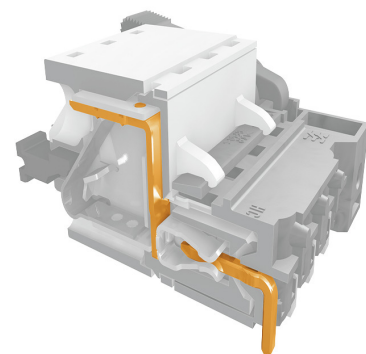
### Dimensional drawing



### Example of use



### Product benefits



Safe power transmission  
Proven properties

## 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.

We reserve the right to make technical changes.

## 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.