

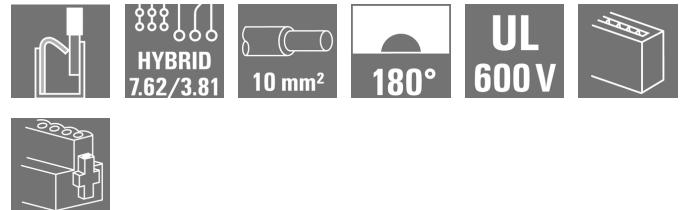
BVF 7.62HP/4/180MSF4 BCF/4 SNBKBX SH180**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

180° female plug with energy and signal contacts in PUSH IN wire connection in 7.62 pitch.
Fulfils the IEC 61800-5-1 requirement and for the energy contact UL 1059 ClassC 600 V.

The self-locking middle flange with automatic interlock reduces the space requirements by one pitch width in comparison with conventional solutions. Optionally also available with additional mounting screw.

Including pre-assembled pluggable shield connection for large area shielding in your application.

Directly during the plug-in process itself, the shield connection is attached vibration-proof to the contact area of the metal housing.

General ordering data

Version	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 4, 180°, PUSH IN with actuator, PUSH IN without actuator, Clamping range, max. : 10 mm², Box
Order No.	2681780000
Type	BVF 7.62HP/4/180MSF4 BCF/4 SNBKBX SH180
GTIN (EAN)	4050118691436
Qty.	20 pc(s).
Product data	IEC: 800 V / 38 A / 0.5 - 10 mm² UL: / AWG 24 - AWG 8
Packaging	Box

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Technical data**Dimensions and weights**

Net weight	43.37 g
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System Parameters

Product family		Type of connection	
OMNIMATE Power - series BV/SV 7.62HP		Field connection	
Wire connection method		Pitch in mm (P)	
PUSH IN with actuator, PUSH IN without actuator		7.62 mm	
Pitch in inches (P)		Conductor outlet direction	
0.3 "		180°	
Number of poles		L1 in mm	
4		30.48 mm	
L1 in inches		L2 in mm	
1.2 "		3.81 mm	
L2 in inch		Number of rows	
0.15 "		1	
Pin series quantity		Rated cross-section	
1		6 mm ²	
Touch-safe protection acc. to DIN VDE 57 106		Touch-safe protection acc. to DIN VDE 0470	
Safe from finger touch		IP 20	
Volume resistance		Can be coded	
4.50 mΩ		Yes	
Stripping length		Tightening torque for screw flange, min.	
12 mm		0.2 Nm	
Tightening torque for screw flange, max.		Screwdriver blade	
0.3 Nm		0.6 x 3.5	
Plugging cycles		Plugging force/pole, max.	
25		17 N	
Pulling force/pole, max.			
15 N			

Material data

Insulating material		Colour	
PA GF		black	
Colour chart (similar)		Insulating material group	
RAL 9011		II	
Comparative Tracking Index (CTI)		UL 94 flammability rating	
≥ 500		V-0	
Contact material		Contact surface	
Cu-alloy		tinned	
Layer structure of plug contact		Storage temperature, min.	
6...8 µm Sn glossy		-40 °C	
Storage temperature, max.		Operating temperature, min.	
70 °C		-50 °C	
Operating temperature, max.		Temperature range, installation, min.	
125 °C		-25 °C	
Temperature range, installation, max.			
125 °C			

Conductors suitable for connection

Clamping range, min.	
0.5 mm ²	
Clamping range, max.	
10 mm ²	
Solid, min. H05(07) V-U	
0.5 mm ²	
Solid, max. H05(07) V-U	
10 mm ²	
Stranded, max. H07V-R	
10 mm ²	
Flexible, min. H05(07) V-K	
0.5 mm ²	
Flexible, max. H05(07) V-K	
10 mm ²	
w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm ² min.	
w. plastic collar ferrule, DIN 46228 pt 4, 6 mm ² max.	
w. wire end ferrule, DIN 46228 pt 1, min.	
1.5 mm ²	
w. wire end ferrule, DIN 46228 pt 1, max.	
10 mm ²	

