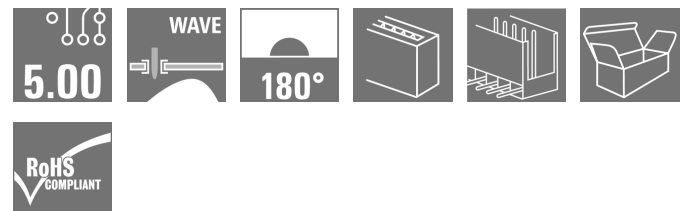
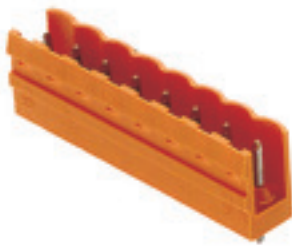


**OMNIMATE Signal - series BL/SL 5.00  
SL 5.00/13/180 3.2SN OR BX**

**Weidmüller Interface GmbH & Co. KG**  
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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 5.00/13/180 3.2SN OR BX
Order No.	<a href="#">1581430000</a>
Version	PCB plug-in connector, male header, open side, THT solder connection, 5.00 mm, Number of poles: 13, 180°, Solder pin length (l): 3.2 mm, tinned, orange, Box
GTIN (EAN)	4008 190052430
Qty.	50 pc(s).
Product data	IEC: 400 V / 18 A UL: 300 V / 15 A
Packaging	Box

Creation date May 3, 2020 11:12:28 PM CEST

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

Width	65 mm	Width (inches)	2.559 inch
Height	15.2 mm	Height (inches)	0.598 inch
Height of lowest version	12 mm	Depth	8.4 mm
Depth (inches)	0.331 inch	Net weight	4.58 g

**System specifications**

Product family	OMNIMATE Signal - series BL/SL 5.00	Type of connection	Board connection
Mounting onto the PCB	THT solder connection	Pitch in mm (P)	5 mm
Pitch in inches (P)	0.197 inch	Outgoing elbow	180°
Number of poles	13	Number of solder pins per pole	1
Solder pin length (l)	3.2 mm	Solder pin length tolerance	+0.1 / -0.2 mm
Tolerance of solder pin position	± 0.15 mm	Solder pin dimensions	d = 1.2 mm, Octagonal
Solder pin dimensions = d tolerance	0 / -0.03 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
Touch-safe protection acc. to DIN VDE 0470	IP20 plugged	Volume resistance	≤ 5mΩ
Can be coded	Yes	Plugging cycles	25
Plugging force/pole, max.	10 N	Pulling force/pole, max.	8 N

**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
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.	-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 A
Rated current, max. number of poles (Tu=20°C)	14.5 A	Rated current, min. number of poles (Tu=40°C)	15 A
Rated current, max. number of poles (Tu=40°C)	12 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 kV	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	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.
- 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 5.00  
SL 5.00/13/180 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

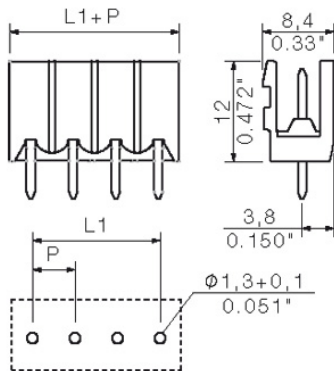
[FL DRIVES EN](#)  
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[FL\\_BASE\\_STATION\\_EN](#)  
[FL ELEVATOR EN](#)  
[FL POWER SUPPLY EN](#)  
[FL 72H SAMPLE SER EN](#)  
[PO OMNIMATE EN](#)

Engineering Data

[SL.zip](#)

**OMNIMATE Signal - series BL/SL 5.00  
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**Drawings****Dimensional drawing**

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**Mating connector (fully pluggable)****BLZP 5.00HC/90 SN**

Female plugs with clamping-yoke connection for connecting wires with a right-angle (90° or 270°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

**General ordering data**

Type	BLZP 5.00HC/13/90 SN BK ...	Version	Product data	Packaging
Order No.	<a href="#">1958540000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup>	Box
GTIN (EAN)	4032248637287	90°, Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	24 pc(s).			
Type	BLZP 5.00HC/13/90 SN OR ...	Version	Product data	Packaging
Order No.	<a href="#">1958090000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup>	Box
GTIN (EAN)	4032248637058	90°, Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	24 pc(s).			

