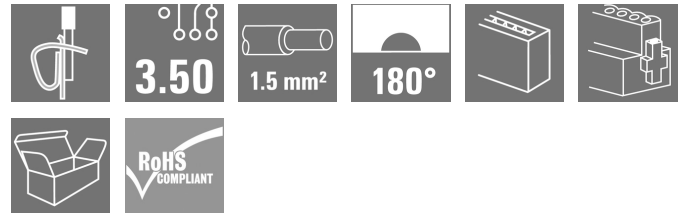


BLZF 3.50/12/180F SN OR BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Product image****Do not use product for new developments**

Female connectors with tension clamp system for connecting cables in 3.50 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: 12, 180°, Tension-clamp connection, Clamping range, max. : 1.5 mm², Box
Order No.	1690980000
Type	BLZF 3.50/12/180F SN OR BX
GTIN (EAN)	4008190329495
Qty.	50 pc(s).
Product data	IEC: 320 V / 14.5 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 26 - AWG 14
Packaging	Box
Delivery status	This article will no longer be available in the future.
Available until	2025-09-30
Alternative product	2459490000

Creation date May 6, 2025 2:38:58 AM CEST

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Technical data**Dimensions and weights**

Depth	21.9 mm	Depth (inches)	0.862 inch
Height	13 mm	Height (inches)	0.512 inch
Width	49 mm	Width (inches)	1.929 inch
Net weight	12 g		

System Parameters

Product family	OMNIMATE Signal - series BL/SL 3.50		
Type of connection	Field connection		
Wire connection method	Tension-clamp connection		
Pitch in mm (P)	3.5 mm		
Pitch in inches (P)	0.138 "		
Conductor outlet direction	180°		
Number of poles	12		
L1 in mm	38.5 mm		
L1 in inches	1.516 "		
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	10 mm		
Tightening torque for screw flange, min.	0.15 Nm		
Tightening torque for screw flange, max.	0.2 Nm		
Screwdriver blade	0.4 x 2.5		
Screwdriver blade standard	DIN 5264-A		
Plugging cycles	25		
Plugging force/pole, max.	7 N		
Pulling force/pole, max.	5 N		
Tightening torque	Torque type	Screw flange	
	Usage information	Tightening torque	min. 0.15 Nm max. 0.2 Nm

Material data

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	Contact material	Cu-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.	0.13 mm ²
Clamping range, max.	1.5 mm ²
Wire connection cross section AWG, min.	AWG 28

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Technical data

Wire connection cross section AWG, max.	AWG 16		
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, min.	0.2 mm ²		
w. plastic collar ferrule, DIN 46228 pt 4, max.	1 mm ²		
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		
Outer diameter of insulation, max.	2.9 mm		
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 12 mm
		Recommended wire-end ferrule	H0.5/16 OR
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0.5/10
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.75 mm ²
	wire end ferrule	Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H0.75/16 W
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0.75/10
	Cross-section for conductor connection	Type	fine-wired
		nominal	1 mm ²
	wire end ferrule	Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H1.0/16D R
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H1.0/10
	Cross-section for conductor connection	Type	fine-wired
		nominal	1.5 mm ²
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H1.5/10
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)	14.5 A
Rated current, max. number of poles (Tu=20°C)	10 A	Rated current, min. number of poles (Tu=40°C)	12 A
Rated current, max. number of poles (Tu=40°C)	8 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

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	200039-1461395
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 26	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 26	Wire cross-section, AWG, max.	AWG 14
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	166 mm
VPE width	115 mm	VPE height	85 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, rated voltage, rated cross-section, pitch, type of material, approval marking SEV, approval marking CSA
	Evaluation	available
	Test	approval marking UL
	Evaluation	on packaging label
	Test	durability
	Evaluation	passed

Creation date May 6, 2025 2:38:58 AM CEST

Catalogue status 26.04.2025 / We reserve the right to make technical changes.

