

SL-SMT 5.00HC/08/90LF 2.1SN BK RL

Weidmüller Interface GmbH & Co. KG
Klingenbergsstraße 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: 8, 90°, Solder pin length (l): 2.1 mm, tinned, black, Tape
Order No.	3027240000
Type	SL-SMT 5.00HC/08/90LF 2.1SN BK RL
GTIN (EAN)	4099986960206
Qty.	300 pc(s).
Product data	IEC: 400 V / 27.5 A UL: 300 V / 18.5 A
Packaging	Tape

Creation date June 12, 2025 11:06:36 AM CEST

Catalogue status 07.06.2025 / We reserve the right to make technical changes.

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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	Width	49.8 mm
Width (inches)	1.961 inch	Net weight	4.92 g

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 "	Outgoing elbow	90°
Number of poles	8	Number of solder pins per pole	1
Solder pin length (l)	2.1 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
Solder eyelet hole diameter (D)	1.5 mm	Solder eyelet hole diameter tolerance (D)+ 0.1 mm	
L1 in mm	35 mm	L1 in inches	1.378 "
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.	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
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		

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	4,000 V	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**

Rated voltage (Use group B / CSA)	300 V
Rated current (Use group B / CSA)	15 A

Rated voltage (Use group D / CSA)	300 V
Rated current (Use group D / CSA)	15 A

Rated data acc. to UL 1059

Institute (UR)



Certificate No. (UR)

E60693

Rated voltage (Use group B / UL 1059)	300 V
Rated current (Use group B / UL 1059)	18.5 A

Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group D / UL 1059)	10 A

Reference to approval values	Specifications are maximum values, details - see approval certificate.
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Packing

Packaging	Tape
VPE width	331 mm

VPE length	334 mm
VPE height	95 mm

Classifications

ETIM 6.0	EC002637
ETIM 8.0	EC002637
ETIM 10.0	EC002637
ECLASS 9.1	27-44-04-02
ECLASS 11.0	27-46-02-01
ECLASS 13.0	27-46-02-01
ECLASS 15.0	27-46-02-01

ETIM 7.0	EC002637
ETIM 9.0	EC002637
ECLASS 9.0	27-44-04-02
ECLASS 10.0	27-44-04-02
ECLASS 12.0	27-46-02-01
ECLASS 14.0	27-46-02-01

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

ETIM 6.0	EC002637
ETIM 8.0	EC002637
ETIM 10.0	EC002637
ECLASS 9.1	27-44-04-02
ECLASS 11.0	27-46-02-01
ECLASS 13.0	27-46-02-01
ECLASS 15.0	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"> 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 Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

Approvals

Approvals



Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319262/-T1z1mm-S800/
UL File Number Search	UL Website
Certificate No. (UR)	E60693

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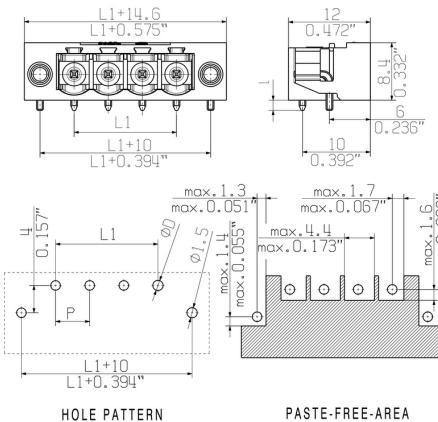
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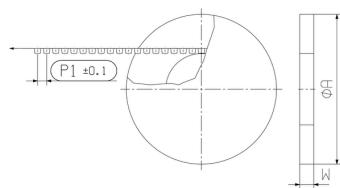
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Drawings