**BLF 5.00HC/180 SN**

Just as reliable as the millionfold proven original and featuring innovative details:  
The BLF 5.00HC PUSH IN version of the BLZ 5.00HC female connector features a new connection system and a more compact design. Weidmüller's innovative PUSH IN spring connection system stands for the future of easy and tool-free wire connection. HC = High Current. In terms of versatility, the BLF 5.00HC offers just as much as the older versions:

- 3 tested-and-proven wire outlet directions provide the usual flexibility for application-specific design
- 4 flange variations and the patented release latch allow the locking concept to be based on the requirements of the user

**General ordering data**

Type	BLF 5.00HC/13/180 SN BK ...	Version	Product data	Packaging
Order No.	<a href="#">1017790000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 23 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4032248728732	180°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm <sup>2</sup> , Box	UL: 300 V / 18.5 A / AWG 26 - AWG 12	
Qty.	24 pc(s).			
Type	BLF 5.00HC/13/180 SN OR ...	Version	Product data	Packaging
Order No.	<a href="#">1017990000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 23 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4032248728565	180°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm <sup>2</sup> , Box	UL: 300 V / 18.5 A / AWG 26 - AWG 12	
Qty.	24 pc(s).			

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**Mating connector (fully pluggable)****BLZP 5.00HC/270 SN**

Female plugs with clamping-yoke connection for connecting wires with a right-angle (90° or 270°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

**General ordering data**

Type	BLZP 5.00HC/13/270 SN O ...	Version	Product data	Packaging
Order No.	<a href="#">1958770000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup>	Box
GTIN (EAN)	4032248637607	90°, Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	24 pc(s).			
Type	BLZP 5.00HC/13/270 SN B ...	Version	Product data	Packaging
Order No.	<a href="#">1958990000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup>	Box
GTIN (EAN)	4032248637928	90°, Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	24 pc(s).			

**BLF 5.00HC/90 SN**

Just as reliable as the millionfold proven original and featuring innovative details:  
 The BLF 5.00HC PUSH IN version of the BLZ 5.00HC female connector features a new connection system and a more compact design. Weidmüller's innovative PUSH IN spring connection system stands for the future of easy and tool-free wire connection. HC = High Current. In terms of versatility, the BLF 5.00HC offers just as much as the older versions:

- 3 tested-and-proven wire outlet directions provide the usual flexibility for application-specific design
- 4 flange variations and the patented release latch allow the locking concept to be based on the requirements of the user

**General ordering data**

Type	BLF 5.00HC/13/90 SN OR ...	Version	Product data	Packaging
Order No.	<a href="#">1980280000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 24 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4032248675364	90°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm <sup>2</sup> ,	UL: 300 V / 18.5 A / AWG 26 - AWG 12	
Qty.	24 pc(s).	Box		
Type	BLF 5.00HC/13/90 SN BK ...	Version	Product data	Packaging
Order No.	<a href="#">1979380000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 24 A / 0.2 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4032248674589	90°, PUSH IN, Spring connection, Clamping range, max. : 3.31 mm <sup>2</sup> ,	UL: 300 V / 18.5 A / AWG 26 - AWG 12	
Qty.	24 pc(s).	Box		

**OMNIMATE Signal - series BL/SL 5.00  
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**Mating connector (fully pluggable)**
**BLZP 5.00HC/180 SN**


Female plug with clamping-yoke screw system for connecting wires with straight (180°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

**General ordering data**

Type	BLZP 5.00HC/13/180 SN B ...	Version	Product data	Packaging
Order No.	<a href="#">1955460000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup>	Box
GTIN (EAN)	4032248633951	180°, Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	24 pc(s).			
Type	BLZP 5.00HC/13/180 SN O ...	Version	Product data	Packaging
Order No.	<a href="#">1954380000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 23 A / 0.2 - 4 mm <sup>2</sup>	Box
GTIN (EAN)	4032248633098	180°, Clamping yoke connection, Clamping range, max. : 4 mm <sup>2</sup> , Box	UL: 300 V / 20 A / AWG 26 - AWG 12	
Qty.	24 pc(s).			

**BLZ 5.00/180**


Female plugs with clamping-yoke screw for wire connection with straight (180°) outlet direction. The female plugs provide space for labelling and can be coded.

**General ordering data**

Type	BLZ 5.00/13/180 SN DKGN ...	Version	Product data	Packaging
Order No.	<a href="#">1646930000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 19 A / 0.5 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190288235	180°, Clamping yoke connection, Clamping range, max. : 3.31 mm <sup>2</sup> ,	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	50 pc(s).	Box		



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**Mating connector (fully pluggable)**

**BLZ 5.00/270**



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 5.00/13/270 SN DKGN ...	Version	Product data	Packaging
Order No.	<a href="#">1650000000</a>	PCB plug-in connector, female plug, 5.00 mm, Number of poles: 13,	IEC: 400 V / 15 A / 0.5 - 2.5 mm <sup>2</sup>	Box
GTIN (EAN)	4008190296582	270°, Clamping yoke connection, Clamping range, max. : 3.31 mm <sup>2</sup> ,	UL: 300 V / 10 A / AWG 26 - AWG 12	
Qty.	50 pc(s).	Box		

## OMNIMATE Signal - series BL/SL 5.00 SL 5.00/13/180 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 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).			
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).			

## 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 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).			

**Data sheet**

**OMNIMATE Signal - series BL/SL 5.00  
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**Accessories**

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).			

## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
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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.