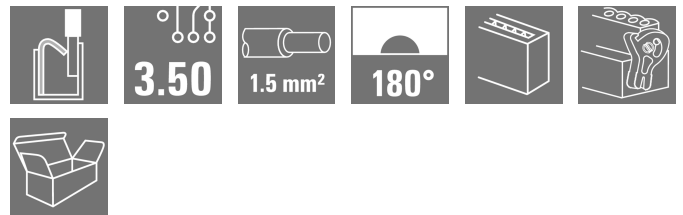
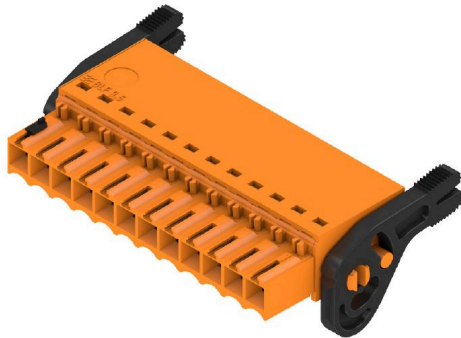


## BLF 3.50/12/180LR SN OR BX SO

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

www.weidmueller.com

### Product image



Connect efficiently - in a small space: female header with spring connection (PUSH IN) as a plug-in connection level; used together with male headers in 3.50 mm pitch.

### General ordering data

Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 12, 180°, PUSH IN with actuator, Clamping range, max. : 1.5 mm <sup>2</sup> , Box
Order No.	<a href="#">2685500000</a>
Type	BLF 3.50/12/180LR SN OR BX SO
GTIN (EAN)	4050118695458
Qty.	36 items
Product data	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm <sup>2</sup> UL: 300 V / 10 A / AWG 26 - AWG 16
Packaging	Box

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**Technical data**
**Approvals**

ROHS	Conform
------	---------

**Dimensions and weights**

Depth	30.05 mm	Depth (inches)	1.1831 inch
Height	15.08 mm	Height (inches)	0.5937 inch
Width	48.9 mm	Width (inches)	1.9252 inch
Net weight	9.25 g		

**Environmental Product Compliance**

RoHS Compliance Status	Compliant without exemption		
REACH SVHC	No SVHC above 0.1 wt%		
Product Carbon Footprint	Cradle to gate	0,682 kg CO2 eq.	

**System Parameters**

Product family	OMNIMATE Signal - series BL/SL 3.50		
Type of connection	Field connection		
Wire connection method	PUSH IN with actuator		
Pitch in mm (P)	3.50 mm		
Pitch in inches (P)	0.138 "		
Conductor outlet direction	180°		
Number of poles	12		
L1 in mm	38.50 mm		
L1 in inches	1.516 "		
Number of rows	1		
Pin series quantity	1		
Rated cross-section	1.5 mm <sup>2</sup>		
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch		
Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 unplugged		
Protection degree	IP20, when fully mounted		
Volume resistance	≤5 mΩ		
Can be coded	Yes		
Stripping length	8 mm		
Stripping length tolerance	min.	0 mm	
	max.	1 mm	
Screwdriver blade	0.4 x 2.5		
Screwdriver blade standard	DIN 5264-A		
Plugging cycles	25		
Plugging force/pole, max.	6 N		
Pulling force/pole, max.	6 N		

**Material data**

Insulating material	PA GF	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 400, ≤ 600	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.	120 °C	Temperature range, installation, min.	-30 °C
Temperature range, installation, max.	100 °C		

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**Technical data**

**Conductors suitable for connection**

Clamping range, min.	0.14 mm <sup>2</sup>
Clamping range, max.	1.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 16
Solid, min. H05(07) V-U	0.14 mm <sup>2</sup>
Solid, max. H05(07) V-U	1.5 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.14 mm <sup>2</sup>
Flexible, max. H05(07) V-K	1.5 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.28 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, max.	1 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm <sup>2</sup>
w. wire end ferrule, DIN 46228 pt 1, max.	1 mm <sup>2</sup>
Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.25 mm <sup>2</sup>
		Stripping length	nominal 10 mm
wire end ferrule	Recommended wire-end ferrule	<a href="#">H0.25/12 HBL</a>	
		Type	fine-wired
		nominal	0.34 mm <sup>2</sup>
Cross-section for conductor connection	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule <a href="#">H0.34/12 TK</a>	
		Type	fine-wired
Cross-section for conductor connection	wire end ferrule	nominal	0.5 mm <sup>2</sup>
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule <a href="#">H0.5/14 OR</a>	
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	0.75 mm <sup>2</sup>
		Stripping length	nominal 10 mm
Cross-section for conductor connection	wire end ferrule	Recommended wire-end ferrule <a href="#">H0.75/14T HBL</a>	
		Type	fine-wired
		nominal	1 mm <sup>2</sup>
Cross-section for conductor connection	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule <a href="#">H1.0/14 GE</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)	17.5 A
Rated current, max. number of poles (Tu=20°C)	14.7 A	Rated current, min. number of poles (Tu=40°C)	17.1 A
Rated current, max. number of poles (Tu=40°C)	13.1 A	Rated voltage for surge voltage class / pollution degree II/2	320 V
Rated voltage for surge voltage class / pollution degree III/2	160 V	Rated voltage for surge voltage class / pollution degree III/3	160 V

