

**OMNIMATE Power - series BV/SV 7.62HP
SV 7.62HP/02/90MF2 SC/06R SN BK BX**

Weidmüller Interface GmbH & Co. KG
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Product image

Similar to illustration

Combined 90° male header with power and signal contacts in PUSH IN connection technology incl. self-locking middle flange interlock and (optional) pluggable shield connection with a 7.62 pitch.

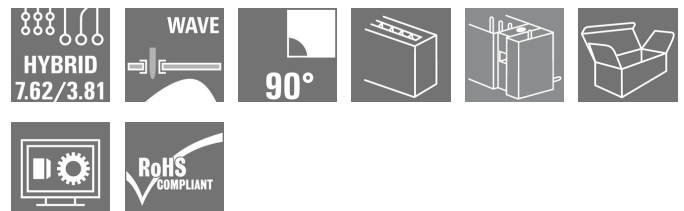
Enables simultaneous connection of power, signals and (optional) EMC shielding. Ideal for connecting servo and asynchronous drives.

Meets the requirements of IEC 61800-5-1 and enables UL approval as per UL840 600 V when combined with female header BVF 7.62HP/...BCF..R...

Without a female header, the mating profile guarantees minimum power-contact touch-safety of >3 mm with 20 N pressure on the test finger.

The self-locking middle flange reduces the space requirements by one pitch width in comparison with conventional solutions.

Optionally on request: without flange fastening, with additional screw mount or with soldered flange fastening.

**General ordering data**

Type	SV 7.62HP/02/90MF2 SC/06R SN BK BX
Order No.	1089410000
Version	PCB plug-in connector, male header, closed side, Middle flange, THT solder connection, 7.62 mm, Number of poles: 2, 90°, Solder pin length (l): 3.5 mm, tinned, black, Box
GTIN (EAN)	4032248857760
Qty.	48 pc(s).
Product data	IEC: 1000 V / 41 A UL: 300 V / 35 A
Packaging	Box

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Technical data**Dimensions and weights**

Height	14.9 mm	Height (inches)	0.587 inch
Height of lowest version	11.4 mm	Depth	28.3 mm
Depth (inches)	1.114 inch	Net weight	3.34 g

System specifications

Product family	OMNIMATE Power - series BV/SV 7.62HP	Type of connection	Board connection
Mounting onto the PCB	THT solder connection	Pitch in mm (P)	7.62 mm
Pitch in inches (P)	0.3 inch	Outgoing elbow	90°
Number of poles	2	Number of solder pins per pole	2
Solder pin length (l)	3.5 mm	Solder pin length tolerance	+0.1 / -0.3 mm
Tolerance of solder pin position	± 0.1 mm	Solder pin dimensions	0.8 x 1.0 mm
Solder eyelet hole diameter (D)	1.4 mm	Solder eyelet hole diameter tolerance (D)	+0,1 mm
L1 in mm	15.24 mm	L1 in inches	0.6 inch
Number of rows	1	Pin series quantity	1
Touch-safe protection acc. to DIN VDE 57 106	safe to back of hand above the printed circuit board	Touch-safe protection acc. to DIN VDE 0470	IP 20
Volume resistance	2.00 mΩ	Can be coded	Yes
Plugging cycles	25		

Material data

Insulating material	PA GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	Insulation strength	≥ 10 ⁸ Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	Copper alloy	Contact surface	tinned
Layer structure of solder connection	1-3 μm Ni / 4-6 μm Sn matt	Layer structure of plug contact	1-3 μm Ni / 4-6 μm Sn matt
Storage temperature, min.	-25 °C	Storage temperature, max.	50 °C
Max. relative humidity during storage	70 %	Operating temperature, min.	-50 °C
Operating temperature, max.	130 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	130 °C		

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	41 A
Rated current, max. number of poles (Tu=20°C)	41 A	Rated current, min. number of poles (Tu=40°C)	41 A
Rated current, max. number of poles (Tu=40°C)	41 A	Rated voltage for surge voltage class / pollution degree II/2	1,000 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

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Technical data**Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1121690

Rated voltage (Use group B / CSA)	300 V
Rated voltage (Use group D / CSA)	600 V
Rated current (Use group C / CSA)	33 A

Rated voltage (Use group C / CSA)	300 V
Rated current (Use group B / CSA)	33 A
Rated current (Use group D / CSA)	5 A

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)	300 V
Rated voltage (Use group D / UL 1059)	600 V
Rated current (Use group C / UL 1059)	35 A
Clearance distance, min.	6.9 mm

