

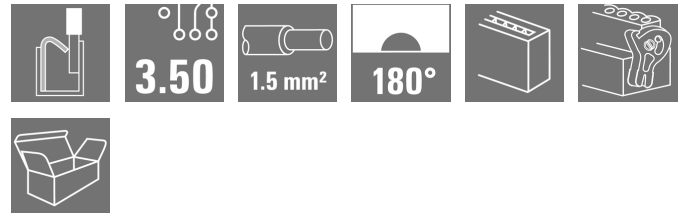
BLF 3.50/09/180LR SN OR BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

Connect efficiently - in a small space: female header with spring connection (PUSH IN) as a plug-in connection level; used together with male headers in 3.50 mm pitch.

General ordering data

Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 9, 180°, PUSH IN with actuator, Clamping range, max. : 1.5 mm², Box
Order No.	2459750000
Type	BLF 3.50/09/180LR SN OR BX
GTIN (EAN)	4050118475166
Qty.	48 pc(s).
Product data	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm² UL: 300 V / AWG 26 - AWG 16
Packaging	Box

Creation date July 3, 2024 5:37:52 PM CEST

Catalogue status 29.06.2024 / We reserve the right to make technical changes.

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Technical data

Dimensions and weights

Depth	30.05 mm	Depth (inches)	1.183 inch
Height	15.08 mm	Height (inches)	0.594 inch
Width	38.4 mm	Width (inches)	1.512 inch
Net weight	9 g		

System Parameters

Product family OMNIMATE Signal - series BL/SL 3.50

Type of connection Field connection

Wire connection method PUSH IN with actuator

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 mm²

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 8 mm

Stripping length tolerance	min.	0 mm
	max.	1 mm

Screwdriver blade 0.4 x 2.5

Screwdriver blade standard DIN 5264-A

Plugging cycles 25

Plugging force/pole, max. 6 N

Pulling force/pole, max. 6 N

Material data

Insulating material PA GF Colour orange

Colour chart (similar) RAL 2000 Insulating material group II

Comparative Tracking Index (CTI) ≥ 400, ≤ 600 UL 94 flammability rating V-0

Contact material Cu-alloy Contact surface tinned

Storage temperature, min. -40 °C Storage temperature, max. 70 °C

Operating temperature, min. -50 °C Operating temperature, max. 120 °C

Temperature range, installation, min. -30 °C Temperature range, installation, max. 100 °C

Conductors suitable for connection

Clamping range, min. 0.14 mm²Clamping range, max. 1.5 mm²

Wire connection cross section AWG, min. AWG 26

Wire connection cross section AWG, max. AWG 16

Solid, min. H05(07) V-U 0.14 mm²Solid, max. H05(07) V-U 1.5 mm²

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Technical data

Flexible, min. H05(07) V-K	0.14 mm²		
Flexible, max. H05(07) V-K	1.5 mm²		
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.25 mm²		
w. plastic collar ferrule, DIN 46228 pt 4, max.	1 mm²		
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm²		
w. wire end ferrule, DIN 46228 pt 1, max.	1 mm²		
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	0.25 mm²
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0.25/12 HBL
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.34 mm²
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0.34/12 TK
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm²
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0.5/14 OR
Cross-section for conductor connection	Type	fine-wired	
	nominal	0.75 mm²	
wire end ferrule	Stripping length	nominal 10 mm	
	Recommended wire-end ferrule	H0.75/14T HBL	
Cross-section for conductor connection	Type	fine-wired	
	nominal	1 mm²	
wire end ferrule	Stripping length	nominal 10 mm	
	Recommended wire-end ferrule	H1.0/14 GE	
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)	17.5 A
Rated current, max. number of poles (Tu=20°C)	14.7 A	Rated current, min. number of poles (Tu=40°C)	17.1 A
Rated current, max. number of poles (Tu=40°C)	13.1 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	1 x 1s with 120 A

