

## BLZ 7.50/10/180 SN OR BX

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

www.weidmueller.com

### Product image



Similar to illustration

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

### General ordering data

Version	PCB plug-in connector, female plug, 7.50 mm, Number of poles: 10, 180°, Clamping yoke connection, Clamping range, max. : 3.31 mm², Box
Order No.	<a href="#">1628000000</a>
Type	BLZ 7.50/10/180 SN OR BX
GTIN (EAN)	4008190200800
Qty.	30 items
Product data	IEC: 800 V / 18,5 A / 0.2 - 2.5 mm² UL: 300 V / 15 A / AWG 26 - AWG 12
Packaging	Box

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## Technical data

## Approvals

Approvals



ROHS	Conform
UL File Number Search	<a href="#">UL Website</a>
Certificate No. (UR)	E60693

## Dimensions and weights

Depth	20.1 mm	Depth (inches)	0.7913 inch
Height	15.2 mm	Height (inches)	0.5984 inch
Net weight	17.39 g		

## Environmental Product Compliance

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

## System Parameters

Product family	OMNIMATE Signal - series BL/SL 7.50	Type of connection	Field connection
Wire connection method	Clamping yoke connection	Pitch in mm (P)	7.50 mm
Pitch in inches (P)	0.295 "	Conductor outlet direction	180°
Number of poles	10	L1 in mm	67.50 mm
L1 in inches	2.657 "	Number of rows	1
Pin series quantity	1	Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch
Volume resistance	4.50 mΩ	Can be coded	Yes
Stripping length	7 mm	Tightening torque, min.	0.4 Nm
Tightening torque, max.	0.5 Nm	Clamping screw	M 2.5
Screwdriver blade	0.6 x 3.5	Screwdriver blade standard	DIN 5264
Plugging cycles	25	Plugging force/pole, max.	9 N
Pulling force/pole, max.	8.5 N		

## Material data

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Moisture Level (MSL)	
UL 94 flammability rating	V-0	Contact material	Cu-alloy
Contact surface	tinned	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	100 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	100 °C		

## Conductors suitable for connection

Clamping range, min.	0.13 mm <sup>2</sup>
Clamping range, max.	3.31 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 12

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Solid, min. H05(07) V-U	0.2 mm <sup>2</sup>			
Solid, max. H05(07) V-U	2.5 mm <sup>2</sup>			
Flexible, min. H05(07) V-K	0.2 mm <sup>2</sup>			
Flexible, max. H05(07) V-K	2.5 mm <sup>2</sup>			
w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm <sup>2</sup> min.				
w. plastic collar ferrule, DIN 46228 pt 4, 2.5 mm <sup>2</sup> max.				
w. wire end ferrule, DIN 46228 pt 1, min.	0.2 mm <sup>2</sup>			
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm <sup>2</sup>			
Plug gauge in accordance with EN 60999 a x b; ø	2.8 mm x 2.0 mm; 2.4 mm			
Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H0,5/6</a>	
		Cross-section for conductor connection	Type	fine-wired
	wire end ferrule	nominal	1 mm <sup>2</sup>	
		Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H1,0/6</a>	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm <sup>2</sup>	
		Stripping length	nominal	7 mm
	wire end ferrule	Recommended wire-end ferrule	<a href="#">H1,5/7</a>	
		Cross-section for conductor connection	Type	fine-wired
		nominal	2.5 mm <sup>2</sup>	
	wire end ferrule	Stripping length	nominal	7 mm
		Recommended wire-end ferrule	<a href="#">H2,5/7</a>	
		Cross-section for conductor connection	Type	fine-wired
	wire end ferrule	nominal	0.75 mm <sup>2</sup>	
		Stripping length	nominal	6 mm
		Recommended wire-end ferrule	<a href="#">H0,75/6</a>	

Reference text The outside diameter of the plastic collar should not be larger than the pitch (P). Length of ferrules is to be chosen depending on the product and the rated voltage.

### 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)	15 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

### Rated data acc. to CSA

Institute (CSA)	CSA	Certificate No. (CSA)	200039-1121690
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V

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Rated current (Use group B / CSA)	15 A	Rated current (Use group D / CSA)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

### Rated data acc. to UL 1059

Institute (UR)	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
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

### Packing

Packaging	Box	VPE length	296.00 mm
VPE width	179.00 mm	VPE height	25.00 mm

### Type tests

Test: Durability of markings	Standard	DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96	
	Test	mark of origin, type identification, rated cross-section, rated voltage, pitch, type of material, approval marking UL, approval marking CSA	
	Evaluation	available	
	Test	durability	
Test: Misengagement (Non-interchangeability)	Evaluation	passed	
	Standard	draft DIN VDE 0627 section 5.9.1 / 09.91, DIN IEC 60512-7 section 5 / 05.94	
	Test	180° turned with coding elements	
Test: Clampable cross section	Evaluation	passed	
	Standard	DIN EN 60999 section 6 and 8.1 / 04.94, DIN EN 60947-1 section 8.2.4.5.1 / 07.98	
	Conductor type	Type of conductor and conductor cross-section	solid 0.08 mm <sup>2</sup>
		Type of conductor and conductor cross-section	stranded 0.08 mm <sup>2</sup>
		Type of conductor and conductor cross-section	solid 2.5 mm <sup>2</sup>
		Type of conductor and conductor cross-section	stranded 2.5 mm <sup>2</sup>
		Type of conductor and conductor cross-section	AWG 28/1
		Type of conductor and conductor cross-section	AWG 28/19
		Type of conductor and conductor cross-section	AWG 12/1
		Type of conductor and conductor cross-section	AWG 12/19
Evaluation	passed		

