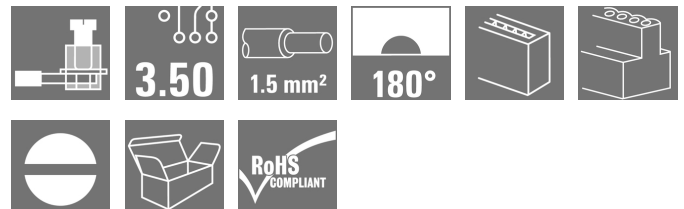
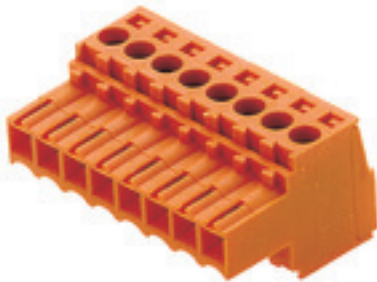


OMNIMATE Signal - series BL/SL 3.50
BL 3.50/05/180 SN BK BX

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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

Type	BL 3.50/05/180 SN BK BX
Order No.	1614090000
Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 5, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box
GTIN (EAN)	4008190019310
Qty.	102 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

Creation date September 6, 2020 10:13:59 AM CEST

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Technical data

Dimensions and weights

Width	17.5 mm	Width (inches)	0.689 inch
Height	13 mm	Height (inches)	0.512 inch
Depth	18.5 mm	Depth (inches)	0.728 inch
Net weight	4.401 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	5	L1 in mm	14 mm
L1 in inches	0.551 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	≤ 5mΩ	Can be coded	Yes
Stripping length	6 mm	Tightening torque, min.	0.2 Nm
Tightening torque, max.	0.25 Nm	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		

Material data

Insulating material	PBT	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	GWFI	960 °C
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
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, min.	0.2 mm ²
w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm ²

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Technical data

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.

Max. clamping range 1.5 mm²

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984		Rated current, min. number of poles (Tu=20°C)	17 A
Rated current, max. number of poles (Tu=20°C)	12 A		Rated current, min. number of poles (Tu=40°C)	14.5 A
Rated current, max. number of poles (Tu=40°C)	10 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	3 x 1s with 100 A

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Technical data
Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

154685-1318353

Rated voltage (Use group B / CSA)	300 V
Rated current (Use group B / CSA)	10 A
Wire cross-section, AWG, min.	AWG 28
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group D / CSA)	300 V
Rated current (Use group D / CSA)	10 A
Wire cross-section, AWG, max.	AWG 14

Rated data acc. to UL 1059

Institute (UR)



Certificate No. (UR)

E60693

Rated voltage (Use group B / UL 1059)	300 V
Rated current (Use group B / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 28
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, max.	AWG 14

Packing

Packaging	Box	VPE length	51 mm
VPE width	78 mm	VPE height	118 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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Technical data

Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 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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Technical data

Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00	
	Requirement	≥5 N	
	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	≥10 N	
	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	≥40 N	
	Conductor type	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
	Evaluation	passed	

Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
eClass 9.0	27-44-03-09	eClass 9.1	27-44-03-09
eClass 10.0	27-44-03-09	UNSPSC	30-21-18-10

Notes

Notes	• Additional colours 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
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.

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Technical data**Approvals**

Approvals



ROHS

Conform

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Brochure/Catalogue

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[MB DEVICE MANUF. EN](#)
[FL DRIVES DE](#)
[CAT 2 PORTFOLIOGUIDE EN](#)
[FL BUILDING SAFETY EN](#)
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[FL ELEVATOR EN](#)
[FL POWER SUPPLY EN](#)
[FL 72H SAMPLE SER EN](#)
[PO OMNIMATE EN](#)

Engineering Data

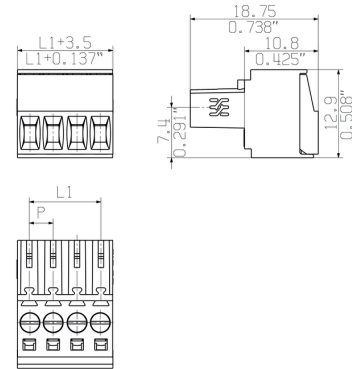
[STEP](#)

OMNIMATE Signal - series BL/SL 3.50 BL 3.50/05/180 SN BK BX

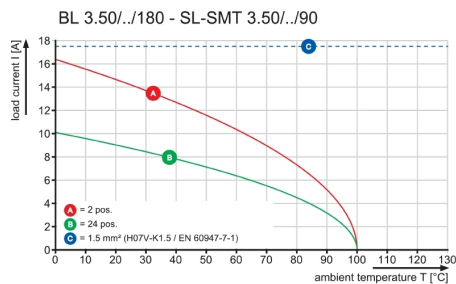
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Drawings

