

BL 3.50/06/180LR SN OR BX**Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

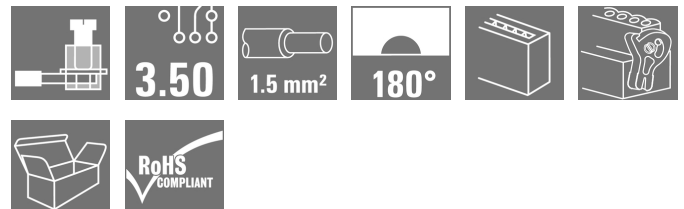
32760 Detmold

Tel. +49 5231 14-0

Fax. +49 5231 14-2083

info@weidmueller.com

www.weidmueller.com

Product image

Similar to illustration

Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 6, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box
Order No.	1531030000
Type	BL 3.50/06/180LR SN OR BX
GTIN (EAN)	4050118336054
Qty.	66 pc(s).
Product data	IEC: 320 V / 17 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 28 - AWG 14
Packaging	Box

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Technical data

Dimensions and weights

Depth	29.5 mm	Depth (inches)	1.161 inch
Height	14.9 mm	Height (inches)	0.587 inch
Width	27.5 mm	Width (inches)	1.083 inch
Net weight	5.061 g		

System Parameters

Product family	OMNIMATE Signal - series BL/SL 3.50		
Type of connection	Field connection		
Wire connection method	Clamping yoke connection		
Pitch in mm (P)	3.5 mm		
Pitch in inches (P)	0.138 inch		
Conductor outlet direction	180°		
Number of poles	6		
L1 in mm	17.5 mm		
L1 in inches	0.689 inch		
Number of rows	1		
Pin series quantity	1		
Rated cross-section	1.5 mm ²		
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	6 mm		
Clamping screw	M 2		
Screwdriver blade	0.4 x 2.5		
Screwdriver blade standard	DIN 5264		
Plugging cycles	25		
Plugging force/pole, max.	7 N		
Pulling force/pole, max.	5 N		
Tightening torque	Torque type	Wire connection	
	Usage information	Tightening torque	min. 0.2 Nm max. 0.25 Nm

Material data

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	UL 94 flammability rating	V-0
Contact material	Copper alloy	Contact surface	tinned
Layer structure of plug contact	4...8 µm Sn hot-dip 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.	-30 °C
Temperature range, installation, max.	100 °C		

Conductors suitable for connection

Clamping range, min.	0.08 mm ²
Clamping range, max.	1.5 mm ²
Wire connection cross section AWG, min.	AWG 28
Wire connection cross section AWG, max.	AWG 14

Creation date September 16, 2022 7:12:15 AM CEST

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Solid, min. H05(07) V-U	0.2 mm ²	
Solid, max. H05(07) V-U	1.5 mm ²	
Flexible, min. H05(07) V-K	0.2 mm ²	
Flexible, max. H05(07) V-K	1.5 mm ²	
w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm ² min.		
w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm ² max.		
w. wire end ferrule, DIN 46228 pt 1, 0.2 mm ² min.		
w. wire end ferrule, DIN 46228 pt 1, 1.5 mm ² max.		
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 0.5 mm ²
	wire end ferrule	Stripping length nominal 8 mm
		Recommended wire-end ferrule H0.5/12 OR
		Stripping length nominal 6 mm
		Recommended wire-end ferrule H0.5/6
	Cross-section for conductor connection	Type fine-wired
		nominal 0.75 mm ²
	wire end ferrule	Stripping length nominal 8 mm
		Recommended wire-end ferrule H0.75/12 W
		Stripping length nominal 6 mm
		Recommended wire-end ferrule H0.75/6
	Cross-section for conductor connection	Type fine-wired
		nominal 1 mm ²
	wire end ferrule	Stripping length nominal 8 mm
		Recommended wire-end ferrule H1.0/12 GE
		Stripping length nominal 6 mm
		Recommended wire-end ferrule H1.0/6
	Cross-section for conductor connection	Type fine-wired
		nominal 0.25 mm ²
	wire end ferrule	Stripping length nominal 8 mm
		Recommended wire-end ferrule H0.25/10 HBL
		Stripping length nominal 5 mm
		Recommended wire-end ferrule H0.25/5
	Cross-section for conductor connection	Type fine-wired
		nominal 0.34 mm ²
	wire end ferrule	Stripping length nominal 8 mm
		Recommended wire-end ferrule H0.34/10 TK
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.	

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Technical data

Rated data acc. to IEC

tested acc. to standard

IEC 60664-1, IEC 61984

Rated current, max. number of poles
(Tu=20°C)

12 A

Rated current, max. number of poles
(Tu=40°C)

10 A

Rated voltage for surge voltage class /
pollution degree III/2

160 V

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 current, min. number of poles
(Tu=20°C)

17 A

Rated current, min. number of poles
(Tu=40°C)

14.5 A

Rated voltage for surge voltage class /
pollution degree II/2

320 V

Rated voltage for surge voltage class /
pollution degree III/3

160 V

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

2.5 kV

Short-time withstand current resistance

3 x 1s with 100 A

Rated data acc. to CSA

Rated voltage (Use group B / CSA)

300 V

Rated current (Use group B / CSA)

10 A

Wire cross-section, AWG, min.

AWG 28

Rated voltage (Use group D / CSA)

300 V

Rated current (Use group D / CSA)

10 A

Wire cross-section, AWG, max.

AWG 14

Packing

Packaging

Box

VPE length

352 mm

VPE width

135 mm

VPE height

38 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, approval
marking SEV, approval marking CSA

Evaluation

available

Test

durability

Evaluation

passed

Test: Misengagement (Non-
interchangeability)

Standard

DIN EN 61984 section 6.3 and 6.9.1 / 09.02,
DIN IEC 60512 part 7 section 5 / 05.94

Test

180° turned with coding elements

Evaluation

passed

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DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 2.4.5 / 12.99

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Technical data

Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 2.4.5 / 12.99	
	Conductor type	Type of conductor and conductor cross-section	solid 0.2 mm ²
		Type of conductor and conductor cross-section	stranded 0.2 mm ²
		Type of conductor and conductor cross-section	solid 1.5 mm ²
		Type of conductor and conductor cross-section	stranded 1.5 mm ²
		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 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	Evaluation	passed	
Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00	
	Requirement	0.2 kg	
	Conductor type	Type of conductor and conductor cross-section	AWG 28/1
		Type of conductor and conductor cross-section	AWG 28/19
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	2 × AWG 24/1
		Type of conductor and conductor cross-section	2 × AWG 24/19 with wire end ferrule
	Evaluation	passed	
	Requirement	0.4 kg	
	Conductor type	Type of conductor and conductor cross-section	solid 1.5 mm ²
		Type of conductor and conductor cross-section	stranded 1.5 mm ²
		Type of conductor and conductor cross-section	AWG 16/7
	Evaluation	passed	

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DIN EN 60999-1 section 9.5 / 12.00

≥5 N info@weidmueller.com

 Type of conductor and conductor cross-section
 AWG 28/1
 and conductor cross-section

 Type of conductor and conductor cross-section
 AWG 28/19

passed

≥10 N

 Type of conductor and conductor cross-section
 2 × AWG 24/1

 Type of conductor and conductor cross-section
 2 × AWG 24/19 with wire end ferrule

passed

≥40 N

 Type of conductor and conductor cross-section
 H05V-U1.5

 Type of conductor and conductor cross-section
 H05V-K1.5

 Type of conductor and conductor cross-section
 AWG 16/7

passed

Pull-out test

Standard

Requirement

Conductor type

Evaluation

Requirement

Conductor type

Evaluation

Requirement

Conductor type

Evaluation

Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ECLASS 9.0	27-44-03-09
ECLASS 9.1	27-44-03-09	ECLASS 10.0	27-44-03-09
ECLASS 11.0	27-46-02-02	ECLASS 12.0	27-46-02-02

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

- Additional variants on request
- Gold-plated contact surfaces on request
- Rated current related to rated cross-section & min. No. of poles.
- Max. outer diameter of the conductor: 2.9 mm
- 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.
- Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

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Catalogue status 09.09.2022 / We reserve the right to make technical changes.

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Technical data

Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (UR)	E60693

Downloads

Approval/Certificate/Document of Conformity

[Declaration of the Manufacturer](#)

Engineering Data

[CAD data – STEP](#)

Product Change Notification

[PCN_2017_088_PL30X_BL_35_Lock_Release_lever_EN](#)
[PCN_2017_088_PL30X_PCN_BL_35_Loeseriegel_DE](#)
[Change of Material LR 3.50 - DE](#)
[Change of Material LR 3.50 - EN](#)

Catalogues

[Catalogues in PDF-format](#)

Brochures

[FL DRIVES EN](#)
[MB DEVICE MANUF. EN](#)
[FL DRIVES DE](#)
[FL BUILDING SAFETY EN](#)
[FL APPL LED LIGHTING EN](#)
[FL INDUSTR.CONTROLS EN](#)
[FL MACHINE SAFETY EN](#)
[FL HEATING ELECTR EN](#)
[FL APPL INVERTER EN](#)
[FL_BASE_STATION_EN](#)
[FL ELEVATOR EN](#)
[FL POWER SUPPLY EN](#)
[FL 72H SAMPLE SER EN](#)
[PO OMNIMATE EN](#)

