

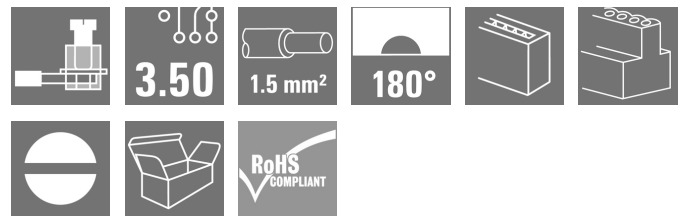
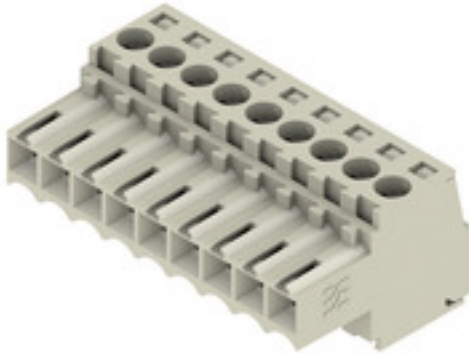
BL 3.50/09/180 AU GY BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

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: 9, 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box
Order No.	1077380000
Type	BL 3.50/09/180 AU GY BX
GTIN (EAN)	4032248834976
Qty.	54 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 July 11, 2025 3:09:25 AM CEST

Catalogue status 04.07.2025 / We reserve the right to make technical changes.

BL 3.50/09/180 AU GY BX

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Technical data

Dimensions and weights

Depth	18.5 mm	Depth (inches)	0.728 inch
Height	13 mm	Height (inches)	0.512 inch
Width	31.5 mm	Width (inches)	1.24 inch
Net weight	7.889 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 "		
Conductor outlet direction	180°		
Number of poles	9		
L1 in mm	28 mm		
L1 in inches	1.102 "		
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	IP20 plugged/ IP10 unplugged		
Protection degree	IP20, when fully mounted		
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	Pebble grey
Colour chart (similar)	RAL 7032	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	UL 94 flammability rating	V-0
Contact material	Cu-alloy	Contact surface	Au (Gold)
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

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Solid, min. H05(07) V-U	0.2 mm²		
Solid, max. H05(07) V-U	1.5 mm²		
Flexible, min. H05(07) V-K	0.2 mm²		
Flexible, max. H05(07) V-K	1.5 mm²		
w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm² min.			
w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm² max.			
w. wire end ferrule, DIN 46228 pt 1, 0.2 mm² min.			
w. wire end ferrule, DIN 46228 pt 1, 1.5 mm² 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 mm²
	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 mm²
	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 mm²
	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 mm²
	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 mm²
	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, 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	320 V	Rated impulse voltage for surge voltage class/ pollution degree III/2	160 V
Rated impulse voltage for surge voltage class/ contamination degree III/3	160 V	Short-time withstand current resistance	3 x 1s with 100 A

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	154685-1318353
Rated voltage (Use group B / CSA)	300 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 28	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Rated data acc. to UL 1059

Institute (UR)		Certificate No. (UR)	E60693
Rated voltage (Use group B / UL 1059)	300 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 28	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	140 mm
VPE width	85 mm	VPE height	65 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

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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
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 solid 0.2 mm ² conductor cross-section
		Type of conductor and stranded 0.2 mm ² conductor cross-section
		Type of conductor and solid 1.5 mm ² conductor cross-section
		Type of conductor and stranded 1.5 mm ² conductor cross-section
		Type of conductor and AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
		Type of conductor and AWG 16/1 conductor cross-section
		Type of conductor and AWG 16/19 conductor cross-section
	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 AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor and 2 × AWG 24/1 conductor cross-section
		Type of conductor and 2 × AWG 24/19 with wire end ferrule conductor cross-section
	Evaluation	passed
	Requirement	0.4 kg
	Conductor type	Type of conductor and solid 1.5 mm ² conductor cross-section
		Type of conductor and stranded 1.5 mm ² conductor cross-section
		Type of conductor and AWG 16/7 conductor cross-section
	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 AWG 28/1 conductor cross-section
		Type of conductor and AWG 28/19 conductor cross-section
	Evaluation	passed
	Requirement	≥10 N
	Conductor type	Type of conductor and 2 × AWG 24/1 conductor cross-section
		Type of conductor and 2 × AWG 24/19 with wire end ferrule
	Evaluation	passed
	Requirement	≥40 N
	Conductor type	Type of conductor and H05V-U1.5 conductor cross-section
		Type of conductor and H05V-K1.5 conductor cross-section
		Type of conductor and AWG 16/7 conductor cross-section
	Evaluation	passed

Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	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
ECLASS 13.0	27-46-02-02	ECLASS 14.0	27-46-02-02
ECLASS 15.0	27-46-02-02		

Approvals

Approvals



Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319226/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319262/-T1z1mm-S800/
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (UR)	E60693

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

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Technical data**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. • 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

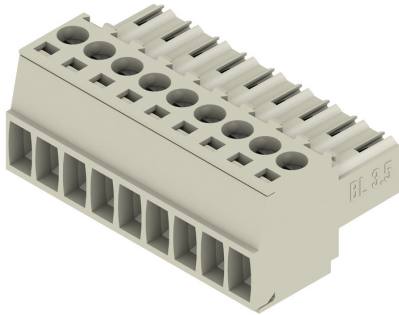
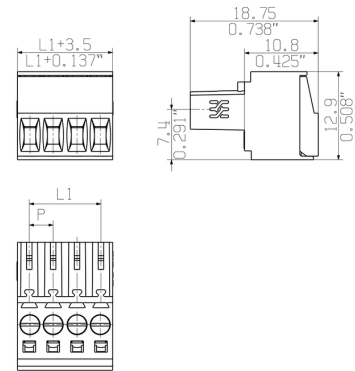
Downloads

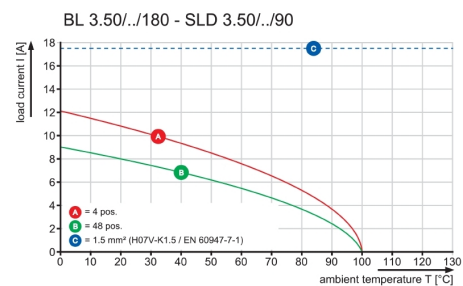
Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Catalogues	Catalogues in PDF-format
Brochures	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FL INDUSTR.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR EN FL APPL INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN

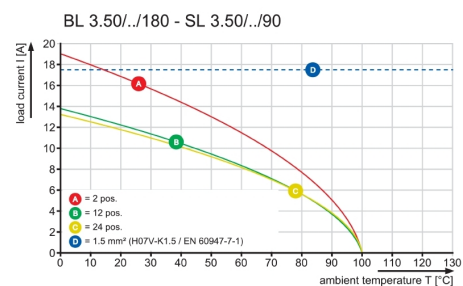
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Drawings
Product image

Dimensional drawing

Graph

Graph

Graph

Graph


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Accessories

Coding elements

**Only connects what is supposed to be connected: the right connection at the right place.**

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

General ordering data

Type	BL SL 3.5 KO SW	Version	Product data	Packaging
Order No.	1610100000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4008190187637	of poles: 1		
Qty.	100 pc(s).			
Type	BL SL 3.5 KO OR	Version	Product data	Packaging
Order No.	1693430000	PCB plug-in connector, Accessories, Coding element, orange, Number		Box
GTIN (EAN)	4008190867447	of poles: 1		
Qty.	100 pc(s).			

Technical drawing of a 4-bolt flange. The drawing shows a top view of the flange with four bolts. The dimensions are as follows:

- Overall diameter: $L1+3.5$
- Distance from center to bolt center: $L1+0.137"$
- Bolt diameter: $L1+7$
- Distance from center to bolt hole center: $L1+0.275"$
- Distance from center to bolt hole edge: $L1+10.5$
- Distance from center to bolt hole edge (including bolt diameter): $L1+0.413"$

M 1/1



Technical drawing of a screwdriver bit. The drawing shows the bit's profile with the following dimensions:

- Overall length: 18.75
- Overall width: 0.738"
- Top section height: 7.4
- Top section width: 0.291"
- Bottom section width: 10.8
- Bottom section width: 0.425"
- Bottom section height: 12.9
- Bottom section width: 0.508"

Orientation labels:

- SCREWDRIVER DIRECTION (indicated by an arrow pointing up)
- CONDUCTOR DIRECTION (indicated by an arrow pointing right)

Technical drawing of a screwdriver head showing dimensions and orientation. The drawing includes a side view and a top view. Dimensions are provided in inches.

