



Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26 D-32758 Detmold Germany

www.weidmueller.com

Product image





















Similar to illustration

Female plugs with spring connection (PUSH IN) as a plugin connection level for decentralised I/O electronic components; used together with male headers in a 3.50-mm pitch.

General ordering data

Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 10, 180°, PUSH IN with actua- tor, Clamping range, max. : 1.5 mm², Box
Order No.	<u>1779870000</u>
Туре	BL-I/O 3.50/10FP SN BK BX
GTIN (EAN)	4032248165193
Qty.	20 items
Product data	IEC: 200 V / 2.2 A / 0.2 - 1.5 mm ² UL: 50 V / 5 A / AWG 24 - AWG 16
Packaging	Вох





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Technical data

Approvals

Approvals



ROHS	Conform
UL File Number Search	<u>UL Website</u>
Certificate No. (UR)	E60693

Dimensions and weights

Depth	27 mm	Depth (inches)	1.063 inch
Height	10.3 mm	Height (inches)	0.4055 inch
Width	42 mm	Width (inches)	1.6535 inch
Net weight	11.15 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	10			
L1 in mm	31.50 mm			
L1 in inches	1.240 "			
Number of rows	1			
Pin series quantity	2			
Rated cross-section	1 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			
Volume resistance	≤5 mΩ			
Can be coded	Yes			
Stripping length	8 mm			
Screwdriver blade	0.4 x 2.5			
Screwdriver blade standard	DIN 5264			
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

Material data

Insulating material	PBT	Colour	black	
Colour chart (similar)	RAL 9011	Insulating material group	IIIa	

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fine-wired

0.75 mm²

nominal

H0,75/14T HBL

10 mm

Type

nominal

end ferrule

Stripping length

Recommended wire-

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Comparative Tracking Index (CTI)	≥ 200	Moisture Level (MSL)	
UL 94 flammability rating	V-0	Contact base material	Cu-alloy
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.	75 °C
Temperature range, installation, min.	-30 °C	Temperature range, installation, max.	75 °C

Conductors suitable for connection

Clamping range, min.	0.2 mm ²		
Clamping range, max.	1.5 mm ²		
Wire connection cross section AWG, min.	AWG 24		
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		<u> </u>
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 min.	4, 0.2 mm ²		
w. plastic collar ferrule, DIN 46228 pt max.	4, 0.75 mm²		
w. wire end ferrule, DIN 46228 pt 1, min.	0.2 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; 1.9mm		
Clampable conductor	Cross-section for conductor connection	Туре	fine-wired
		nominal	0.25 mm ²

Clampable conductor	Closs section for conductor connection	Турс	III C WIICG
		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

wire end ferrule

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	2.2 A
Rated current, max. number of poles (Tu=20°C)	2 A	Rated current, min. number of poles (Tu=40°C)	2.2 A
Rated current, max. number of poles (Tu=40°C)	2 A	Rated voltage for surge voltage class / pollution degree II/2	200 V
Rated voltage for surge voltage class / pollution degree III/2	160 V	Rated voltage for surge voltage class / pollution degree III/3	50 V

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Rated impulse voltage for surge voltage 2500 V class/ pollution degree II/2	Rated impulse voltage for surge voltage 2.5 kV class/ pollution degree III/2
Rated impulse voltage for surge voltage 0.8 kV class/ contamination degree III/3	Short-time withstand current resistance 3 x 1s with 120 A

Rated data acc. to CSA

Institute (CSA)	CSA	Certificate No. (CSA)	200039-1202189
Rated voltage (Use group B / CSA)	50 V	Rated voltage (Use group D / CSA)	50 V
Rated current (Use group B / CSA)	5 A	Rated current (Use group D / CSA)	5 A
Wire cross-section, AWG, min.	AWG 22	Wire cross-section, AWG, max.	AWG 16
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Rated data acc. to UL 1059

Institute (UR)	UR	Certificate No. (UR)	E60693
Rated voltage (Use group B / UL 1059)	50 V	Rated voltage (Use group D / UL 1059)	50 V
Rated current (Use group B / UL 1059)	5 A	Rated current (Use group D / UL 1059)	5 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 16
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	126.00 mm
VPE width	91.00 mm	VPE height	40.00 mm

Type tests

Test: Durability of markings	Standard	draft DIN VDE 0627 section 6.2.2 / 09.91	
	Test	mark of origin, type identification, pitch, type of material	
	Evaluation	available	
	Test	durability	
	Evaluation	passed	
Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DI EN 60947-1 section 8.2.4.5.1 / 12.99	
	Conductor type	Type of conductor solid 0.2 mm ² and conductor cross-section	
		Type of conductor stranded 0.2 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 24/1 and conductor cross-section	
		Type of conductor AWG 24/19 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	
T4.6 d 4did4-1	Evaluation	passed	
Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999 section 8.4 / 04.94	
	Requirement Conductor type	O.2 kg Type of conductor stranded 0.05 mm² and conductor cross- section	
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor solid 0.5 mm ² and conductor cross-section	
		Type of conductor AWG 24/1 and conductor cross-section	
		Type of conductor AWG 24/19 and conductor cross-section	
	Evaluation	passed	
	Requirement	0.4 kg	
	Conductor type	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 16/1 and conductor cross-section	
		Type of conductor AWG 16/19 and conductor cross-section	
	Evaluation	passed	
Pull-out test	Standard	DIN EN 60999 section 8.5 / 04.94	
	Requirement	≥10 N	
	Conductor type	Type of conductor AWG 24/1 and conductor cross-section	
		Type of conductor AWG 24/19 and conductor cross-section	
	Evaluation	passed	
	Requirement	≥30 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 H05V-U1.5 and conductor cross- section	
		Type of conductor H05V-K1.5 and conductor cross-section	
	Evaluation	passed	





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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. P on drawing = pitch Crimp form A for wire end ferrules with PZ 6/5 crimping tool are recommended for the largest cable sizes. Total load-carrying capacity of the potential bridges when feeding with 1.5 mm² is max. 17.5 A (so the capacity is 2.18 A for poles 2 through 9) Wire end ferrule without plastic collar to DIN 46228/1 Wire end ferrule with plastic collar to DIN 46228/4 Conductor < 0.2 mm² tinned Max. outer diameter of the conductor: 2.9 mm 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 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		



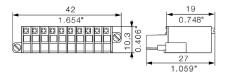
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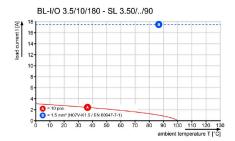
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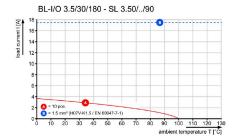
Drawings

Dimensional drawing



Graph Graph

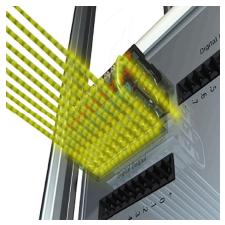




Product benefits

Solid PUSH IN contactSafe and durable

Product benefits



Multiplies the potentialLow wiring costs



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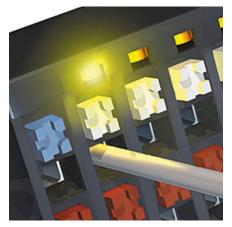
Drawings

Product benefits



PUSH IN - fast and secureInvented by Weidmüller

Product benefits



Integrated electronicsFor more space on the circuit board