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Technical data

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm ²
wire end ferrule		Stripping length	nominal 14 mm
		Recommended wire-end ferrule	H0.5/18 OR
Cross-section for conductor connection		Type	fine-wired
		nominal	1 mm ²
wire end ferrule		Stripping length	nominal 15 mm
		Recommended wire-end ferrule	H1.0/18 GE
Cross-section for conductor connection		Type	fine-wired
		nominal	1.5 mm ²
wire end ferrule		Stripping length	nominal 15 mm
		Recommended wire-end ferrule	H1.5/18D SW
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H1.5/12
Cross-section for conductor connection		Type	fine-wired
		nominal	0.75 mm ²
wire end ferrule		Stripping length	nominal 14 mm
		Recommended wire-end ferrule	H0.75/18 W
Cross-section for conductor connection		Type	fine-wired
		nominal	2.5 mm ²
wire end ferrule		Stripping length	nominal 14 mm
		Recommended wire-end ferrule	H2.5/19D BL
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H2.5/12
Cross-section for conductor connection		Type	fine-wired
		nominal	4 mm ²
wire end ferrule		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H4.0/12
		Stripping length	nominal 14 mm
		Recommended wire-end ferrule	H4.0/20D GR
Cross-section for conductor connection		Type	fine-wired
		nominal	6 mm ²
wire end ferrule		Stripping length	nominal 14 mm
		Recommended wire-end ferrule	H6.0/20 SW
		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H6.0/12
Cross-section for conductor connection		Type	fine-wired
		nominal	10 mm ²
wire end ferrule		Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H10.0/12
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)	38 A
Rated current, max. number of poles (Tu=20°C)	38 A	Rated current, min. number of poles (Tu=40°C)	34 A
Rated current, max. number of poles (Tu=40°C)	34 A	Rated voltage for surge voltage class / pollution degree II/2	800 V
Rated voltage for surge voltage class / pollution degree III/2	630 V	Rated voltage for surge voltage class / pollution degree III/3	630 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	6 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	6 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	6 kV	Short-time withstand current resistance	3 x 1s with 420 A
Clearance, min.	10.4 mm	Creepage distance, min.	12.7 mm

Rated data acc. to UL 1059

Rated voltage (Use group F / UL 1059)	600 V	Rated current (Use group F / UL 1059)	33 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 8

Packing

Packaging	Box	VPE length	350 mm
VPE width	130 mm	VPE height	60 mm

Technical data - hybrid

Pitch in mm (Signal)	3.81 mm	Pitch in inches (Signal)	0.15 inch
Number of poles (Signal)	4	L2 in mm	3.81 mm
L2 in inch	0.15 "	Number of rows (Signal)	2
Contact material (Signal)	CuMg	Contact surface (Signal)	tinned
Layer structure of the plug contact (Signal)	1-3 µ Ni / 4-8 µ Sn	Rated voltage for overvoltage class/pollution severity level II/2 (Signal)	250 V
Rated voltage for overvoltage class/pollution severity level III/2 (Signal)	150 V	Rated voltage for overvoltage class/pollution severity level III/3 (Signal)	63 V
Rated impulse voltage for overvoltage class/pollution severity level II/2 (Signal)	2.5 kV	Rated impulse voltage for overvoltage class/pollution severity level III/2 (Signal)	2.5 kV
Rated impulse voltage for overvoltage class/pollution severity level III/3 (Signal)	2.5 kV	Short-time withstand current resistance (Signal)	3 x 1s with 80 A
Connector cross-section (Signal)	AWG 26...AWG 16		

Conductors that can be connected - Hybrid

Clamping range, rated connection (Power)	0.5...10 mm ²	Clamping range, rated connection (Signal)	0.2...1.5 mm ²
Connector cross-section (Power)	AWG 24...AWG 8	Connector cross-section AWG (Signal)	AWG 26...AWG 16
solid, H05(07) V-U (Power)	0.5...10 mm ²	solid, H05(07) V-U (Signal)	0.14...1.5 mm ²
flexible, H05(07) V-K (Power)	0.5...6 mm ²	flexible, H05(07) V-K (Signal)	0.14...1.5 mm ²
with wire-end ferrule with collar (Power)	0.5...6 mm ²	with wire-end ferrule with collar, DIN 46 228/4 (Signal)	0.25...1.5 mm ²
with wire-end ferrule according to DIN 46 228/1 (Power)	0.5...6 mm ²	with wire-end ferrule according to DIN 46 228/1 (Signal)	0.25...1.5 mm ²

