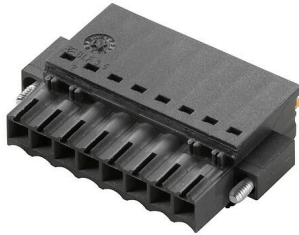


## BLF 3.50/10/180F SN BK BX SO

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

www.weidmueller.com

### Product image



similar to illustration

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: 10, 180°, PUSH IN with actuator, Clamping range, max. : 1.5 mm², Box
Order No.	<a href="#">3108240000</a>
Type	BLF 3.50/10/180F SN BK BX SO
GTIN (EAN)	4099987179799
Qty.	42 items
Product data	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm² UL: 300 V / 10 A / AWG 26 - AWG 16
Packaging	Box

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## Technical data

## Dimensions and weights

Depth	22.7 mm	Depth (inches)	0.8937 inch
Height	9 mm	Height (inches)	0.3543 inch
Width	42 mm	Width (inches)	1.6535 inch
Net weight	7.39 g		

## Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption		
REACH SVHC	No SVHC above 0.1 wt%		
Product Carbon Footprint	Cradle to gate	1,002 kg CO <sub>2</sub> 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	10		
L1 in mm	31.50 mm		
L1 in inches	1.240 "		
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		
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		
Tightening torque	Torque type	Screw flange	
	Usage information	Tightening torque	min. 0.15 Nm max. 0.2 Nm

## Material data

Insulating material	PA GF	Colour	black
Colour chart (similar)	RAL 9011	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	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
Rated impulse voltage for surge voltage class/ pollution degree II/2	2.5 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	2.5 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	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 C / CSA)	50 V
Rated voltage (Use group D / CSA)	300 V	Rated current (Use group B / CSA)	10 A
Rated current (Use group D / CSA)	10 A	Wire cross-section, AWG, min.	AWG 16
Wire cross-section, AWG, max.	AWG 26		

### Rated data acc. to UL 1059

Rated voltage (Use group B / UL 1059)	300 V	Rated voltage (Use group C / UL 1059)	50 V
Rated voltage (Use group D / UL 1059)	300 V	Rated current (Use group B / UL 1059)	10 A
Rated current (Use group D / UL 1059)	10 A	Wire cross-section, AWG, min.	AWG 26
Wire cross-section, AWG, max.	AWG 16		

### Packing

Packaging	Box	VPE length	350.00 mm
VPE width	140.00 mm	VPE height	31.00 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

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**Technical data**

	Evaluation	passed		
	Standard	IEC 61984:2001-10 section 6.2		
	Test	visual examination		
Test: Durability of markings	Evaluation	passed		
	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		
Test: Clampable cross section	Evaluation	passed		
	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>	
		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		

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**Technical data**

	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
Pull-out test	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
		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-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> </ul>

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## Technical data

- 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		

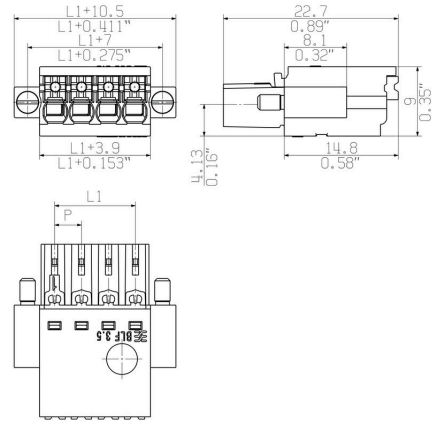
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Drawings

www.weidmueller.com

Dimensional drawing



Derating curve



Derating curve



Product benefits



Solid PUSH IN contact Safe and durable