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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 solid 0.2 mm ² conductor cross-section
		Type of conductor and stranded 0.5 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 solid 0.2 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
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor and stranded 0.5 mm ² 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 16/1 conductor cross-section
		Type of conductor and AWG 16/19 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 H05V-U0.2 conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
	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 16/1 conductor cross-section
		Type of conductor and AWG 16/19 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		

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	- 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. - 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 - Crimp shape A for wire-end ferrules with crimping tools PZ 1,5 (order no. 9005990000) or PZ 6/5 (order no. 9011460000) for larger wire cross-sections recommended. - P on drawing = pitch - 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

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

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D-32758 Detmold

Germany

www.weidmueller.com**Technical data****Downloads**Approval/Certificate/Document of Con-
formity[Declaration of the Manufacturer](#)

Engineering Data

[CAD data – STEP](#)

Product Change Notification

[PCN_2016_324_PL30_Aenderung_Flanschkontur_BLZF3.5_DE](#)[PCN_2016_324_PL30_change_flange_contour_BLZF3.5_EN](#)[20211010 BLZF 3.50180 - Änderung Außenkontur](#)[20211010 BLZF 3.50180 - Modification outer contour](#)

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](#)[FLIndustr.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](#)[PO OMNIMATE EN](#)

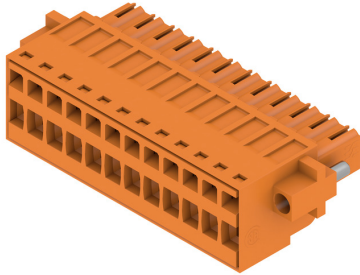
BLZF 3.50/12/180F SN OR BX

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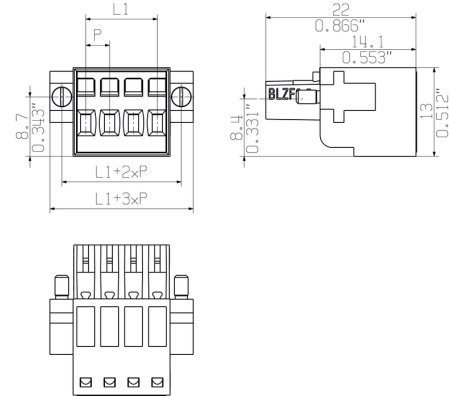
www.weidmueller.com

Drawings

Product image



Dimensional drawing



Graph



Graph



Graph



BLZF 3.50/12/180F SN OR BX

Weidmüller Interface GmbH & Co. KG

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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 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).			
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).			

Strain reliefs



For frequent load changes: the "trailer coupling" for plug-in connectors.

The strain relief can do more than just relieve the strain on conductors:

Simply clip onto the plug and

- bundle conductors
- guide cables
- use as a connection and disconnection aid

No damage to the connecting points, clear, tidy wiring and easy to handle.

User advantages: permanent heavy-duty connections for harsh industrial environments and convenient operation ensure improved system availability.

General ordering data

Type	BL 3.50 ZE08 OR BX	Version	Product data	Packaging
Order No.	1629690000	PCB plug-in connector, Accessories, Strain relief, orange, Number of		Box
GTIN (EAN)	4008190202583	poles: 8		
Qty.	50 pc(s).			
Type	BL 3.50 ZE03 BK BX	Version	Product data	Packaging
Order No.	1627820000	PCB plug-in connector, Accessories, Strain relief, black, Number of		Box
GTIN (EAN)	4008190202552	poles: 3		
Qty.	50 pc(s).			

BLZF 3.50/12/180F SN OR BX**Weidmüller Interface GmbH & Co. KG**

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Type	BL 3.50 ZE08 BK BX	Version	Product data	Packaging
Order No.	1627830000	PCB plug-in connector, Accessories, Strain relief, black, Number of		Box
GTIN (EAN)	4008190202576	poles: 8		
Qty.	50 pc(s).			
Type	BL 3.50 ZE03 OR BX	Version	Product data	Packaging
Order No.	1629680000	PCB plug-in connector, Accessories, Strain relief, orange, Number of		Box
GTIN (EAN)	4008190202569	poles: 3		
Qty.	50 pc(s).			

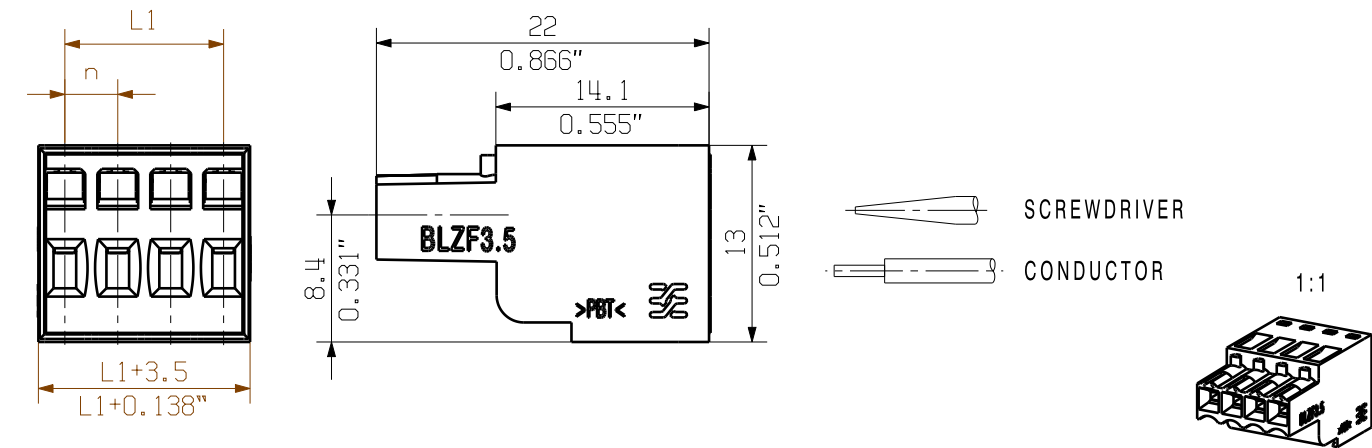
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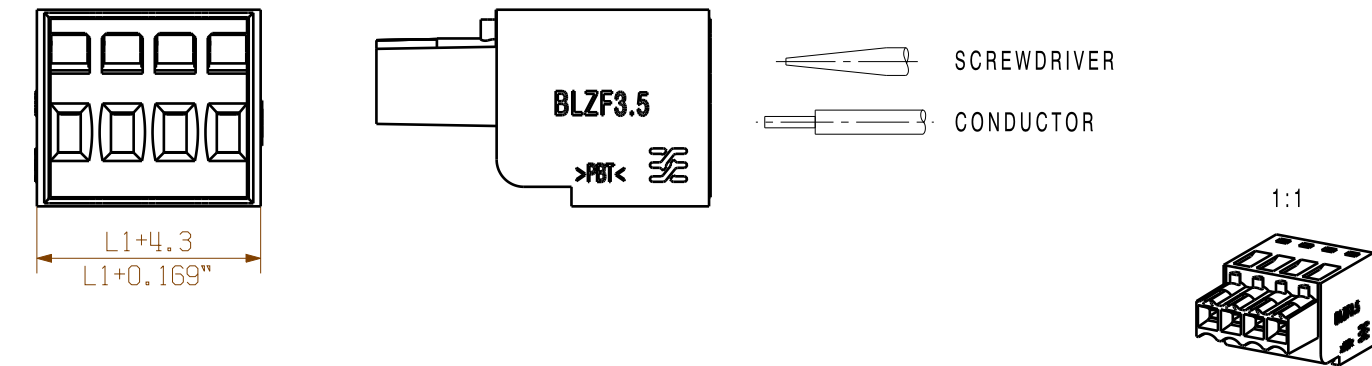
Dimensions without tolerances are no check dimensions