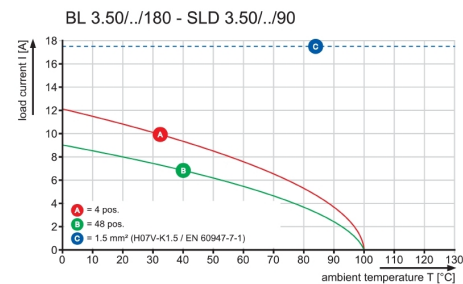
Dimensional drawing



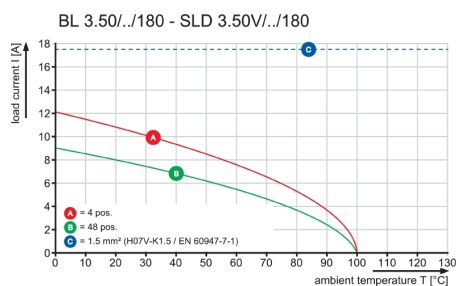
Graph



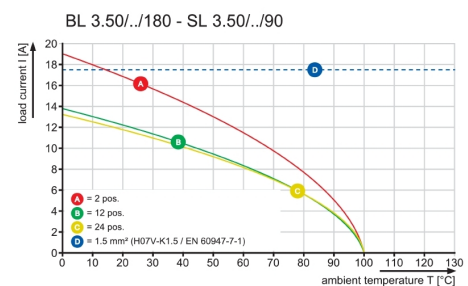
Graph



Graph



Graph



BL 3.50/04/180F



BL 3.50/04/180



M 1/1



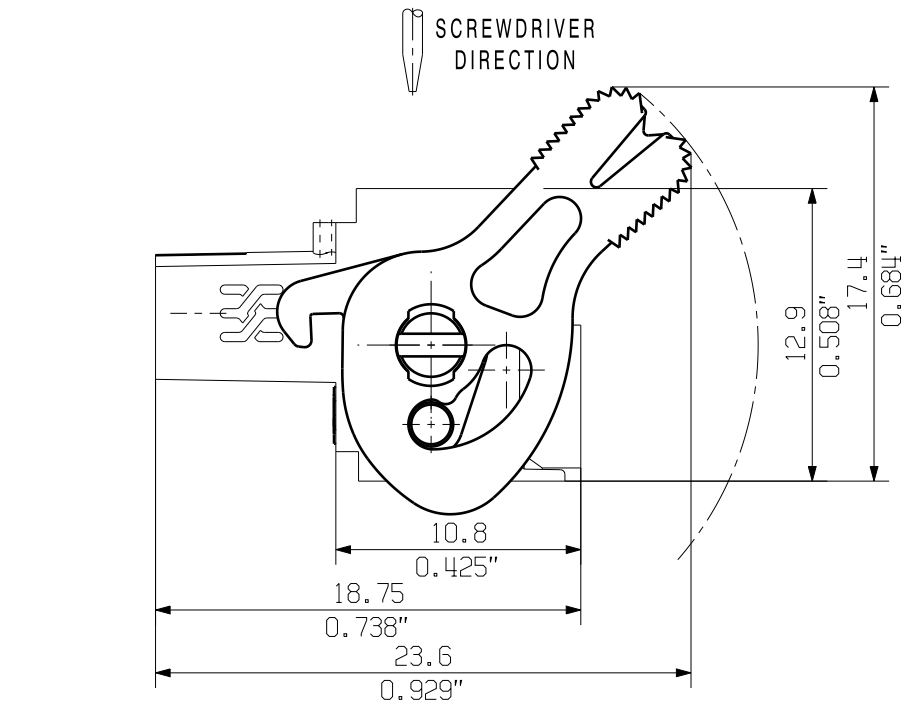
BL 3.50/04/180LH



M 1/1



BL 3.50/04/180LR



M 1/1



BL 3.50/04/180LR REDESIGN



M 1/1



MIN. FRONT PLATE CUT-OUT

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

Modification

Drawn 02.09.2008 HELIS_MA

Responsible AMANN_A

Checked

Approved LANG_T

Cat.no.: .

Weidmüller

3 19675 **36**

Sheet 00 of 00 sheets

BL 3.50/././180

BUCHSENSTECKER
FEMALE PLUG

Product file: BL 3.50

7382

in Prüfung /
Verification

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GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED