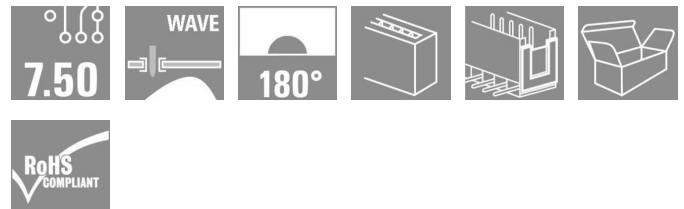


**OMNIMATE Signal - series BL/SL 7.50  
SL 7.50/07/180B 3.2SN OR BX**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
 D-32758 Detmold  
 Germany  
 Fon: +49 5231 1429-0  
 Fax: +49 5231 14292083  
 www.weidmueller.com



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 7.50/07/180B 3.2SN OR BX
Order No.	<a href="#">1629180000</a>
Version	PCB plug-in connector, male header, Dovetails for fixing blocks, THT solder connection, 7.50 mm, No. of poles: 7, 180°, Solder pin length (l): 3.2 mm, tinned, Orange, Box
GTIN (EAN)	4008190201982
Qty.	50 pc(s).
Product data	IEC: 800 V / 18.5 A UL: 300 V / 15 A
Packaging	Box

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

Net weight 3.66 g

**System specifications**

Product family		Mounting onto the PCB	
	OMNIMATE Signal - series BL/SL 7.50		THT solder connection
Pitch in mm (P)	7.5 mm	Pitch in inches (P)	0.295 inch
Outgoing elbow	180°	No. of poles	7
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	45 mm
L1 in inches	1.772 inch	Number of rows	1
Pin series quantity		Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch, plugged
Volume resistance	4.50 mΩ	Can be coded	Yes
Withdrawal force per pole	2 N	Packaging	Box


**Material data**

Insulating material	PBT	Colour	Orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
CTI	≥ 200	Insulation resistance	≥ 10 <sup>8</sup> Ω
UL 94 flammability rating	V-0	Contact material	CuSn
Contact surface	tinned	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.	-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. no. of poles (Ta = 20°C)	18.5 A
Rated current, max. no. of poles (Ta = 20°C)	17 A	Rated current, min. no. of poles (Ta = 40°C)	16 A
Rated current, max. no. of poles (Ta = 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

**Rated data acc. to CSA**


Institute (CSA)		Certificate No. (CSA)	200039-1121690
Rated voltage (Use group B)	300 V	Rated voltage (use group D)	300 V
Rated current (use group B)	15 A	Rated current (use group D)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

## OMNIMATE Signal - series BL/SL 7.50 SL 7.50/07/180B 3.2SN OR BX

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## Technical data

### Rated data acc. to UL 1059

Institute (UR)		Certificate No. (UR)	E60693
Rated voltage (use group B)	300 V	Rated voltage (use group D)	300 V
Rated current (use group B)	15 A	Rated current (use group D)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

### Classifications

ETIM 3.0	EC001284	ETIM 4.0	EC002637
ETIM 5.0	EC002637	ETIM 6.0	EC002637
UNSPSC	30-21-18-10	eClass 5.1	27-26-07-04
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		

### Notes

Notes	<ul style="list-style-type: none"> <li>• Additional colours on request</li> <li>• Gold-plated contact surfaces on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Rated voltage for 7.62 mm pitch: <math>U/2 = 1000 \text{ V} / 6 \text{ kV}</math></li> <li>• P on drawing = pitch</li> <li>• 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.</li> </ul>
IPC conformity	The products are developed, manufactured and delivered according to the internationally recognised IPC-A-610 standard, category "permissible". More extensive demands on the products can be evaluated on request.

### Approvals

Approvals	
ROHS	Conform

### Downloads

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Brochure/Catalogue	<a href="#">FL DRIVES EN</a> <a href="#">FL DRIVES DE</a>
Engineering Data	<a href="#">SL.zip</a>

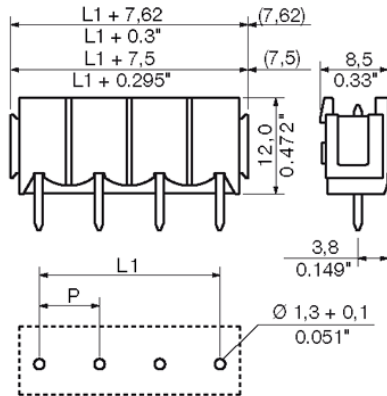
**Data sheet**

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

**Dimensional drawing**



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**Mating connector (conditionally 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**

Delivery status	Available until	Type	Order No.	Version	GTIN (EAN)	Qty.
Discontinued	2016-04-08T00:00:00+02:00	BLZ 7.50/07/90 SN OR BX	<a href="#">1701840000</a>	PCB plug-in connector, female plug, 7.50 mm, No. of poles: 7, 90°, Clamping yoke connection, Clamping range, rated connection, max.: 3.31 mm², Box	4008190908423	36 pc(s).