The English version is binding

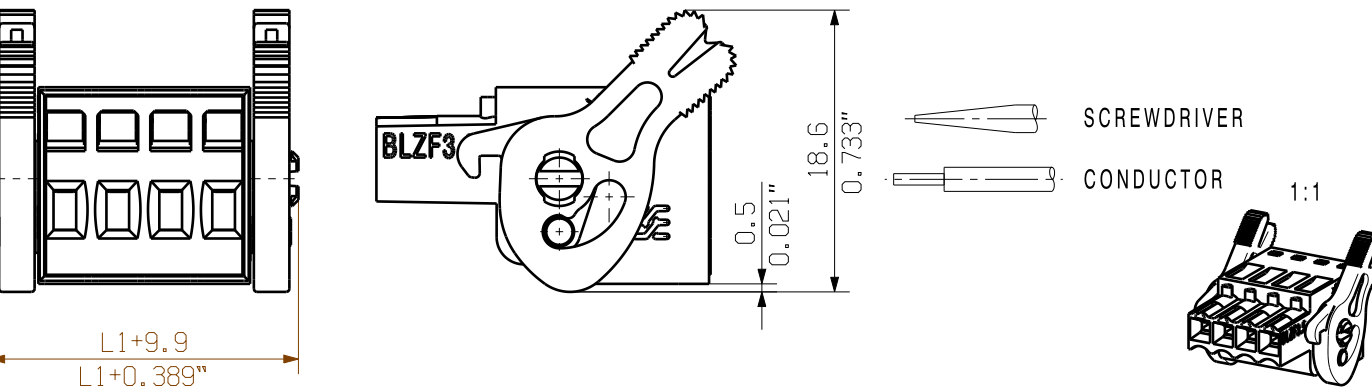
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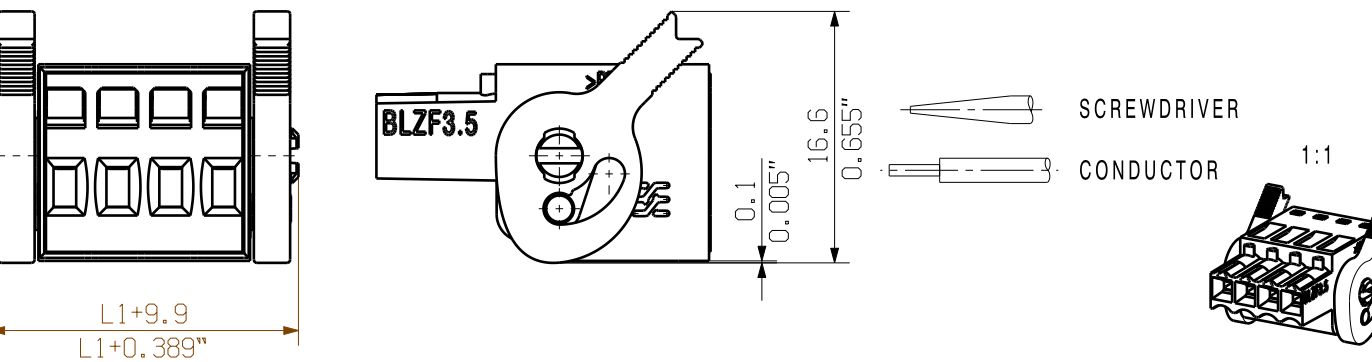
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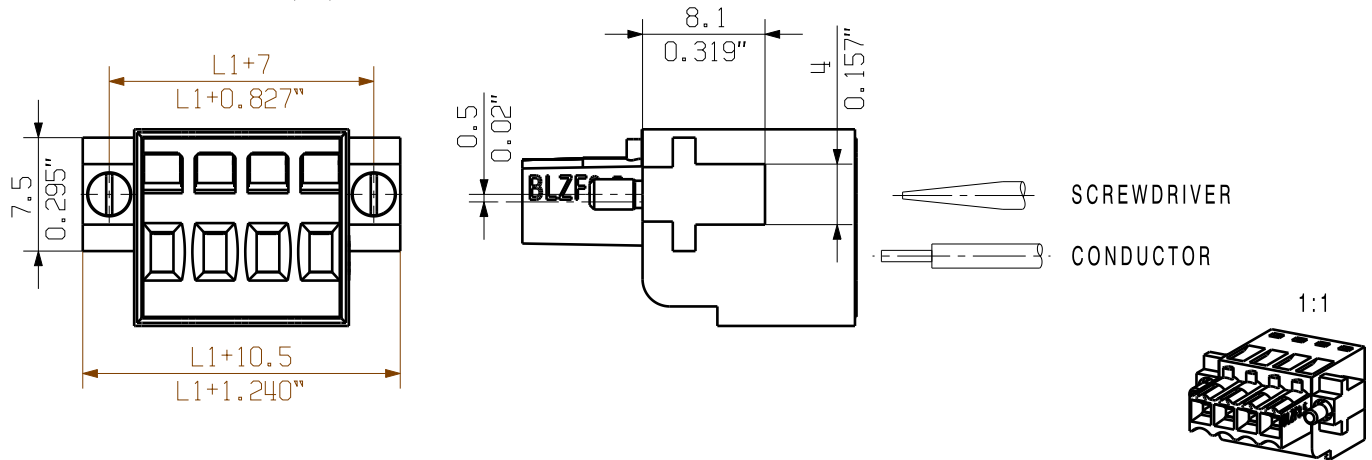
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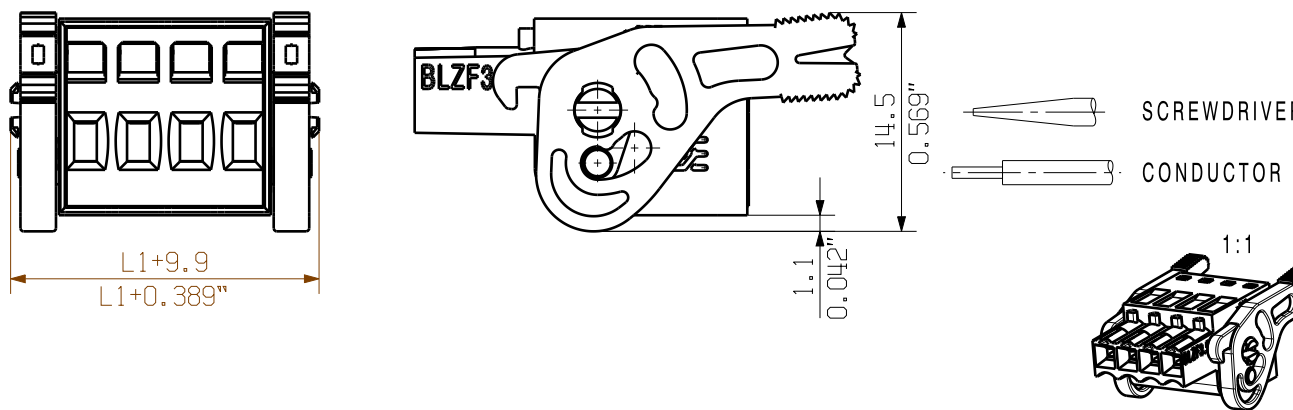
SHOWN:BLZF 3.50/04/180LH



SHOWN:BLZF 3.50/04/180F



SHOWN:BLZF 3.50/04/180LR REDESIGN



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

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
POLZAHL n POLES	L1 [mm]	L1 [inch]

 DIN ISO 2768-m	93783/5 24.11.17 HELIS_MA		02	Weidmüller 	Cat.no.: .	
	Modification				3 23142 Drawing no. Issue no.	20
			Date	Name	Sheet 01	of 01 sheets
	Drawn	10.12.2007	HELIS_MA	BLZF 3.50/./180.. BUCHSENSTECKER FEMALE PLUG		
	Responsible		AMANN_A			
Scale: 2/1	Checked	08.01.2018	HELIS_MA			
Supersedes: .	Approved		LANG_T	Product file: BLZF 3.50 7357		