

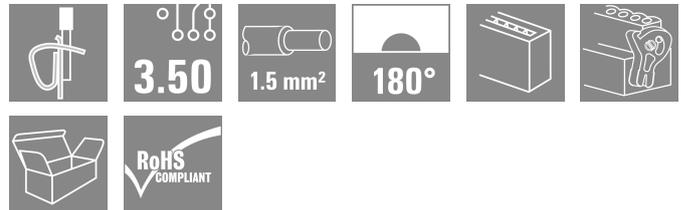
BLZF 3.50/05/180LR SN OR BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Do not use product for
 new developments

Product image



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: 5, 180°, Tension-clamp connection, Clamping range, max. : 1.5 mm², Box
Order No.	1531250000
Type	BLZF 3.50/05/180LR SN OR BX
GTIN (EAN)	4050118336337
Qty.	50 items
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	Discontinued
Available until	2025-09-30T00:00:00+02:00
Alternative product	BLF 3.50/05/180LR SN OR BX
Creation date	18.03.2026 09:30:36 MEZ

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Technical data

Approvals

ROHS	Conform
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Dimensions and weights

Depth	29.5 mm	Depth (inches)	1.1614 inch
Height	14.5 mm	Height (inches)	0.5709 inch
Width	23.9 mm	Width (inches)	0.9409 inch
Net weight	4.82 g		

Environmental Product Compliance

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

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)	3.50 mm
Pitch in inches (P)	0.138 "	Conductor outlet direction	180°
Number of poles	5	L1 in mm	14.00 mm
L1 in inches	0.551 "	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
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		

Material data

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Moisture Level (MSL)	
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
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

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w. plastic collar ferrule, DIN 46228 pt 4, 1 mm²
 max.

w. wire end ferrule, DIN 46228 pt 1,
 min. 0.2 mm²

w. wire end ferrule, DIN 46228 pt 1,
 max. 1.5 mm²

Outer diameter of insulation, max. 2.90 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	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	wire end ferrule	Type	fine-wired
		nominal	0.75 mm ²
wire end ferrule	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	wire end ferrule	Type	fine-wired
		nominal	1 mm ²
wire end ferrule	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	wire end ferrule	Type	fine-wired
		nominal	1.5 mm ²
wire end ferrule	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.

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

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

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Rated data acc. to UL 1059

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

Packing

Packaging	Box	VPE length	130.00 mm
VPE width	105.00 mm	VPE height	65.00 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	
Test: Clampable cross section	Evaluation	passed	
	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 0.5 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	solid 0.2 mm ²
		Type of conductor and conductor cross-section	AWG 28/1
		Type of conductor and conductor cross-section	AWG 28/19
	Evaluation	passed	

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

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.

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Technical data

- 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

Classifications

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

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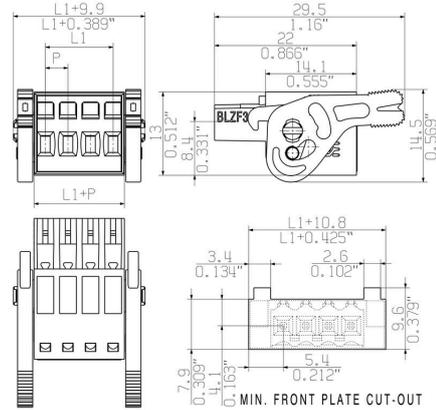
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Drawings