**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	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZ 7.50/07/180 SN OR BX	<a href="#">1627970000</a>	PCB plug-in connector, female plug, 7.50 mm, No. of poles: 7, 180°, Clamping yoke connection, Clamping range, rated connection, max.: 3.31 mm², Box	4008190200770	40 pc(s).	IEC: 800 V / 18.5 A / 0.2 - 2.5 mm² UL: 300 V / 15 A / AWG 26 - AWG 12	Box

**Data sheet**

**OMNIMATE Signal - series BL/SL 7.50  
SL 7.50/07/180B 3.2SN OR BX**

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**Mating connector (conditionally 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**

Delivery status	Available until	Type	Order No.	Version	GTIN (EAN)	Qty.
Discontinued	2016-04-08T00:00:00+02:00	BLZ 7.50/07/270 SN OR BX	<a href="#">1702280000</a>	PCB plug-in connector, female plug, 7.50 mm, No. of poles: 7, 270°, Clamping yoke connection, Clamping range, rated connection, max.: 3.31 mm <sup>2</sup> , Box	4008190908768	36 pc(s).

**OMNIMATE Signal - series BL/SL 7.50  
SL 7.50/07/180B 3.2SN OR BX**

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**Mating connector (fully 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**

Delivery status	Available until	Type	Order No.	Version	GTIN (EAN)	Qty.
Discontinued	2016-04-08T00:00:00+02:00	BLZ 7.50/07/270B SN OR BX	<a href="#">1702500000</a>	PCB plug-in connector, female plug, 7.50 mm, No. of poles: 7, 270°, Clamping yoke connection, Clamping range, rated connection, max.: 3.31 mm², Box	4008190908980	30 pc(s)

**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**

Delivery status	Available until	Type	Order No.	Version	GTIN (EAN)	Qty.
Discontinued	2016-04-08T00:00:00+02:00	BLZ 7.50/07/90B SN OR BX	<a href="#">1702060000</a>	PCB plug-in connector, female plug, 7.50 mm, No. of poles: 7, 90°, Clamping yoke connection, Clamping range, rated connection, max.: 3.31 mm², Box	4008190908539	30 pc(s)

**Data sheet**

**OMNIMATE Signal - series BL/SL 7.50  
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**Mating connector (fully 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	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZ 7.50/07/180B SN OR BX	<a href="#">1628190000</a>	PCB plug-in connector, female plug, 7.50 mm, No. of poles: 7, 180°, Clamping yoke connection, Clamping range, rated connection, max.: 3.31 mm², Box	4008190200992	40 pc(s).	IEC: 800 V / 18.5 A / 0.2 - 2.5 mm² UL: 300 V / 15 A / AWG 26 - AWG 12	Box

## OMNIMATE Signal - series BL/SL 7.50 SL 7.50/07/180B 3.2SN OR BX

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# Accessories

### Additional accessories



#### No task is too small when creating the perfect solution.

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	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
SL AT OR	<a href="#">1598300000</a>	PCB plug-in connector, Accessories, Partition element, Orange, No. of poles: 1	4008190189266	100 pc(s).		Box
SL AT SW	<a href="#">1770240000</a>	PCB plug-in connector, Accessories, Partition element, Black, No. of poles: 1	4032248117710	100 pc(s).		Box

### 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	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
BLZ/SL KO BK BX	<a href="#">1545710000</a>	PCB plug-in connector, Accessories, Coding	4008190087142	50 pc(s).		Box

## OMNIMATE Signal - series BL/SL 7.50 SL 7.50/07/180B 3.2SN OR BX

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## Accessories

	element, Black, No. of poles: 1		
BLZ/SL KO OR <a href="#">1573010000</a> BX	PCB plug-in connector, Accessories, Coding element, Orange, No. of poles: 1	4008190048396 100 pc(s).	Box

## Blocks for PCB mounting



### Minor component, major effect:

Clip-on attachment elements increase the mechanical resilience of the whole plug connection by

- securing the male connectors to the circuit board
- providing a vibration-proof connection between the sockets and the male connectors

Clip-on or pre-assembled - always the right solution:

- Hard-wearing, precise fitting dovetail joint
- Hard-wearing metal threaded inserts
- Suitable for all outlet directions

Maximum stability, minimum effort:

- Extremely resilient for frequent fastening operations
- Complete set for easy selection

The result: soldering points, contacts and overall module are more resilient against mechanical stress such as vibrations and tensile loads.

## General ordering data

Type	Order No.	Version	GTIN (EAN)	Qty.	Product data	Packaging
SLA BB2R SW	<a href="#">1723490000</a>	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190366049	20 pc(s).		Box
SLA BB1R OR	<a href="#">1723430000</a>	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190365981	20 pc(s).		Box
SLA BB2R OR	<a href="#">1723440000</a>	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190365998	20 pc(s).		Box
SLA BB11R OR	<a href="#">1604120000</a>	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190182977	20 pc(s).		Box
SLA BB11R SW	<a href="#">1692340000</a>	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190864965	20 pc(s).		Box
SLA BB5R OR	<a href="#">1723460000</a>	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190366018	20 pc(s).		Box

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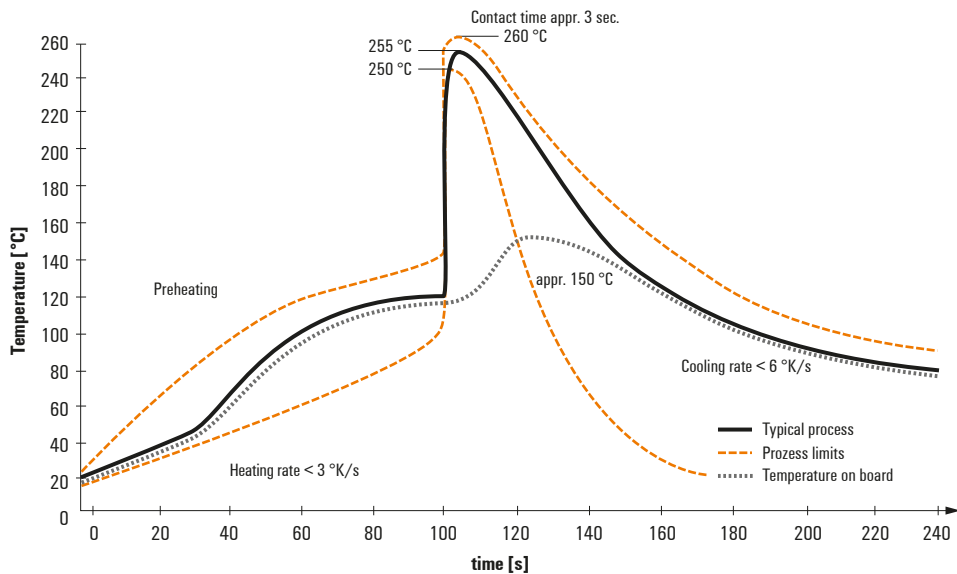
# Accessories

SLA BB6R OR <a href="#">1723470000</a>	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190366025 20 pc(s).	Box
SLA BB1R SW <a href="#">1723480000</a>	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190366032 20 pc(s).	Box
SLA BB5R SW <a href="#">1723510000</a>	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190366063 20 pc(s).	Box
SLA BB12R <a href="#">1593450000</a> OR	PCB plug-in connector, Accessories, Mounting block, Orange, No. of poles: 1	4008190122164 100 pc(s).	Box
SLA BB6R SW <a href="#">1723520000</a>	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190366070 20 pc(s).	Box
SLA BB12R <a href="#">1626880000</a> SW	PCB plug-in connector, Accessories, Mounting block, Black, No. of poles: 1	4008190198213 100 pc(s).	Box

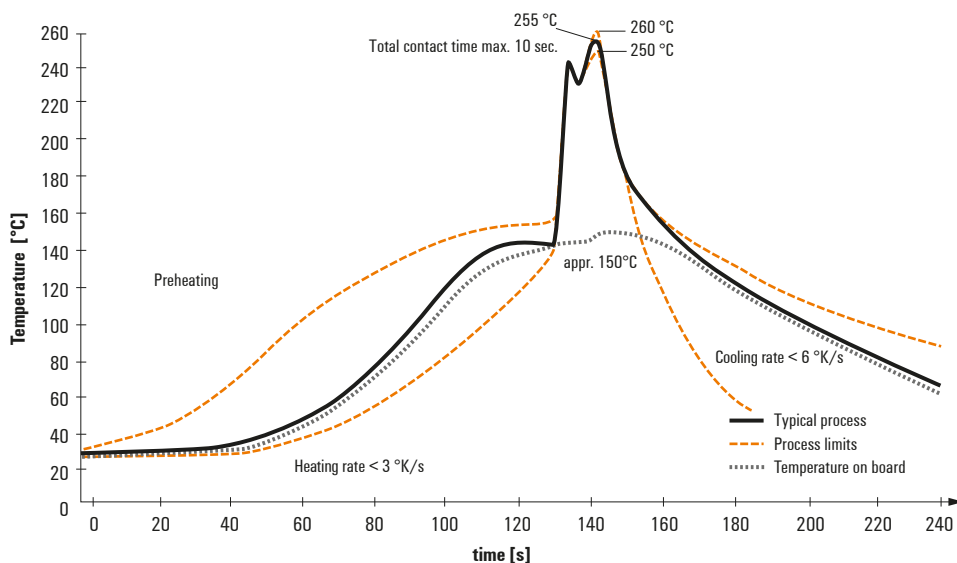
## Recommended wave soldering profiles

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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.

