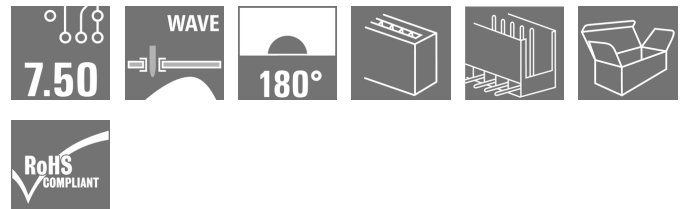


## OMNIMATE Signal - series BL/SL 7.50 SL 7.50/09/180 3.2SN OR BX

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 26  
D-32758 Detmold  
Germany  
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www.weidmueller.com

### Product image



Similar to illustration

Male connectors with straight outlet direction. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

### General ordering data

Type	SL 7.50/09/180 3.2SN OR BX
Order No.	<a href="#">1629090000</a>
Version	PCB plug-in connector, male header, open side, THT solder connection, 7.50 mm, Number of poles: 9, 180°, Solder pin length (l): 3.2 mm, tinned, orange, Box
GTIN (EAN)	4008 19020 1890
Qty.	50 pc(s).
Product data	IEC: 800 V / 18.5 A UL: 300 V / 15 A
Packaging	Box

Creation date May 3, 2020 7:30:35 PM CEST

**OMNIMATE Signal - series BL/SL 7.50  
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**Technical data****Dimensions and weights**

Height	15.2 mm	Height (inches)	0.598 inch
Height of lowest version	12 mm	Depth	8.5 mm
Depth (inches)	0.335 inch	Net weight	4.48 g

**System specifications**

Product family	OMNIMATE Signal - series BL/SL 7.50	Type of connection	Board connection
Mounting onto the PCB	THT solder connection	Pitch in mm (P)	7.5 mm
Pitch in inches (P)	0.295 inch	Outgoing elbow	180°
Number of poles	9	Number of solder pins per pole	1
Solder pin length (l)	3.2 mm	Tolerance of solder pin position	± 0.1 mm
Solder eyelet hole diameter (D)	1.3 mm	Solder eyelet hole diameter tolerance (D)	+ 0,1 mm
L1 in mm	60 mm	L1 in inches	2.362 inch
Number of rows	1	Pin series quantity	1
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch, plugged	Volume resistance	4.50 mΩ
Can be coded	Yes		

**Material data**

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10 <sup>8</sup> Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	CuSn	Contact surface	tinned
Storage temperature, min.	-25 °C	Storage temperature, max.	50 °C
Max. relative humidity during storage	70 %	Operating temperature, min.	-50 °C
Operating temperature, max.	100 °C	Temperature range, installation, min.	-25 °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)	18.5 A
Rated current, max. number of poles (Tu=20°C)	17 A	Rated current, min. number of poles (Tu=40°C)	16 A
Rated current, max. number of poles (Tu=40°C)	14.5 A	Rated voltage for surge voltage class / pollution degree II/2	800 V
Rated voltage for surge voltage class / pollution degree III/2	630 V	Rated voltage for surge voltage class / pollution degree III/3	500 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	6 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	6 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	6 kV	Short-time withstand current resistance	3 x 1s with 120 A

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

Institute (CSA)



Certificate No. (CSA)

200039-1121690

Rated voltage (Use group B / CSA) 300 V

Rated voltage (Use group D / CSA) 300 V

Rated current (Use group B / CSA) 15 A

Rated current (Use group D / CSA) 10 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) 15 A

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

Reference to approval values

Specifications are maximum values, details - see approval certificate.

**Packing**

Packaging	Box	VPE length	69 mm
VPE width	76 mm	VPE height	149 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	UNSPSC	30-21-18-10

**Notes**

Notes

- Additional colours on request
- Gold-plated contact surfaces on request
- Rated current related to rated cross-section & min. No. of poles.
- Rated voltage for 7.62 mm pitch:  $U/2 = 1000 \text{ V} / 6 \text{ kV}$
- 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.

**Data sheet****OMNIMATE Signal - series BL/SL 7.50  
SL 7.50/09/180 3.2SN OR BX**

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**Technical data****Approvals**

Approvals



ROHS

Conform

**Downloads**Approval/Certificate/Document of  
Conformity[Declaration of the Manufacturer](#)

Brochure/Catalogue

[FL DRIVES EN](#)  
[MB DEVICE MANUF. EN](#)  
[FL DRIVES DE](#)  
[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

[SL.zip](#)

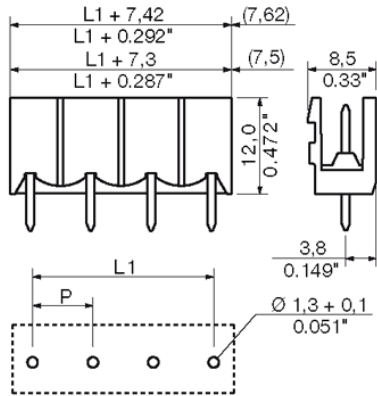
**Data sheet**

**OMNIMATE Signal - series BL/SL 7.50  
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**Drawings**

**Dimensional drawing**



**OMNIMATE Signal - series BL/SL 7.50  
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**Mating connector (conditionally pluggable)**
**BLZ 7.50/270B**


Female plugs with clamping-yoke screw for wire connection with 270° outlet direction. The female plugs provide space for labelling and can be coded.