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Technical data**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 D / CSA)	10 A
Wire cross-section, AWG, max.	AWG 16

Rated voltage (Use group C / CSA)	50 V
Rated current (Use group B / CSA)	10 A
Wire cross-section, AWG, min.	AWG 26

Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

Rated voltage (Use group B / UL 1059)	300 V
Rated voltage (Use group D / UL 1059)	300 V
Wire cross-section, AWG, min.	AWG 26
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group C / UL 1059)	50 V
Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, max.	AWG 16

Packing

Packaging	Box	VPE length	338 mm
VPE width	130 mm	VPE height	33 mm

Type tests

Visual and dimensional test	Standard	IEC 60512-1-1:2002-02
	Test	dimensional inspection
	Evaluation	passed
	Standard	IEC 60512-1-2:2002-02
	Test	weight check
	Evaluation	passed
	Standard	IEC 61984:2001-10 section 6.2
	Test	visual examination
Test: Durability of markings	Evaluation	passed
	Standard	IEC 60068-2-70:1995-12 test Xb
	Test	mark of origin, type identification, pitch, type of material, date clock, approval marking UL, approval marking CSA
	Evaluation	available
	Test	durability
Test: Misengagement (Non-interchangeability)	Evaluation	passed
	Standard	IEC 60512-13-5:2006-02
	Test	180° turned with coding elements
	Evaluation	passed
	Test	180° turned without coding elements
	Evaluation	passed
	Test	visual examination
	Evaluation	passed

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Test: Clampable cross section	Standard	IEC 60999-1:1999-11 section 9.1, IEC 60947-1:2011-03 section 8.2.4.5.1	
	Conductor type	Type of conductor and solid 0.14 mm ² conductor cross-section	
		Type of conductor and stranded 0.14 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 26/1 conductor cross-section	
		Type of conductor and AWG 26/19 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	IEC 60999-1:1999-11 section 9.4 bzw. section 8.10	
	Requirement	0.2 kg	
	Conductor type	Type of conductor and AWG 26/1 conductor cross-section	
		Type of conductor and AWG 26/19 conductor cross-section	
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section	
		Type of conductor and H05V-K0.5 conductor cross-section	
	Evaluation	passed	
	Requirement	0.4 kg	
	Conductor type	Type of conductor and H07V-U1.5 conductor cross-section	
		Type of conductor and H07V-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	

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Technical data

Pull-out test	Standard	IEC 60999-1:1999-11 section 9.5
	Requirement	≥10 N
	Conductor type	Type of conductor and AWG 26/1 conductor cross-section
		Type of conductor and AWG 26/19 conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor and H05V-U0.5 conductor cross-section
		Type of conductor and H05V-K0.5 conductor cross-section
	Evaluation	passed
	Requirement	≥40 N
	Conductor type	Type of conductor and H07V-U1.5 conductor cross-section
		Type of conductor and H07V-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
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

Environmental Product Compliance

REACH SVHC

/

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www.weidmueller.com**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	<ul style="list-style-type: none"> • Additional variants on request • Gold-plated contact surfaces on request • Rated current related to rated cross-section & min. No. of poles. • 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

Approvals

Approvals



UL File Number Search	UL Website
Certificate No. (cULus)	E60693

Downloads

Engineering Data	CAD data – STEP
Product Change Notification	Change of Material LR 3.50 - DE Change of Material LR 3.50 - EN
Catalogues	Catalogues in PDF-format

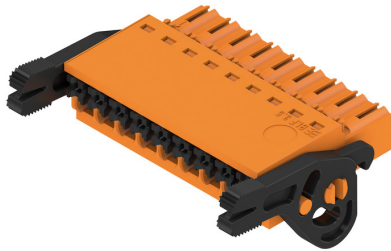
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Drawings

Product image



Dimensional drawing



Derating curve



Derating curve



Product benefits



Solid PUSH IN contact
Safe and durable