

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26 D-32758 Detmold Germany

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Product image















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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: 12, 180°, PUSH IN with actua-	
	tor, Clamping range, max.: 1.5 mm², Box	
Order No.	<u>2459670000</u>	
Туре	BLF 3.50/12/180F SN BK BX	
GTIN (EAN)	4050118475081	
Qty.	36 items	
Product data	IEC: 320 V / 17.5 A / 0.14 - 1.5 mm ²	
	UL: 300 V / 10 A / AWG 26 - AWG 16	
Packaging	Вох	



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Technical data

Αp	prova	ls
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Approvals	c FU *us
ROHS	Conform
UL File Number Search	<u>UL Website</u>
Certificate No. (cURus)	E60693

Dimensions and weights

Depth	22.7 mm	Depth (inches)	0.8937 inch
Height	9 mm	Height (inches)	0.3543 inch
Width	49 mm	Width (inches)	1.9291 inch
Net weight	8.77 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	PUSH IN with actuator			
Pitch in mm (P)	3.50 mm			
Pitch in inches (P)	0.138 "			
Conductor outlet direction	180°			
Number of poles	12			
L1 in mm	38.50 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	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			
Tightening torque	Torque type	Screw flange		
	Usage information	Tightening torque	min.	0.15 Nm
			max.	0.2 Nm





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Material data

Insulating material	PA GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 400, ≤ 600	Moisture Level (MSL)	
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 mm ²
Clamping range, max.	1.5 mm ²
Wire connection cross section AWG, min.	AWG 26
Wire connection cross section AWG, max.	AWG 16
Solid, min. H05(07) V-U	0.14 mm ²
Solid, max. H05(07) V-U	1.5 mm ²
Flexible, min. H05(07) V-K	0.14 mm ²
Flexible, max. H05(07) V-K	1.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4 min.	4, 0.28 mm²
w. plastic collar ferrule, DIN 46228 pt 4 max.	4, 1 mm²
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm ²
w. wire end ferrule, DIN 46228 pt 1, max.	1 mm ²
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 mm ²	
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 mm ²	
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 mm ²	
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 mm ²	
wire end ferrule	Stripping length	nominal 10 mm	
	Recommended wire- end ferrule	H0,75/14T HBL	
Cross-section for conductor connection	Туре	fine-wired	
	nominal	1 mm ²	
wire end ferrule	Stripping length	nominal 10 mm	
	Recommended wire- end ferrule	H1,0/14 GE	





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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

Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group C / CSA)	50 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 16
Wire cross-section, AWG, max	AWG 26		

Rated data acc. to UL 1059

Institute (cURus)	CURUS	Certificate No. (cURus)	E60693
Rated voltage (Use group B / UL 1059)	300 V	Rated voltage (Use group C / UL 1059)	50 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 16	Reference to approval values	Specifications are maximum values, details - see approval certificate.

Packing

Packaging	Box	VPE length	349.00 mm
VPE width	139.00 mm	VPE height	32.00 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	
	Evaluation	passed	
Test: Durability of markings	Standard	IEC 60068-2-70:1995-12 test Xb	
	Test	mark of origin, type identification, pitch, typ of material, date clock, approval marking UL approval marking CSA	
	Evaluation	available	
	Test	durability	
	Evaluation	passed	
Test: Misengagement (Non- interchangeability)	Standard	IEC 60512-13-5:2006-02	

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	Test	180° turned with coding elements
	Evaluation	passed
	Test	180° turned without coding elements
	Evaluation	passed
	Test	visual examination
	Evaluation	passed
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 solid 0.14 mm ² and conductor cross-section
		Type of conductor stranded 0.14 mm ² and conductor cross-section
		Type of conductor solid 1.5 mm ² and conductor cross-section
		Type of conductor stranded 1.5 mm ² and conductor cross-section
		Type of conductor AWG 26/1 and conductor cross-section
		Type of conductor AWG 26/19 and conductor cross-section
		Type of conductor AWG 16/1 and conductor cross-section
		Type of conductor AWG 16/19 and conductor cross-section
	Evaluation	passed
est for damage to and accidental osening of conductors	Standard	IEC 60999-1:1999-11 section 9.4 bzw. sectio 8.10
	Requirement	0.2 kg
	Conductor type	Type of conductor AWG 26/1 and conductor cross-section
		Type of conductor AWG 26/19 and conductor cross-section
	Evaluation	passed
	Requirement	0.3 kg
	Conductor type	Type of conductor H05V-U0.5 and conductor cross-section
		Type of conductor H05V-K0.5 and conductor cross-section
	Evaluation	passed
	Requirement	0.4 kg
	Conductor type	Type of conductor H07V-U1.5 and conductor cross-section
		Type of conductor H07V-K1.5 and conductor cross-section
		Type of conductor AWG 16/1 and conductor cross-section





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		Type of conductor AWG 16/19 and conductor cross-section
	Evaluation	passed
Pull-out test	Standard	IEC 60999-1:1999-11 section 9.5
	Requirement	≥10 N
	Conductor type	Type of conductor AWG 26/1 and conductor cross-section
		Type of conductor AWG 26/19 and conductor cross-section
	Evaluation	passed
	Requirement	≥20 N
	Conductor type	Type of conductor H05V-U0.5 and conductor cross- section
		Type of conductor H05V-K0.5 and conductor cross- section
	Evaluation	passed
	Requirement	≥40 N
	Conductor type	Type of conductor H07V-U1.5 and conductor cross- section
		Type of conductor H07V-K1.5 and conductor cross- section
		Type of conductor AWG 16/1 and conductor cross-section
		Type of conductor AWG 16/19 and conductor cross-section
	Evaluation	passed

Important note

Notes

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.

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
- \bullet Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

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

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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		



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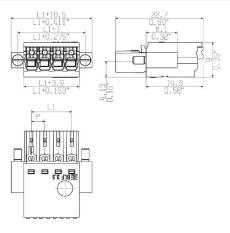
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Drawings

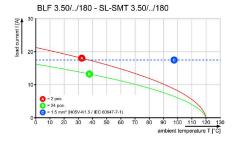
Product image



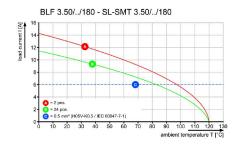
Dimensional drawing



Derating curve



Derating curve



Product benefits



Solid PUSH IN contactSafe and durable