

## BLF 3.50/12/180 SN OR BX

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

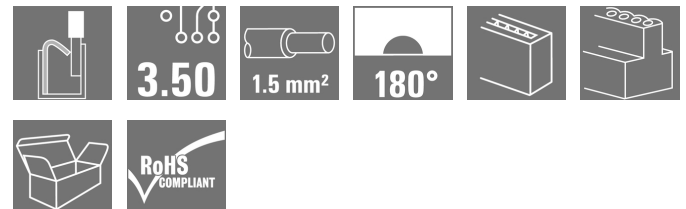
Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmueller.com

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: 12, 180°, PUSH IN, Spring connection, Clamping range, max.: 1.5 mm², Box
Order No.	<a href="#">2459 150000</a>
Type	BLF 3.50/12/180 SN OR BX
GTIN (EAN)	4050118474503
Qty.	42 pc(s).
Product data	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm² UL: 300 V / AWG 26 - AWG 16
Packaging	Box

Creation date November 23, 2020 8:14:38 AM CET

## BLF 3.50/12/180 SN OR BX

Weidmüller Interfaces GmbH & Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmueller.com

www.weidmueller.com

## Technical data

### Dimensions and weights

Depth	22.7 mm	Depth (inches)	0.894 inch
Height	9 mm	Height (inches)	0.354 inch
Net weight	9.762 g	Width	42 mm
Width (inches)	1.654 inch		

### System Parameters

Product family	OMNIMATE Signal - series BL/SL 3.50		
Type of connection	Field connection		
Wire connection method	PUSH IN, Spring connection		
Pitch in mm (P)	3.5 mm		
Pitch in inches (P)	0.138 inch		
Conductor outlet direction	180°		
Number of poles	12		
L1 in mm	38.5 mm		
L1 in inches	1.516 inch		
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	IP 20		
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	Insulation strength	10 <sup>6</sup> Ω
UL 94 flammability rating	V-0	Contact material	Copper 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		

## BLF 3.50/12/180 SN OR BX

Weidmüller Interfaces GmbH &amp; Co. KG

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

## Technical data

info@weidmuller.com

www.weidmuller.com

AWG 16

1.5 mm<sup>2</sup>1.5 mm<sup>2</sup>1 mm<sup>2</sup>1 mm<sup>2</sup>1 mm<sup>2</sup>1 mm<sup>2</sup>

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.

2.4 mm x 1.5 mm

IEC 60664-1, IEC 61984

17.5 A

17.1 A

320 V

160 V

160 V

2.5 kV

2.5 kV

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

1 x 1s with 120 A

## 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.	0.25 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		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 26
Wire cross-section, AWG, max.	AWG 16		

## Rated data acc. to UL 1059

Institute (cURus)		Certificate No. (cURus)	E60693
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 D / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 16
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

## Packing

Packaging	Box	VPE length	350 mm
VPE width	140 mm	VPE height	30 mm

Creation date November 23, 2020 8:14:38 AM CET

Catalogue status 21.11.2020 / We reserve the right to make technical changes.

3

**BLF 3.50/12/180 SN OR BX**
**Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

**Technical data**
[info@weidmueller.com](mailto:info@weidmueller.com)
[www.weidmueller.com](http://www.weidmueller.com)
**Type tests**

Visual and dimensional test	Standard	IEC 60512-1-2:2002-02	
	Test	dimensional inspection	
	Evaluation	passed	
	Standard	IEC 60512-1-2:2002-02	
	Test	weight check	
	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, durability	
Test: Misengagement (Non-interchangeability)	Evaluation	available	
	Standard	IEC 60512-13-5:2006-02	
	Test	intentional plugging	
	Evaluation	passed	
	Test	180° turned without coding elements	
	Evaluation	passed	
	Test	180° turned with coding elements	
	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>
		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	

**BLF 3.50/12/180 SN OR BX**

**Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

IEC 60999-1:1999-11 section 9.4 bzw. section 8.10 [info@weidmueller.com](mailto:info@weidmueller.com)

**Technical data**

Test for damage to and accidental loosening of conductors

Standard	IEC 60999-1:1999-11 section 9.4 bzw. section 8.10	
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	
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	

Pull-out test

Standard	IEC 60999-1:1999-11 section 9.5	
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	
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	

**BLF 3.50/12/180 SN OR BX****Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

**Technical data**

info@weidmueller.com

www.weidmueller.com

EC002638

eClass 9.1 27-44-03-09

eClass 11.0 27460202

**Classifications**

ETIM 6.0	EC002638	ETIM 7.0	www.weidmueller.com
eClass 9.0	27-44-03-09	eClass 9.1	27-44-03-09
eClass 10.0	27-44-03-09	eClass 11.0	27460202

**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.

**Approvals**

Approvals



ROHS

Conform

UL File Number Search

E60693

**Downloads**

Engineering Data

[STEP](#)

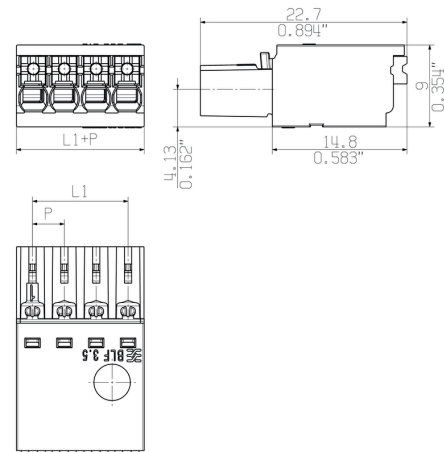
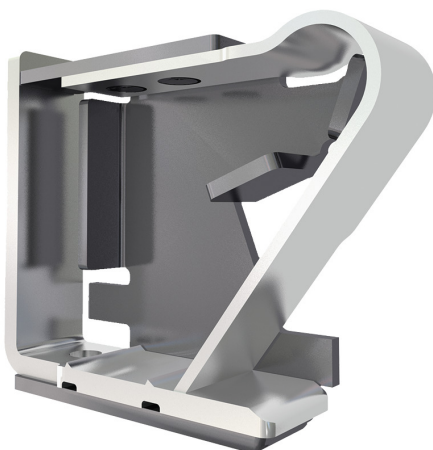
**Data sheet****BLF 3.50/12/180 SN OR BX****Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

**Drawings****Dimensional drawing** [info@weidmueller.com](mailto:info@weidmueller.com)**Product benefits**

Solid PUSH IN contact  
Safe and durable