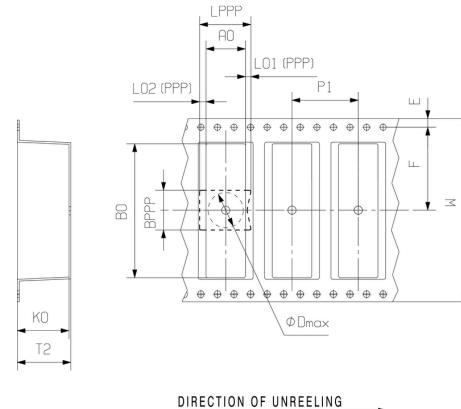
Dimensional drawing



Dimensional drawing



Dimensional drawing

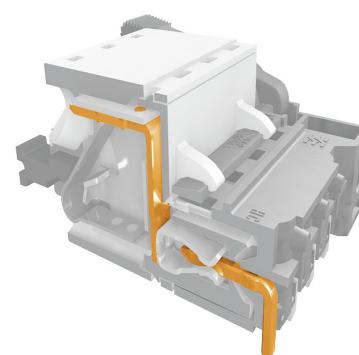


Example of use



Compliant with existing standards

Product benefits



Safe power transmission Proven properties

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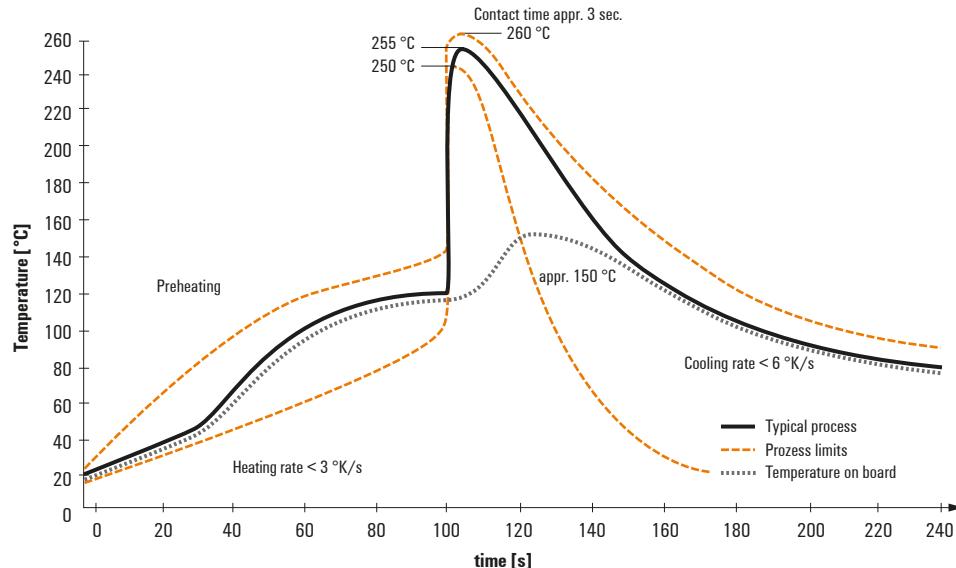
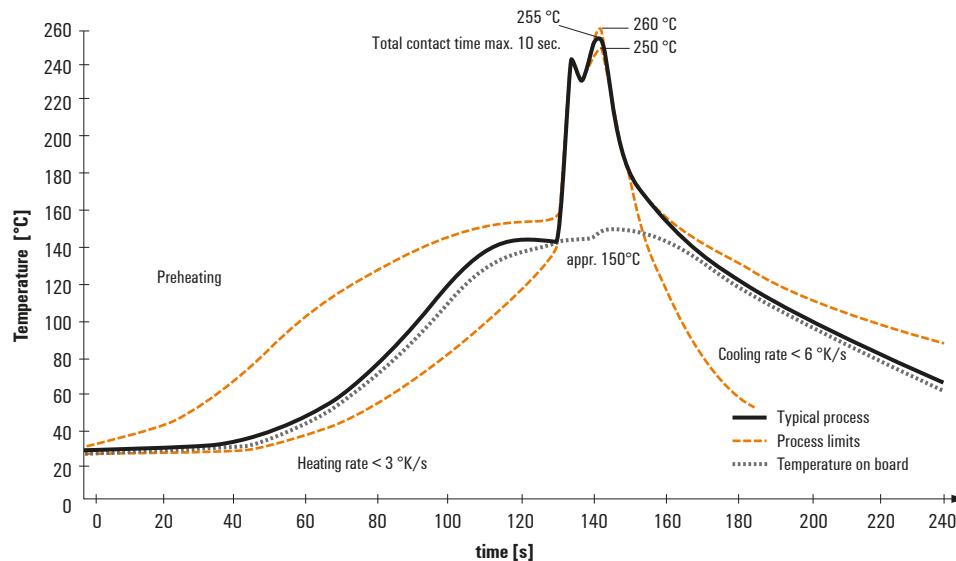
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Drawings**Product benefits**

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.

