

BVF 7.62HP/03/180MSF2 BCF/04R SN BK BX**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.

General ordering data

Version	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 3, 180°, PUSH IN with actuator, PUSH IN without actuator, Clamping range, max. : 10 mm², Box
Order No.	1157440000
Type	BVF 7.62HP/03/180MSF2 BCF/04R SN BK BX
GTIN (EAN)	4032248944897
Qty.	40 pc(s).
Product data	IEC: 1000 V / 38 A / 0.5 - 10 mm² UL: 600 V / 35 A / AWG 24 - AWG 8
Packaging	Box

Creation date July 5, 2024 9:44:50 PM CEST

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Technical data**Dimensions and weights**

Net weight	2 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	
3		22.86 mm	
L1 in inches		L2 in mm	
0.9 "		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	1,000 V
Rated voltage for surge voltage class / pollution degree III/2	1,000 V	Rated voltage for surge voltage class / pollution degree III/3	800 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	8 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	8 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 CSA

Institute (CSA)		Certificate No. (CSA)	200039-1121690
Rated voltage (Use group B / CSA)	600 V	Rated voltage (Use group C / CSA)	600 V
Rated voltage (Use group D / CSA)	600 V	Rated current (Use group B / CSA)	33 A
Rated current (Use group C / CSA)	33 A	Rated current (Use group D / CSA)	5 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 8
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Rated data acc. to UL 1059

Institute (cURus)		Certificate No. (cURus)	E60693
Rated voltage (Use group B / UL 1059)	600 V	Rated voltage (Use group C / UL 1059)	600 V
Rated voltage (Use group D / UL 1059)	600 V	Rated current (Use group B / UL 1059)	35 A
Rated current (Use group C / UL 1059)	35 A	Rated current (Use group D / UL 1059)	5 A
Wire cross-section, AWG, min.	AWG 24	Wire cross-section, AWG, max.	AWG 8
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	352 mm
VPE width	136 mm	VPE height	62 mm

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Technical data**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)	400 V
Rated voltage for overvoltage class/pollution severity level III/2 (Signal)	320 V	Rated voltage for overvoltage class/pollution severity level III/3 (Signal)	200 V
Rated impulse voltage for overvoltage class/pollution severity level II/2 (Signal)	4 kV	Rated impulse voltage for overvoltage class/pollution severity level III/2 (Signal)	4 kV
Rated impulse voltage for overvoltage class/pollution severity level III/3 (Signal)	4 kV	Short-time withstand current resistance (Signal)	3 x 1s with 80 A
Rated voltage (Use group B / CSA) (Signal)	300 V	Rated voltage (Use group C / CSA) (Signal)	50 V
Rated voltage (Use group D / CSA) (Signal)	300 V	Rated current (Use group B / CSA) (Signal)	9 A
Rated current (Use group C / CSA) (Signal)	9 A	Rated current (Use group D / CSA) (Signal)	9 A
Wire connection cross-section AWG (Signal)	AWG 24...AWG 16	Rated voltage (Use group B / UL 1059] (Signal)	300 V
Rated voltage (Use group C / UL 1059] (Signal)	50 V	Rated voltage (Use group D / UL 1059] (Signal)	300 V
Rated current (Use group B / UL 1059] (Signal)	5 A	Rated current (Use group C / UL 1059] (Signal)	5 A
Rated current (Use group D / UL 1059] (Signal)	5 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

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

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"> • 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

Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E60693

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www.weidmueller.com**Technical data****Downloads**Approval/Certificate/Document of Con-
formity[Declaration of the Manufacturer](#)

Engineering Data

[CAD data – STEP](#)

Product Change Notification

[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](#)

User Documentation

[Operating Instruction BVF](#)[Operating Instruction BVF hybrid](#)[QR-Code product handling video](#)

Catalogues

[Catalogues in PDF-format](#)

Brochures

[FL DRIVES EN](#)[MB DEVICE MANUF. EN](#)[FL DRIVES DE](#)[FL HEATING ELECTR EN](#)[FL APPL. INVERTER EN](#)[FL BASE STATION EN](#)[FL ELEVATOR EN](#)[FL POWER SUPPLY EN](#)[FL 72H SAMPLE SER EN](#)[PO OMNIMATE EN](#)[PO OMNIMATE EN](#)

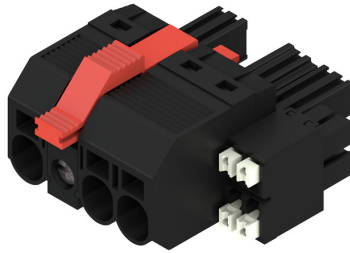
BVF 7.62HP/03/180MSF2 BCF/04R SN BK BX

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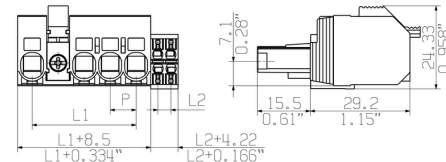
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Drawings