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**Technical data**

Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999 section 8.4 / 04.94		
	Requirement	0.2 kg		
	Conductor type	Type of conductor and conductor cross-section	AWG 28/1	
		Type of conductor and conductor cross-section	AWG 28/7	
	Evaluation	passed		
	Requirement	0.3 kg		
	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm <sup>2</sup>	
		Type of conductor and conductor cross-section	stranded 0.5 mm <sup>2</sup>	
	Evaluation	passed		
	Requirement	0.7 kg		
	Conductor type	Type of conductor and conductor cross-section	solid 2.5 mm <sup>2</sup>	
		Type of conductor and conductor cross-section	stranded 2.5 mm <sup>2</sup>	
	Evaluation	passed		
	Requirement	0.9 kg		
	Conductor type	Type of conductor and conductor cross-section	AWG 12/1	
Type of conductor and conductor cross-section		AWG 12/19		
Evaluation	passed			
Pull-out test	Standard	DIN EN 60999 section 8.5 / 04.94		
	Requirement	≥5 N		
	Conductor type	Type of conductor and conductor cross-section	AWG 28/1	
		Type of conductor and conductor cross-section	AWG 28/7	
	Evaluation	passed		
	Requirement	≥50 N		
	Conductor type	Type of conductor and conductor cross-section	H05V-U2.5	
		Type of conductor and conductor cross-section	H05V-K2.5	
	Evaluation	passed		
	Requirement	≥60 N		
	Conductor type	Type of conductor and conductor cross-section	AWG 12/1	
		Type of conductor and conductor cross-section	AWG 12/19	
	Evaluation	passed		

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### 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"> <li>• Additional variants 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>• Wire end ferrule without plastic collar to DIN 46228/1</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</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> <li>• 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</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul>

### Classifications

ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	EC002638	ECLASS 14.0	27-46-02-02
ECLASS 15.0	27-46-02-02		

**Dimensional drawing**



**Derating curve**



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## Accessories

### Strain reliefs



For frequent load changes: the "trailer coupling" for plug-in connectors.

The strain relief can do more than just relieve the strain on conductors:

Simply clip onto the plug and

- bundle conductors
- guide cables
- use as a connection and disconnection aid

No damage to the connecting points, clear, tidy wiring and easy to handle.

User advantages: permanent heavy-duty connections for harsh industrial environments and convenient operation ensure improved system availability.

### General ordering data

Type	BLZ 7.50 ZE03 OR BX	Version
Order No.	<a href="#">1652140000</a>	PCB plug-in connector, Accessories, Strain relief, orange, Number of
GTIN (EAN)	4008190401818	poles: 3
Qty.	50 ST	

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

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## Counterpart

## SL 7.50/90B

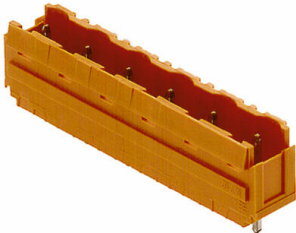


Male connectors with 90° outlet direction. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

## General ordering data

Type	SL 7.50/10/90B 3.2SN OR...	Version
Order No.	<a href="#">1628550000</a>	PCB plug-in connector, male header, Dovetails for fixing blocks, THT
GTIN (EAN)	4008190201357	solder connection, 7.50 mm, Number of poles: 10, 90°, Solder pin
Qty.	50 ST	length (l): 3.2 mm, tinned, orange, Box

## SL 7.50/180B

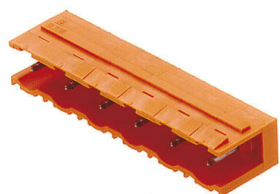


Male connectors with straight outlet direction. The solder pin length is optimised for wave flow soldering. The pin headers provide space for labelling and can be coded.

## General ordering data

Type	SL 7.50/10/180B 3.2SN O...	Version
Order No.	<a href="#">1629210000</a>	PCB plug-in connector, male header, Dovetails for fixing blocks, THT
GTIN (EAN)	4008190202019	solder connection, 7.50 mm, Number of poles: 10, 180°, Solder pin
Qty.	50 ST	length (l): 3.2 mm, tinned, orange, Box

## SL 7.50/90



Male connectors with 90° 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 7.50/10/90 3.2SN OR ...	Version
Order No.	<a href="#">1628440000</a>	PCB plug-in connector, male header, open side, THT solder
GTIN (EAN)	4008190201241	connection, 7.50 mm, Number of poles: 10, 90°, Solder pin length (l):
Qty.	50 ST	3.2 mm, tinned, orange, Box

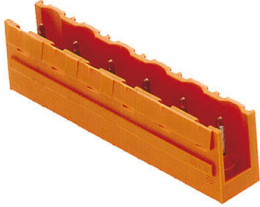
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### SL 7.50/180



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 7.50/10/180 3.2SN OR...	Version
Order No.	<a href="#">1629100000</a>	PCB plug-in connector, male header, open side, THT solder
GTIN (EAN)	4008190201906	connection, 7.50 mm, Number of poles: 10, 180°, Solder pin length
Qty.	50 ST	(I): 3.2 mm, tinned, orange, Box