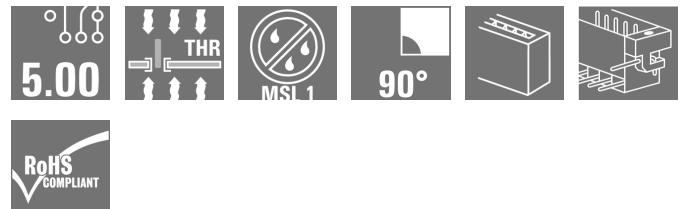


## SL-SMT 5.00HC/05/90LF 1.5AU BK BX

**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, Solder flange, THT/THR solder connection, 5.00 mm, Number of poles: 5, 90°, Solder pin length (l): 1.5 mm, Gold-plated, black, Box
Order No.	<a href="#">1177420000</a>
Type	SL-SMT 5.00HC/05/90LF 1.5AU BK BX
GTIN (EAN)	4032248971152
Qty.	48 pc(s).
Product data	IEC: / 27.5 A UL: / 18.5 A
Packaging	Box

Creation date March 23, 2021 7:45:19 AM CET

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**Technical data****Dimensions and weights**

Depth	12 mm	Depth (inches)	0.472 inch
Height	10 mm	Height (inches)	0.394 inch
Height of lowest version	8.5 mm	Net weight	3.167 g
Width	34.8 mm	Width (inches)	1.37 inch

**System specifications**

Product family	OMNIMATE Signal - series BL/SL 5.00	Type of connection	Board connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	5 mm
Pitch in inches (P)	0.197 inch	Outgoing elbow	90°
Number of poles	5	Solder pin length (l)	1.5 mm
Solder pin length tolerance	+0.1 / -0.2 mm	Solder pin dimensions	d = 1.2 mm, Octagonal
Solder pin dimensions = d tolerance	0 / -0,03 mm	L1 in mm	20 mm
L1 in inches	0.787 inch	Pin series quantity	1
Volume resistance	≤5 mΩ	Plugging force/pole, max.	7 N
Pulling force/pole, max.	5.5 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
Contact material	CuMg	Contact surface	Gold-plated
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 / 1.7...2.3 μm Au
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 data acc. to CSA**

Rated current (Use group B / CSA)	15 A	Rated current (Use group D / CSA)	15 A
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**Rated data acc. to UL 1059**

Institute (UR)		Certificate No. (UR)	E60693
Rated current (Use group B / UL 1059)	18.5 A	Reference to approval values	Specifications are maximum values, details - see approval certificate.

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**Technical data**
**Packing**

Packaging	Box	VPE length	40 mm
VPE width	70 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	<ul style="list-style-type: none"> <li>• Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li> </ul>

**Approvals**

Approvals



ROHS	Conform
UL File Number Search	E60693

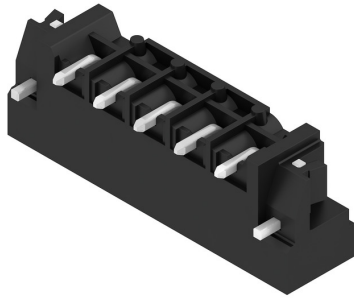
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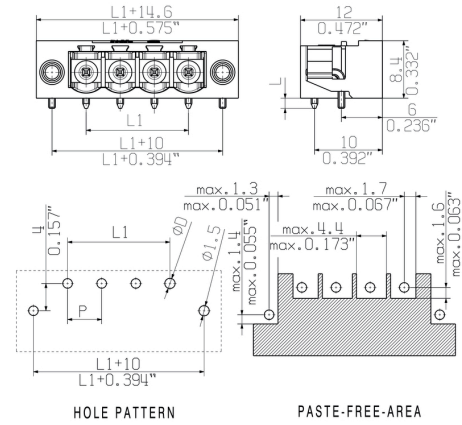
www.weidmueller.com