Dimensions:

- Overall length: 7.4"
- Distance from handle to the start of the head: 0.291"
- Distance from the start of the head to the center of the screw hole: 18.75"
- Distance from the start of the head to the center of the screw hole (alternative measurement): 0.738"
- Distance from the start of the head to the center of the screw hole (alternative measurement): 21.5"
- Distance from the start of the head to the center of the screw hole (alternative measurement): 0.846"
- Distance from the start of the head to the center of the screw hole (alternative measurement): 10.8"
- Distance from the start of the head to the center of the screw hole (alternative measurement): 0.425"
- Distance from the start of the head to the center of the screw hole (alternative measurement): 12.9"
- Distance from the start of the head to the center of the screw hole (alternative measurement): 0.508"
- Distance from the start of the head to the center of the screw hole (alternative measurement): 15.58"
- Distance from the start of the head to the center of the screw hole (alternative measurement): 0.613"

Orientation:

- SCREWDRIVER DIRECTION (indicated by an arrow pointing right)
- CONDUCTOR DIRECTION (indicated by an arrow pointing right)

Technical drawing of the front view of the 'L' model. The drawing shows a symmetrical design with a central panel and side panels. Dimensions are provided for the overall width and the width of the central panel at different heights. The overall width is 6.9 units. The central panel width at the top is $L1+3.5$, at a height of $L1+0.137$ it is $L1+8.7$, at a height of $L1+0.342$ it is $L1+0.342$, at a height of $L1+9.9$ it is $L1+9.9$, and at the bottom it is $L1+0.389$.

Technical drawing of a screwdriver bit. The drawing includes the following dimensions and labels:

- SCREWDRIVER DIRECTION**: Indicated by an arrow pointing upwards.
- CONDUCTOR DIRECTION**: Indicated by an arrow pointing to the right.
- M 1/1**: A label next to a small screwdriver bit icon.
- Dimensions**:
 - Overall length: 0.929"
 - Length of the main body: 0.738"
 - Length of the handle section: 0.425"
 - Length of the tip section: 0.508"
 - Length of the tip section (dashed line): 0.684"
 - Length of the tip section (dashed line): 17.4
 - Length of the tip section (dashed line): 12.9
 - Length of the tip section (dashed line): 10.8
 - Length of the tip section (dashed line): 18.75
 - Length of the tip section (dashed line): 23.6

M 1/1

Technical drawing of the M 1/1 connector. The drawing includes the following dimensions and labels:

- SCREWDRIVER DIRECTION:** Indicated by an arrow pointing upwards.
- CONDUCTOR DIRECTION:** Indicated by an arrow pointing to the right.
- M 1/1:** Label for the connector type.
- Dimensions:**
 - Overall width: 29.5 (1.16")
 - Overall height: 12.9 (0.507")
 - Internal width: 21.6 (0.85")
- Assembly:** A detailed view of the connector assembly, showing the internal components and the screwdriver handle.

CONDUCTOR
DIRECTION

M 1/1

A diagram showing a cable with a connector. The cable has a braided shield and a central conductor. The connector is a multi-pin connector. A key symbol is shown next to the cable, indicating the conductor direction. The key symbol is a small rectangle with a diagonal line and the text "M 1/1".

Technical drawing of a mechanical part, likely a bracket or support, showing dimensions in millimeters (mm) and inches (").

Dimensions:

- Overall width: 110.8 mm (L1+10.8), 4.362" (L1+0.425")
- Top flange width: 34 mm (1.34")
- Top flange thickness: 2.6 mm (0.102")
- Overall height: 96 mm (3.78")
- Height of main body: 79 mm (3.09")
- Height of top flange: 41 mm (1.63")
- Height of bottom flange: 3 mm (0.118")
- Width of bottom flange: 145 mm (5.69")
- Width of base: 54 mm (2.12")

Notes:

- support area for release lever

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 POLZAH POLES	L1 [mm]	L1 [inch]

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

GENERAL TOLERANCE: DIN ISO 2768-m		103300/5 17.05.18 HELIS_MA 01		Weidmüller 		Cat.no.: ... 3 19675 (36)	
		Modification		Drawing no. ...		Issue no. ...	
		Date	Name	BL 3.50/..180 BUCHSENSTECKER FEMALE PLUG			
Drawn		02.09.2008	HELIS_MA	In Prüfung / Verification			
Responsible		AMANN_A		Product file: BL 3.50			
Checked		Approved		7382			
Scale: 5/1		LANG_T					
Supersedes: .							