**General ordering data**

Type	BLZ 7.50/09/270B SN OR ...	Version	Product data	Packaging
Order No.	<a href="#">1702520000</a>	PCB plug-in connector, female plug, 7.50 mm, Number of poles: 9,	IEC: 800 V / 15 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190909000	270°, Clamping yoke connection, Clamping range, max. : 3.31 mm <sup>2</sup> ,	UL: 300 V / 10 A / AWG 26 - AWG 12	
Qty.	24 pc(s).	Box		

**BLZ 7.50/90B**


Female plugs with clamping-yoke screw for wire connection with 90° outlet direction. The female plugs provide space for labelling and can be coded.

**General ordering data**

Type	BLZ 7.50/09/90B SN OR BX	Version	Product data	Packaging
Order No.	<a href="#">1702080000</a>	PCB plug-in connector, female plug, 7.50 mm, Number of poles: 9,	IEC: 800 V / 15 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190908560	90°, Clamping yoke connection, Clamping range, max. : 3.31 mm <sup>2</sup> ,	UL: 300 V / 10 A / AWG 26 - AWG 12	
Qty.	24 pc(s).	Box		

**OMNIMATE Signal - series BL/SL 7.50  
SL 7.50/09/180 3.2SN OR BX**

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**Mating connector (conditionally pluggable)**

**BLZ 7.50/180B**



Female plugs with clamping-yoke screw wire-connect system. The female plugs provide space for labelling and can be coded.

**General ordering data**

Type	BLZ 7.50/09/180B SN OR ...	Version	Product data	Packaging
Order No.	<a href="#">1628210000</a>	PCB plug-in connector, female plug, 7.50 mm, Number of poles: 9,	IEC: 800 V / 18.5 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190201012	180°, Clamping yoke connection, Clamping range, max. : 3.31 mm <sup>2</sup> ,	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	30 pc(s).	Box		

**OMNIMATE Signal - series BL/SL 7.50  
SL 7.50/09/180 3.2SN OR BX**

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**Mating connector (fully pluggable)**
**BLZ 7.50/270**


Female plugs with clamping-yoke screw for wire connection with 270° outlet direction. The female plugs provide space for labelling and can be coded.

**General ordering data**

Type	BLZ 7.50/09/270 SN OR BX	Version	Product data	Packaging
Order No.	<a href="#">1702300000</a>	PCB plug-in connector, female plug, 7.50 mm, Number of poles: 9,	IEC: 800 V / 15 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190908782	270°, Clamping yoke connection, Clamping range, max. : 3.31 mm <sup>2</sup> ,	UL: 300 V / 10 A / AWG 26 - AWG 12	
Qty.	24 pc(s).	Box		

**BLZ 7.50/180**


Female plugs with clamping-yoke screw wire-connect system. The female plugs provide space for labelling and can be coded.

**General ordering data**

Type	BLZ 7.50/09/180 SN OR BX	Version	Product data	Packaging
Order No.	<a href="#">1627990000</a>	PCB plug-in connector, female plug, 7.50 mm, Number of poles: 9,	IEC: 800 V / 18.5 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190200794	180°, Clamping yoke connection, Clamping range, max. : 3.31 mm <sup>2</sup> ,	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	30 pc(s).	Box		



**OMNIMATE Signal - series BL/SL 7.50  
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**Mating connector (fully pluggable)**
**BLZ 7.50/90**


Female plugs with clamping-yoke screw for wire connection with 90° outlet direction. The female plugs provide space for labelling and can be coded.

**General ordering data**

Type	BLZ 7.50/09/90 SN OR BX	Version	Product data	Packaging
Order No.	<a href="#">1701860000</a>	PCB plug-in connector, female plug, 7.50 mm, Number of poles: 9,	IEC: 800 V / 15 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190908447	90°, Clamping yoke connection, Clamping range, max. : 3.31 mm <sup>2</sup> ,	UL: 300 V / 10 A / AWG 26 - AWG 12	
Qty.	24 pc(s).	Box		

## OMNIMATE Signal - series BL/SL 7.50 SL 7.50/09/180 3.2SN OR BX

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# Accessories

## Coding elements



**Only connects what is supposed to be connected: the right connection at the right place.**

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

### General ordering data

Type	BLZ/SL KO OR BX	Version	Product data	Packaging
Order No.	<a href="#">1573010000</a>	PCB plug-in connector, Accessories, Coding element, orange, Number		Box
GTIN (EAN)	4008190048396	of poles: 1		
Qty.	100 pc(s).			
Type	BLZ/SL KO BK BX	Version	Product data	Packaging
Order No.	<a href="#">1545710000</a>	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4008190087142	of poles: 1		
Qty.	50 pc(s).			