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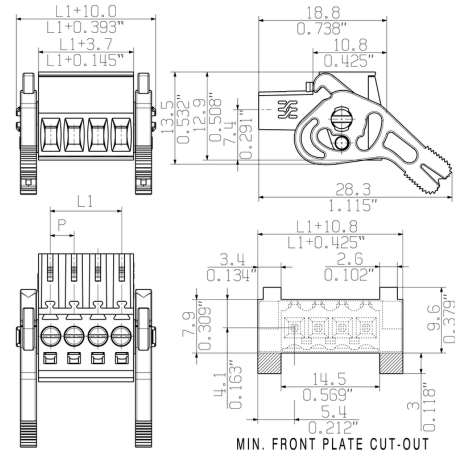
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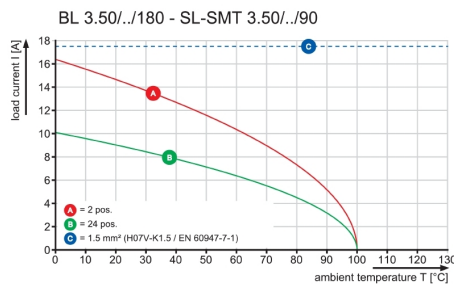
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Drawings

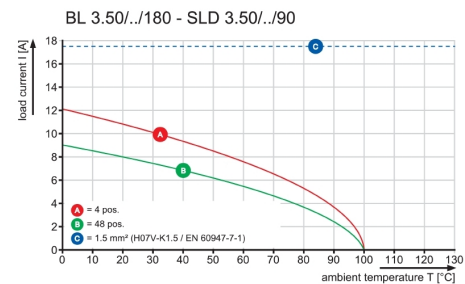
Dimensional drawing info@weidmueller.com



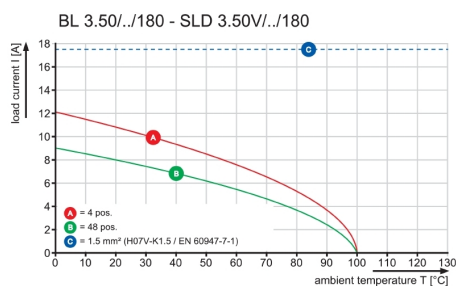
Graph



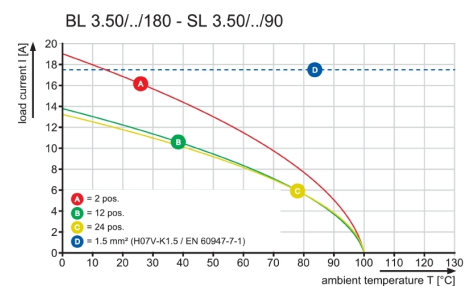
Graph



Graph



Graph



BL 3.50/04/180F



BL 3.50/04/180



BL 3.50/04/180LH



BL 3.50/04/180LR



BL 3.50/04/180LR REDESIGN



P= 3.50 RASTER PITCH

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller connectors are tested to the DIN VDE 0627 standard, and are valid for its field of application. Provided that the connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

24	80.5	3.169
23	77.0	3.032
22	73.5	2.894
21	70.0	2.756
20	66.5	2.618
19	63.0	2.480
18	59.5	2.343
17	56.0	2.205
16	52.5	2.067
15	49.0	1.929
14	45.5	1.791
13	42.0	1.654
12	38.5	1.516
11	35.0	1.378
10	31.5	1.240
9	28.0	1.102
8	24.5	0.965
7	21.0	0.827
6	17.5	0.689
5	14.0	0.551
4	10.5	0.413
3	7.0	0.276
2	3.5	0.138
n	POLZAHL POLES	L1 [mm] L1 [inch]

GENERAL TOLERANCE: DIN ISO 2768-m 	103300/5 17.05.18 HELIS_MA 01		Cat.no.: .	
	Modification		Weidmüller 	
	Date		Name	
	Drawn 02.09.2008		HELIS_MA	
	Responsible		AMANN_A	
	Checked			
Scale: 5/1	Approved		LANG_T	
Supersedes: .	Product file: BL 3.50		7382	

3 19675 (36)

Drawing no. Issue n

Sheet 00 of 00 sheets

BL 3.50/././180

BUCHSENSTECKER

FEMALE PLUG

Prüfung /

Verification

ALLGEMEINGÜLTIGE KUNDENZEICHNUNG, AKTUELLER STAND NUR AUF ANFRAGE
GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED