

SL-SMT 5.00HC/06/90G 3.2AU 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, closed side, THT/THR solder connection, 5.00 mm, Number of poles: 6, 90°, Solder pin length (l): 3.2 mm, Gold-plated, black, Tape
Order No.	1161680000
Type	SL-SMT 5.00HC/06/90G 3.2AU BK RL
GTIN (EAN)	4032248950652
Qty.	350 pc(s).
Product data	IEC: / 27.5 A UL: / 18.5 A
Packaging	Tape

Creation date March 23, 2021 7:07:22 AM CET

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Technical data

Dimensions and weights

Depth	12 mm	Depth (inches)	0.472 inch
Height	18.74 mm	Height (inches)	0.738 inch
Height of lowest version	8.5 mm	Net weight	3.87 g
Width	33.2 mm	Width (inches)	1.307 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	6	Solder pin length (l)	3.2 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	25 mm
L1 in inches	0.984 inch	Pin series quantity	2
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

Institute (CSA)		Certificate No. (CSA)	200039-1176845
Rated current (Use group B / CSA)	15 A	Rated current (Use group D / CSA)	15 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

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Technical data**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.

Packing

Packaging	Tape	VPE length	50 mm
VPE width	330 mm	VPE height	330 mm
Tape depth (T2)	12.8 mm	Tape width (W)	44 mm
Tape pocket depth (K0)	12.3 mm	Tape pocket height (A0)	12.3 mm
Tape pocket width (B0)	33.98 mm	Tape pocket separation (P1)	16 mm
Tape hole separation (E)	1.75 mm	Tape pocket separation (F)	20.2 mm
Tape reel diameter $\varnothing$ (A)	330 mm	Surface resistance	$R_s = 10^9 - 10^{12} \Omega$

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

- Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

Approvals

Approvals



ROHS

Conform

UL File Number Search

E60693

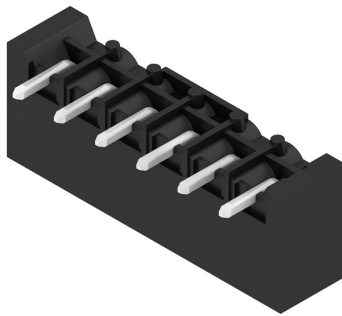
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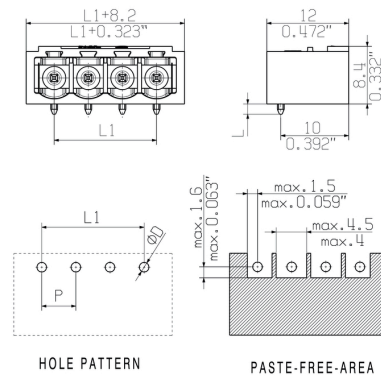
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Drawings