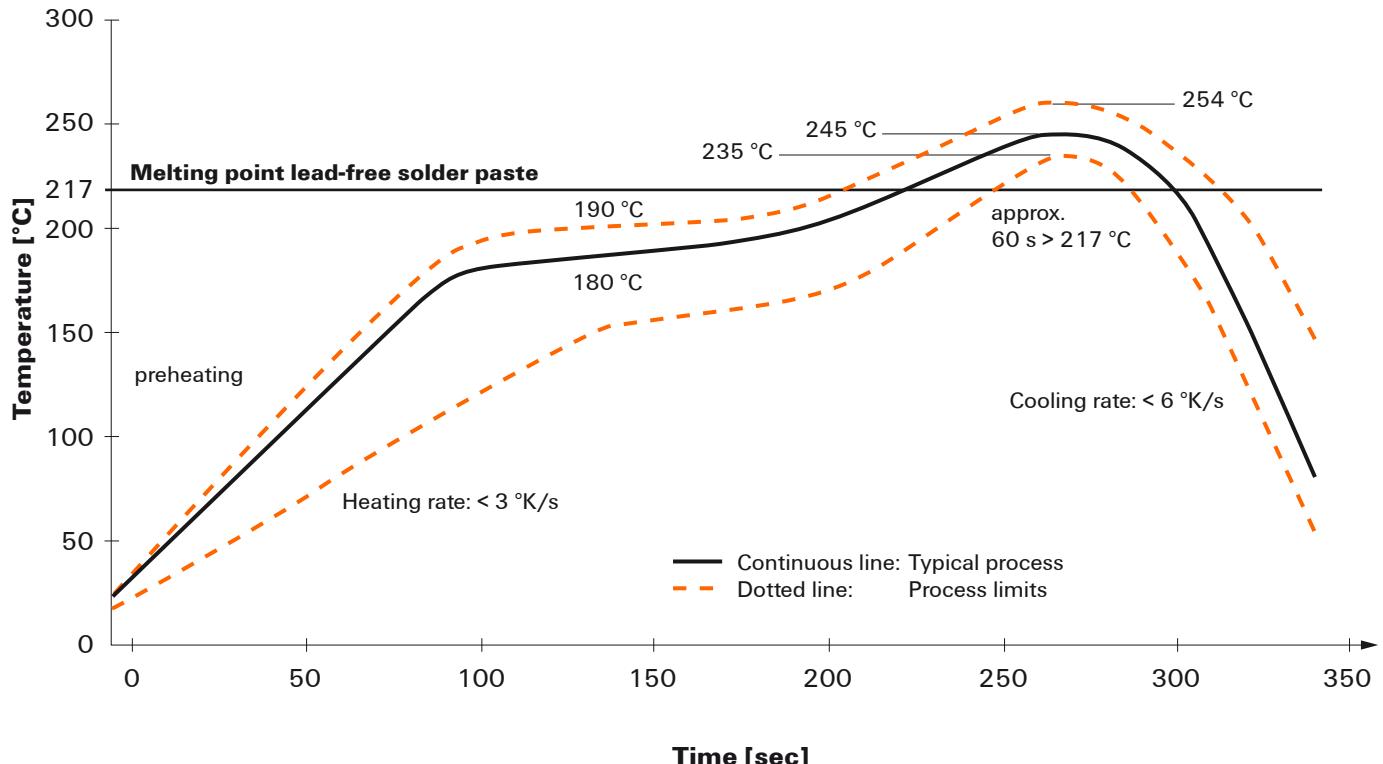
When choosing a suitable profile for your application, the following factors also need to be considered:

- 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.

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.