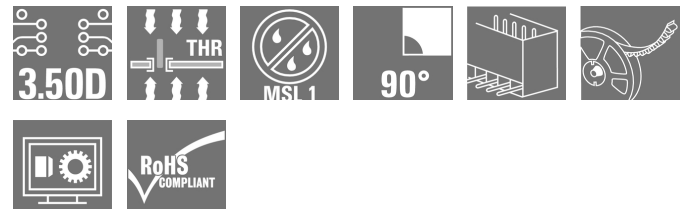


**OMNIMATE Signal - series B2L/S2L 3.50 - 2-row
S2L-SMT 3.50/06/90G 3.2SN BK RL**

Weidmüller Interface GmbH & Co. KG
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Product image


Similar to illustration

High-temperature-resistant, straight, 2-tier male connector for all common soldering methods. Optimised for automatic assembly. Packed in box or tape. 3.2 mm solder pin suitable for reflow and wave soldering. These male connectors can be labelled and coded.

General ordering data

Type	S2L-SMT 3.50/06/90G 3.2SN BK RL
Order No.	1807470000
Version	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.50 mm, No. of poles: 6, 90°, Solder pin length (l): 3.2 mm, tinned, Black, Tape
GTIN (EAN)	4032248278763
Qty.	235 pc(s).
Product data	IEC: 160 V / 10 A UL: 150 V / 10 A
Packaging	Tape

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Technical data**Dimensions and weights**

Width	11.9 mm	Width (inches)	0.469 inch
Height	14.2 mm	Height (inches)	0.559 inch
Height of lowest version	10.8 mm	Depth	14.2 mm
Depth (inches)	0.559 inch	Net weight	3.302 g

System specifications

Product family	OMNIMATE Signal - series B2L/S2L 3.50 - 2-row	Type of connection	Board connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 inch	Outgoing elbow	90°
No. of poles	6	Number of solder pins per pole	1
Solder pin length (l)	3.2 mm	Tolerance of solder pin position	± 0.1 mm
Solder pin dimensions	d = 1.0 mm, Octagonal	Solder eyelet hole diameter (D)	1.3 mm
Solder eyelet hole diameter tolerance (D)+	0,1 mm	Outside diameter of solder pad	2.1 mm
Template aperture diameter	1.9 mm	L1 in mm	7 mm
L1 in inches	0.276 inch	Number of rows	1
Pin series quantity	2	Touch-safe protection acc. to DIN VDE 57 106	Safe from back-of-hand touch
Touch-safe protection acc. to DIN VDE 0470	IP 10	Can be coded	Yes
Plugging cycles	25	Plugging force/pole, max.	3 N
Pulling force/pole, max.	6 N		

Material data

Insulating material	LCP GF	Colour	Black
Colour chart (similar)	RAL 9011	Insulating material group	IIIb
CTI	≥ 175	Insulation resistance	≥ 10 ⁸ Ω
Moisture Level (MSL)	1	UL 94 flammability rating	V-0
Contact material	Copper alloy	Contact surface	tinned
Layer structure of solder connection	2-3 μm Ni / 5-7 μm Sn glossy	Storage temperature, min.	-25 °C
Storage temperature, max.	55 °C	Max. relative humidity during storage	80 %
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. no. of poles (Tu=20°C)	10 A
Rated current, max. no. of poles (Tu=20°C)	10 A	Rated current, min. no. of poles (Tu=40°C)	9 A
Rated current, max. no. of poles (Tu=40°C)	8.5 A	Rated voltage for surge voltage class / pollution degree II/2	160 V
Rated voltage for surge voltage class / pollution degree III/2	125 V	Rated voltage for surge voltage class / pollution degree III/3	50 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	1.5 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	1.5 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	2.5 kV	Short-time withstand current resistance	3 x 1s with 77 A

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Technical data**Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1176845

Rated voltage (Use group B / CSA)	150 V
Rated voltage (Use group D / CSA)	150 V
Rated current (Use group C / CSA)	9.5 A