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## Technical data

Rated impulse voltage for surge voltage class/ pollution degree II/2 2.5 kV

Rated impulse voltage for surge voltage class/ contamination degree III/3 2.5 kV

Rated impulse voltage for surge voltage class/ pollution degree III/2 2.5 kV

Short-time withstand current resistance 1 x 1s with 120 A

### Rated data acc. to CSA

Rated voltage (Use group B / CSA) 300 V

Rated voltage (Use group D / CSA) 300 V

Rated current (Use group D / CSA) 10 A

Wire cross-section, AWG, max. AWG 26

Rated voltage (Use group C / CSA) 50 V

Rated current (Use group B / CSA) 10 A

Wire cross-section, AWG, min. AWG 16

### Rated data acc. to UL 1059

Rated voltage (Use group B / UL 1059) 300 V

Rated voltage (Use group D / UL 1059) 300 V

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

Wire cross-section, AWG, max. AWG 16

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

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

Wire cross-section, AWG, min. AWG 26

### Packing

Packaging Box VPE length 350.00 mm

VPE width 141.00 mm VPE height 40.00 mm

### Type tests

Visual and dimensional test

Standard IEC 605 12-1-1:2002-02

Test dimensional inspection

Evaluation passed

Standard IEC 605 12-1-2:2002-02

Test weight check

Evaluation passed

Standard IEC 61984:2001-10 section 6.2

Test visual examination

Evaluation passed

Test: Durability of markings

Standard IEC 60068-2-70:1995-12 test Xb

Test mark of origin, type identification, pitch, type of material, date clock, approval marking UL, approval marking CSA

Evaluation available

Test durability

Evaluation passed

Test: Misengagement (Non-interchangeability)

Standard IEC 605 12-13-5:2006-02

Test 180° turned with coding elements

Evaluation passed

Test 180° turned without coding elements

Evaluation passed

Test visual examination

Evaluation passed

Test: Clampable cross section

Standard IEC 60999-1:1999-11 section 9.1, IEC 60947-1:2011-03 section 8.2.4.5.1

Conductor type

Type of conductor and conductor cross-section solid 0.14 mm<sup>2</sup>

Type of conductor and conductor cross-section stranded 0.14 mm<sup>2</sup>

Type of conductor and conductor cross-section solid 1.5 mm<sup>2</sup>

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**Technical data**

		Type of conductor and conductor cross-section	stranded 1.5 mm <sup>2</sup>
		Type of conductor and conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
		Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	Evaluation	passed	
Test for damage to and accidental loosening of conductors	Standard	IEC 60999-1:1999-11 section 9.4 bzw. section 8.10	
	Requirement	0.2 kg	
	Conductor type	Type of conductor and conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.5
		Type of conductor and conductor cross-section	H05V-K0.5
	Evaluation	passed	
	Requirement	0.4 kg	
Conductor type	Type of conductor and conductor cross-section	H07V-U1.5	
	Type of conductor and conductor cross-section	H07V-K1.5	
	Type of conductor and conductor cross-section	AWG 16/1	
	Type of conductor and conductor cross-section	AWG 16/19	
Evaluation	passed		
Standard	IEC 60999-1:1999-11 section 9.5		
Requirement	≥10 N		
Conductor type	Type of conductor and conductor cross-section	AWG 26/1	
	Type of conductor and conductor cross-section	AWG 26/19	
Evaluation	passed		
Requirement	≥20 N		
Conductor type	Type of conductor and conductor cross-section	H05V-U0.5	

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## Technical data

	Type of conductor and conductor cross-section	H05V-K0.5
Evaluation	passed	
Requirement	≥40 N	
Conductor type	Type of conductor and conductor cross-section	H07V-U1.5
	Type of conductor and conductor cross-section	H07V-K1.5
	Type of conductor and conductor cross-section	AWG 16/1
	Type of conductor and conductor cross-section	AWG 16/19
Evaluation	passed	

## 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-6 10 "Class 2". Further claims on the products can be evaluated on request.

- Notes**
- Additional variants on request
  - Gold-plated contact surfaces on request
  - Rated current related to rated cross-section & min. No. of poles.
  - Wire end ferrule without plastic collar to DIN 46228/1
  - Wire end ferrule with plastic collar to DIN 46228/4
  - 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.
  - 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
  - Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

## 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		

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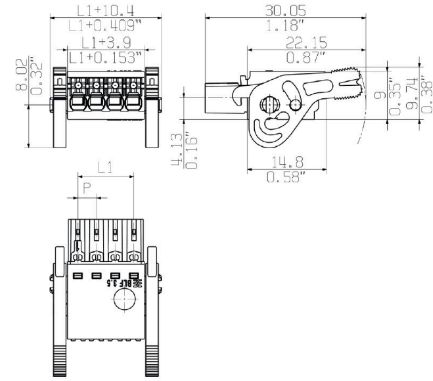
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Drawings

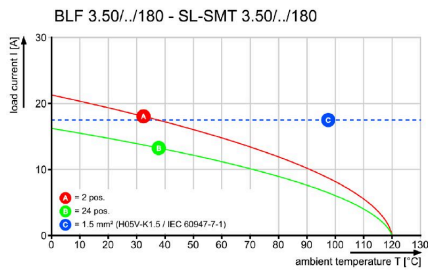
Product image



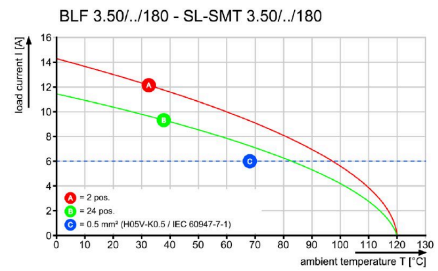
Dimensional drawing



Derating curve



Derating curve



Product benefits



Solid PUSH IN contact Safe and durable