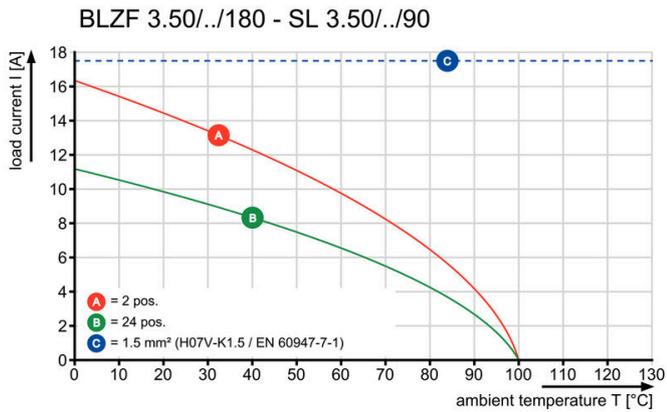
Product image



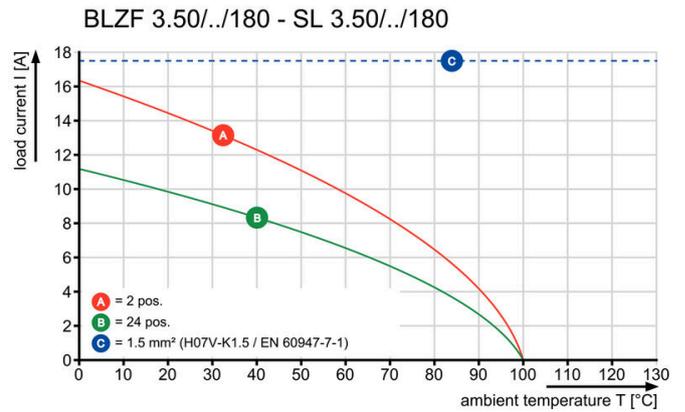
Dimensional drawing



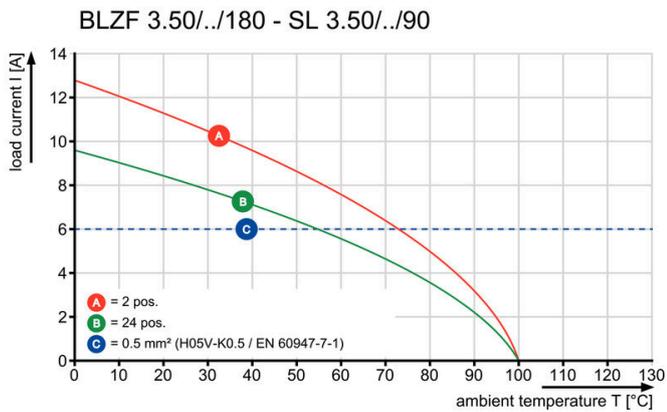
Graph



Graph



Graph



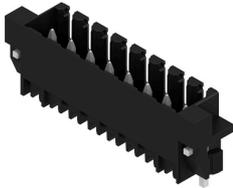
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Counterpart

SL-SMT 3.5/180RF

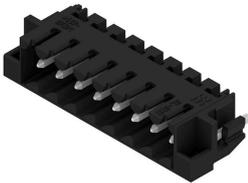


- High-temperature-resistant male header, 3.50 mm pitch.
- Plugging direction parallel (90°), straight 180° or angled (135°) to PCB
 - Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)
 - Optimised for the SMT process
 - Pin length 3.2 mm universal for all soldering methods
 - Pin length 1.5 mm optimised for reflow soldering methods
 - Packed either in a box (BX) or tape-on-reel (RL)
 - Male header can be coded

General ordering data

Type	SL-SMT 3.50/05/180RF 1...	Version
Order No.	1291320000	PCB plug-in connector, male header, Clip-on flange, THT/THR solder
GTIN (EAN)	4050118085358	connection, 3.50 mm, Number of poles: 5, 180°, Solder pin length (l):
Qty.	50 ST	1.5 mm, tinned, black, Box

SL-SMT 3.5/90RF



- High-temperature-resistant male header, 3.50 mm pitch.
- Plugging direction parallel (90°), straight 180° or angled (135°) to PCB
 - Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)
 - Optimised for the SMT process
 - Pin length 3.2 mm universal for all soldering methods
 - Pin length 1.5 mm optimised for reflow soldering methods
 - Packed either in a box (BX) or tape-on-reel (RL)
 - Male header can be coded

General ordering data

Type	SL-SMT 3.50/05/90RF 1.5...	Version
Order No.	1000610000	PCB plug-in connector, male header, Clip-on flange, THT/THR solder
GTIN (EAN)	4032248822348	connection, 3.50 mm, Number of poles: 5, 90°, Solder pin length (l):
Qty.	50 ST	1.5 mm, tinned, black, Box