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Technical data**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	27-46-03-02	ECLASS 13.0	27-46-03-02

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"> • Technical specifications refer to the power contacts • Technical data of signal contacts: 50V / 5A, stripping length 8mm • Additional variants on request • Rated current related to rated cross-section & min. No. of poles. • Wire end ferrule with plastic collar to DIN 46228/4 • Wire end ferrule without plastic collar to DIN 46228/1 • 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

Downloads

Engineering Data	CAD data – STEP
Product Change Notification	20210408 OMNIMATE® Power – BVF(L) 7.62 HPIT fastening shielding plate 20210408 OMNIMATE® Power BVF(L) 7.62 HPIT Schirmblechbefestigung 20220201 Visual change OMNIMATE® Power PCB terminal blocks and connectors 20220201 Visuelle Änderung OMNIMATE® Power Leiterplattenklemmen und -steckverbinder 20220208 Visual change Temporarily different color for connectors and accessories 20220208 Visuelle Änderung Vorübergehend anderer Farbton für Steckverbinder und Zubehör
Catalogues	Catalogues in PDF-format

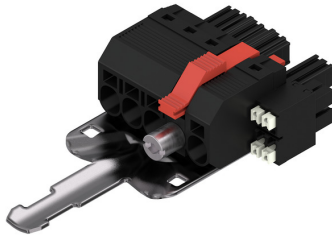
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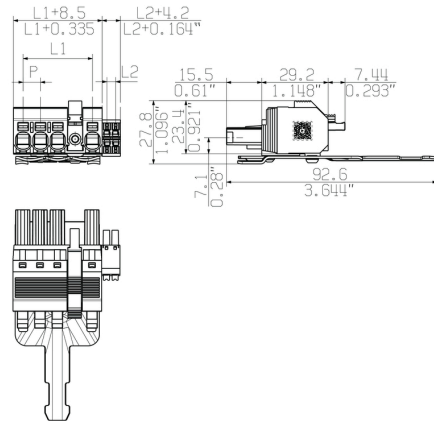
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Drawings

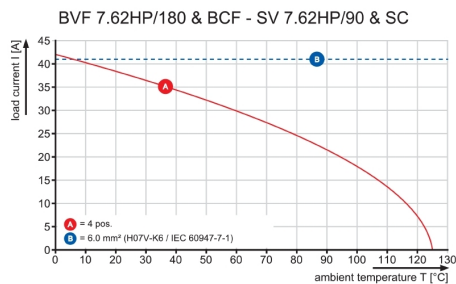
Product image



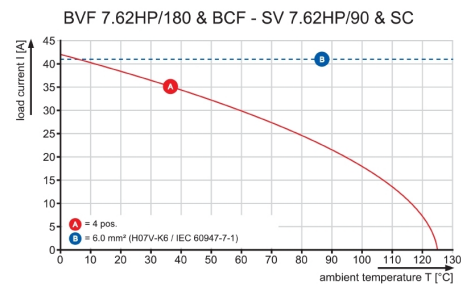
Dimensional drawing



Graph



Graph

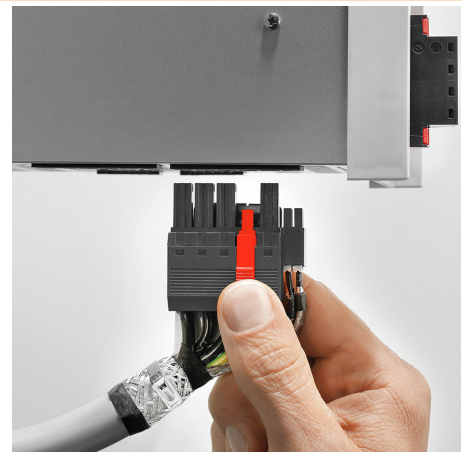


Product benefits



one connector for: Power, Signal (data) and Shielding

Product benefits



Single-handed operation
Automatic latching