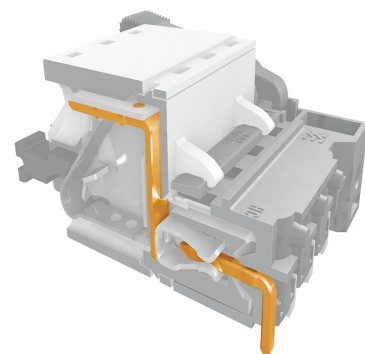
Product image



Dimensional drawing



Product benefits



Safe power transmission
Proven properties

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Drawings

Product benefits



Compliant with existing standards

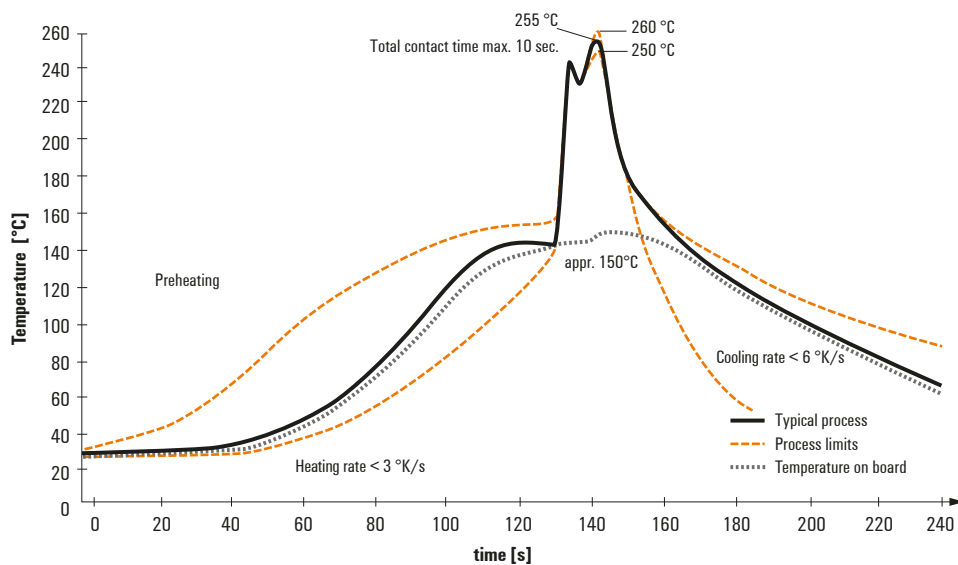
Recommended wave soldering profiles

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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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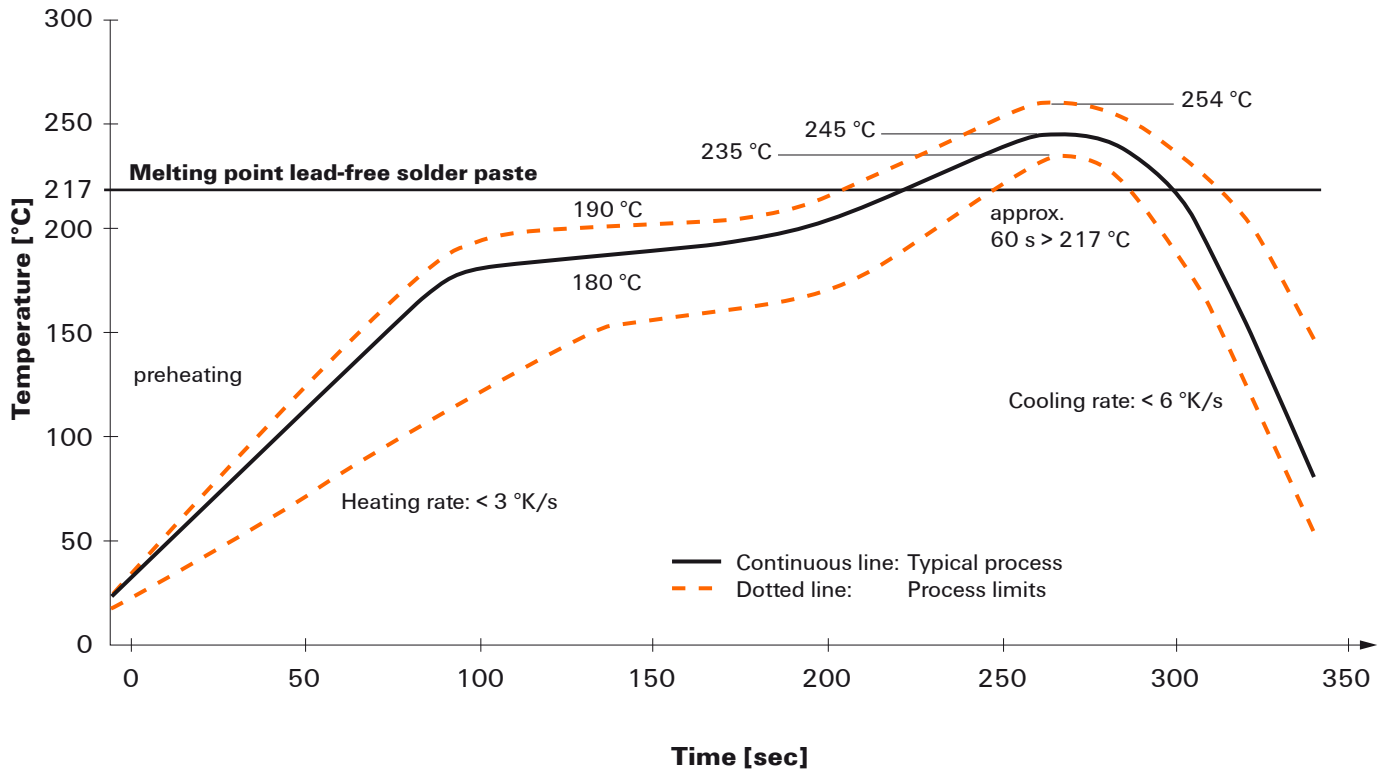
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Reflow soldering profile

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.