## Additional accessories



**No task is too small when creating the perfect solution.** br />

Connections form just one part of the overall process. Small details are often the key to the perfect solution in applications where potentials are tested, grouped or even isolated.

A system is not a system without small but useful details:

- Test plugs - ensure reliable pick-up from diagnostic sockets
- Cross-connectors - ensure a stable electrical distribution contact directly at the connection
- Compartment partition elements - divide a large number of male connectors into several separate socket connector channels
- Locks and clips - optional vibration-resistant clip-on connection or mounting for male and female connectors

In tandem with the manufacturing process and application - more accessories = smaller workload

### General ordering data

Type	SL AT SW	Version	Product data	Packaging
Order No.	<a href="#">1770240000</a>	PCB plug-in connector, Accessories, Spacer, black, Number of poles: 1		Box
GTIN (EAN)	4032248117710			
Qty.	100 pc(s).			

**Data sheet**

**OMNIMATE Signal - series BL/SL 7.50  
SL 7.50/09/180 3.2SN OR BX**

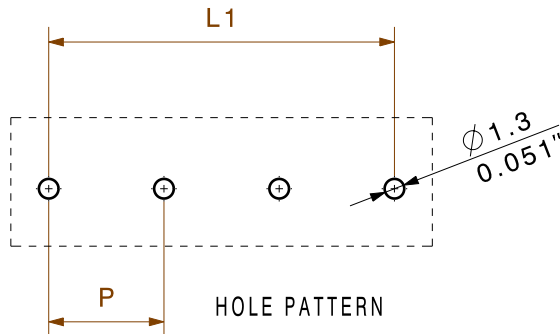
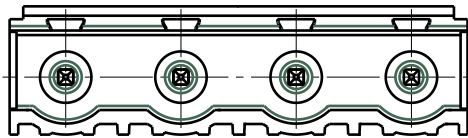
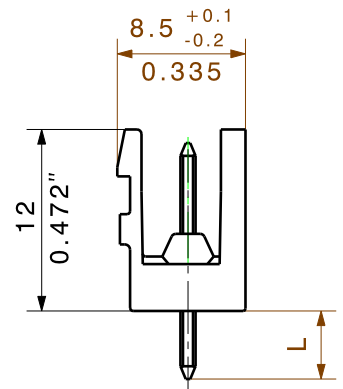
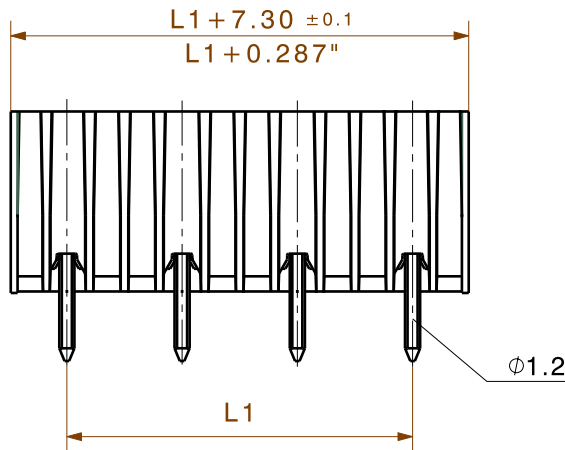
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 Germany  
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**Accessories**

Type	SL AT OR	Version	Product data	Packaging
Order No.	<a href="#">1598300000</a>	PCB plug-in connector, Accessories, Spacer, orange, Number of poles:		Box
GTIN (EAN)	4008190189266	1		
Qty.	100 pc(s).			

MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE  
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH  
THE GERMAN VERSION IS BINDING



For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application. Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

P = PITCH

SHOWN: SL7.50/04/180

12	82,50	3,248
11	75,00	2,953
10	67,50	2,657
9	60,00	2,362
8	52,50	2,067
7	45,00	1,772
6	37,50	1,476
5	30,00	1,181
4	22,50	0,886
3	15,00	0,591
2	7,50	0,295
n	L1 [mm]	L1 [inch]

STIFTLÄNGE L PIN LENGTH L	TOLERANZ TOLERANCE
3,2	0,1
	-0,3
4,5	0,1
	-0,3

	METRIC TOLERANCES: X. = ±0.3 X.X = ±0.1 X.XX = ±0.05	57768/0 28.03.11 HOHLBEIN_K 01	CAT.NO.:
	MODIFICATION		C 21324 13 DRAWING NO. ISSUE NO. SHEET 01 OF 02 SHEETS
	DATE 15.10.2003	NAME HERTEL_S	SL 7.50/./180... STIFTLASTE PIN HEADER
SCALE: 5:1	CHECKED 29.03.2011	HECKERT_M	
SUPERSEDES:	APPROVED	HECKERT_M	
PRODUCT FILE: BLZ/SL 7.50		7152	

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## 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.