Rated voltage (Use group C / CSA)	50 V
Rated current (Use group B / CSA)	5 A
Rated current (Use group D / CSA)	9.5 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)	150 V
Rated current (Use group B / UL 1059)	10 A

Rated voltage (Use group C / UL 1059)	50 V
Rated current (Use group C / UL 1059)	10 A

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Packaging

Packaging	Tape	VPE length	20 mm
VPE width	330 mm	VPE height	330 mm
Tape depth (T2)	15.1 mm	Tape width (W)	32 mm
Tape pocket depth (K0)	14.6 mm	Tape pocket height (A0)	14.6 mm
Tape pocket width (B0)	22.1 mm	Tape pocket separation (P1)	20 mm
Tape hole separation (E)	1.75 mm	Tape pocket separation (F)	14.2 mm
Tape reel diameter \varnothing (A)	330 mm	Surface resistance	$R_s = 10^9 - 10^{12} \Omega$

Classifications

ETIM 4.0	EC002637	ETIM 5.0	EC002637
ETIM 6.0	EC002637	UNSPSC	30-21-18-10
eClass 5.1	27-26-07-01	eClass 6.2	27-26-07-04
eClass 7.1	27-44-04-02	eClass 8.1	27-44-04-02
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02

Data sheet

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Technical data

Notes

- | | |
|-------|---|
| Notes | <ul style="list-style-type: none"> • Additional colours on request • Gold-plated contact surfaces on request • Spacing between rows: see hole layout • Rated current related to rated cross-section & min. No. of 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. |
|-------|---|

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.
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Approvals

Approvals



ROHS	Conform
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Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB SMT EN FL DRIVES DE MB DEVICE MANUF. EN FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FLIndustr.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR EN FL APPL INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN
Engineering Data	WSCAD
Engineering Data	STEP
SMT white paper	Download Whitepaper

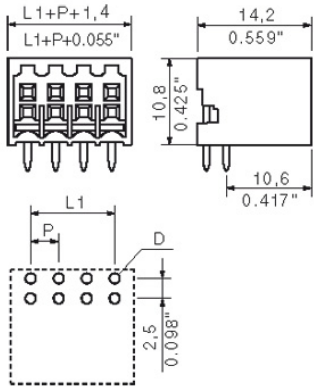
Data sheet

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Drawings

Dimensional drawing



Example of use



Data sheet

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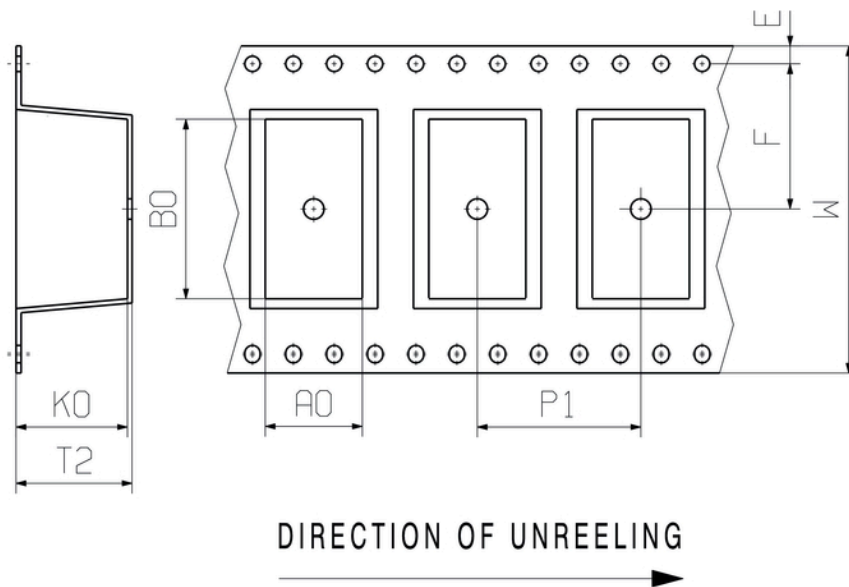
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Drawings

Dimensional drawing



Dimensional drawing



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.