**Drawings**

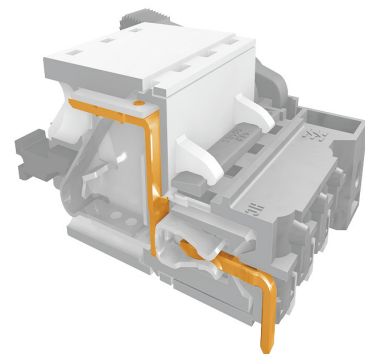
**Product image**



**Dimensional drawing**



**Product benefits**



Safe power transmission  
 Proven properties

**Data sheet**

**SL-SMT 5.00HC/05/90LF 1.5AU BK BX**

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**Drawings**

**Product benefits**



Compliant with existing standards

## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
 Klängenbergstraße 16  
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 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
 www.weidmueller.com

### 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.

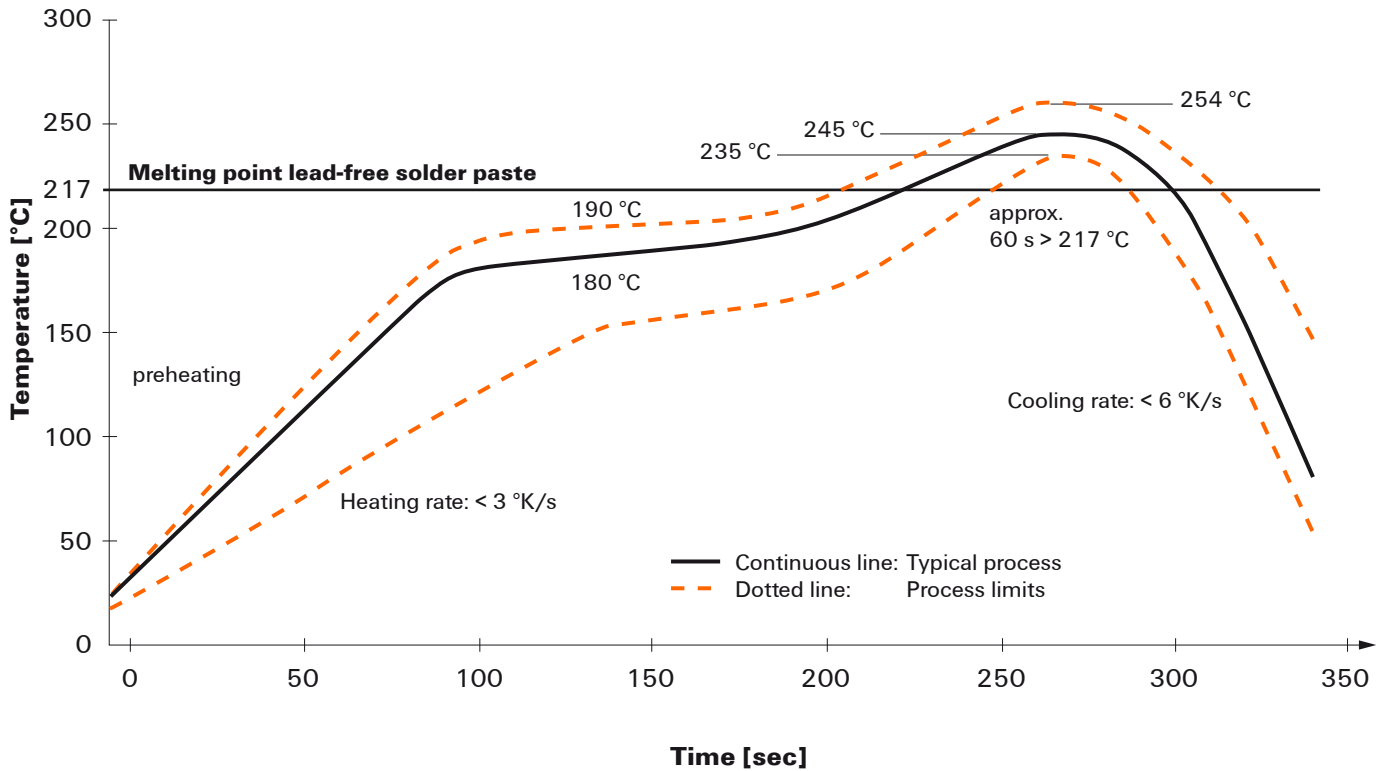
When choosing a suitable profile for your application, the following factors also need to be considered:

- 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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 Fax: +49 5231 14-292083  
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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  $\leq +3K/s$ . 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  $\geq -6K/s$  solder is cured. Board and components cool down while avoiding cold cracks.