Product image



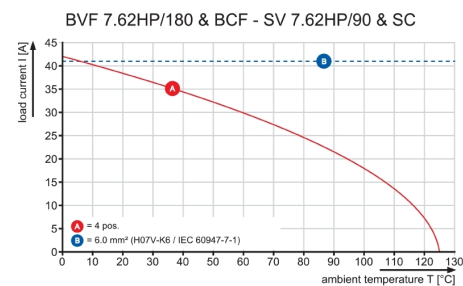
Dimensional drawing



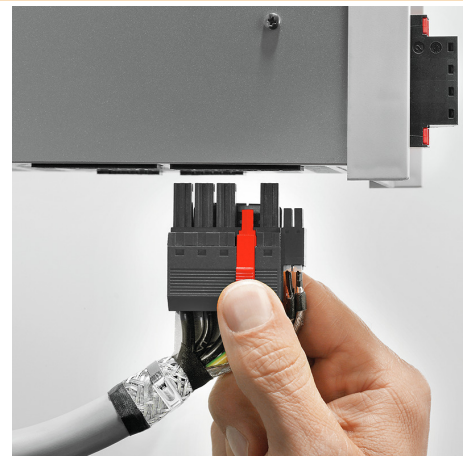
Graph



Graph



Product benefits



Single-handed operation
 Automatic latching

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Accessories
Slotted screwdriver


Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish grip

General ordering data

Type	SDS 0.8X4.5X125	Version
Order No.	2749370000	Screwdriver, Blade width (B): 4.5 mm, Blade length: 125 mm, Blade
GTIN (EAN)	4050118895599	thickness (A): 0.8 mm
Qty.	1 pc(s).	

Coding elements


The pluggable connections for power electronics - optimised for modern drive technologies, e.g. motor starters, frequency converters and servo-controllers.

OMNIMATE Power sets the new standard – with increased safety and innovative solutions such as the pluggable shield, integrated signal contacts and one-handed operation.

The three product lines offer you further advantages:

- Application-oriented scalability: from the compact 4 mm² connector for 29 A (IEC) or 20 A (UL) up to the sturdy 16 mm² connector for 76 A (IEC) or 54 A (UL)
- Unlimited usage up to 1,000 V (IEC) or 600 V (UL)
- A variety of application optimised mounting options

Our Service:

Design your individual connectors simply by using the

General ordering data

Type	BV/SV 7.62HP KO	Version	Product data	Packaging
Order No.	1937590000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4032248608881	of poles: 1		
Qty.	50 pc(s).			

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www.weidmueller.com**Accessories****Crimping tools****Crimping tools for wire end ferrules, with and without plastic collars**

- Ratchet guarantees precise crimping
- Release option in the event of incorrect operation

General ordering data

Type	PZ 6/5	Version
Order No.	9011460000	Pressing tool, Crimping tool for wire-end ferrules, 0.25mm ² , 6mm ² ,
GTIN (EAN)	4008190165352	Trapezoidal indentation crimp
Qty.	1 pc(s).	

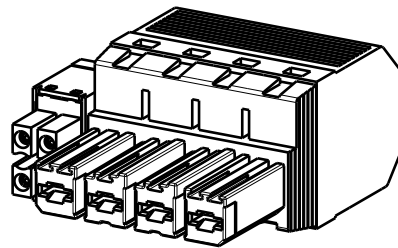
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Dimensions without tolerances are no check dimensions

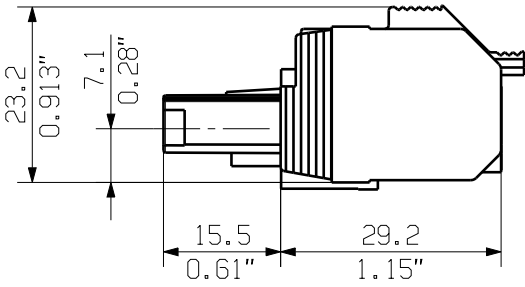
The English version is binding

BVF7.62HP/.../180BCF/...R
SHOWN: BVF7.62HP/04/180BCF/04R



SCREWDRIVER
CONDUCTOR

BVF7.62HP/.../180MF...BCF/...R
SHOWN: BVF7.62HP/04/180MF4BCF/04R



SCREWDRIVER
CONDUCTOR

P = Raster/pitch = 7.62
P2 = Raster/pitch = 3.81

5	30,48	7.62			
4	22,86				
3	15,24				
2	7,62				
POLZAHL/ NO OF POLES	L1 mm	P mm	HYBRID 4POL L3=8.03mm L2=3.81	HYBRID 6POL L3=11.84mm L2=7.62	HYBRID 8POL L3=15.65mm L2=11.43

GENERAL TOLERANCE:
DIN ISO 2768-m

P=POL/POLES
MF= MITTELFLENSCH/MIDDLE FLANGE

5 MF 4	P	P	P	MF	P	P
5 MF 3	P	P	MF	P	P	P
4 MF 4	P	P	P	MF	P	
4 MF 3	P	P	MF	P	P	
3 MF 3	P	P	MF	P		
3 MF 2	P	MF	P	P		
2 MF 2	P	MF	P			
POLE	1	2	3	4	5	6
NO OF POLES	POS					

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller connectors are tested to the DIN VDE 0627 standard, and are valid for its field of application. Provided that the connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

	Max. nos.		Prim PLM Part No.:005815		Prim ERP Part No.:1080320000	
	First Issue Date 29.08.2018		00			
	Modification					
	Drawn	Date 24.10.2018	Name Administrator			
	Responsible		Krug, Matthias			
Scale: 2/11	Size: A3	Approved				
Drawings Assembly		Product file: 7390 BVF/SVF 7.62HP				

BVF 7.62HP/04/180 BCF
BUCHSENLEISTE
SOCKET BLOCK

not released

49284

Drawing no. Issue no.

Sheet 01 of 01 sheets