Rated voltage (Use group C / UL 1059)	300 V
Rated current (Use group B / UL 1059)	35 A
Rated current (Use group D / UL 1059)	5 A
Creepage distance, min.	9.6 mm

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Packing

Packaging	Box	VPE length	0
VPE width	0	VPE height	0

Technical data - hybrid

Pitch in mm (Signal)	3.81 mm	Pitch in inches (Signal)	0.15 inch
Number of poles (Signal)	6	Number of solder pins per pole (Signal)	1
Solder pin dimensions (Signal)	0.8 x 0.8 mm	PCB hole diameter (Signal)	1.3 mm
PCB hole diameter tolerance (Signal)	± 0.1 mm	L2 in mm	7.62 mm
L2 in inch	0.3 inch	Number of rows (Signal)	2
Contact material (Signal)	CuMg	Contact surface (Signal)	tinned
Rated voltage for overvoltage class/pollution severity level II/2 (Signal)	320 V	Rated voltage for overvoltage class/pollution severity level III/2 (Signal)	160 V
Rated voltage for overvoltage class/pollution severity level III/3 (Signal)	160 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	Rated voltage (Use group B / CSA) (Signal)	300 V
Rated voltage (Use group C / CSA) (Signal)	50 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
Rated voltage (Use group B / UL 1059] (Signal)	300 V	Rated voltage (Use group C / UL 1059] (Signal)	50 V
Rated current (Use group B / UL 1059] (Signal)	5 A	Rated current (Use group C / UL 1059] (Signal)	5 A

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Technical data**Classifications**

ETIM 6.0	EC002637	ETIM 7.0	EC002637
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02
eClass 10.0	27-44-04-02		

Notes

Notes	<ul style="list-style-type: none"> • Technical specifications refer to the power contacts • Technical data of signal contacts: 50V / 5A, stripping length 8mm • Rated current related to rated cross-section & min. No. of poles. • Specifications of diagram: P1=7.62 mm; P2=3.81 mm • 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. • MF2 and MSF3: X= Position of the middle flange e.g. MF2, MSF3
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.

Approvals

Approvals



ROHS Conform

Downloads

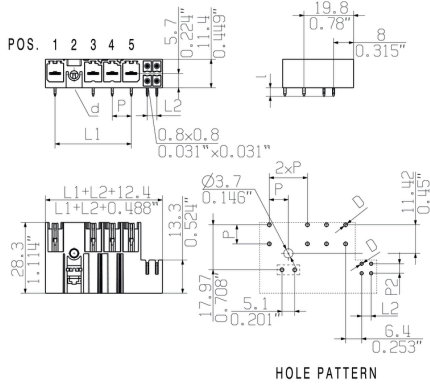
Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL HEATING ELECTR EN FL APPL INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN
Engineering Data	EPLAN, WSCAD
Engineering Data	STEP
White paper power electronics connected correctly	Download Whitepaper
White paper UL 600 V	Download Whitepaper

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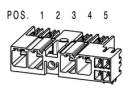
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Drawings

Dimensional drawing



Connection diagram

6	M(S)F6	o	o	o	o	o	X	o
6	M(S)F5	o	o	o	o	X	o	o
6	M(S)F4	o	o	o	X	o	o	o
6	M(S)F3	o	o	X	o	o	o	o
6	M(S)F2	o	X	o	o	o	o	o
5	M(S)F5	o	o	o	o	X	o	
5	M(S)F4	o	o	o	X	o	o	
5	M(S)F3	o	o	X	o	o	o	
5	M(S)F2	o	X	o	o	o	o	
4	M(S)F4	o	o	o	X	o		
4	M(S)F3	o	o	X	o	o		
4	M(S)F2	o	X	o	o	o		
3	M(S)F3	o	o	X	o			
3	M(S)F2	o	X	o	o			
2	M(S)F2	o	X	o				
NO OF POLES	X = MIDDLE FLANGE POSITION	1	2	3	4	5	6	7
								

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Mating connector (conditionally pluggable)
BVF 7.62HP SN / BCF 3.81 SN 180MSF


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

Type	BVF 7.62HP/02/180MSF2 B ...	Version	Product data	Packaging
Order No.	1082080000	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 2,	IEC: 1000 V / 38 A / 0.5 - 10 mm ²	Box
GTIN (EAN)	4032248844791	180°, PUSH IN, Clamping range, max.: 10 mm ² , Box	UL: 600 V / 35 A / AWG 24 - AWG 8	
Qty.	45 pc(s).			

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Mating connector (fully pluggable)

BVF 7.62HP SN / BCF 3.81 SN 180MF



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

Type	BVF 7.62HP/02/180MF2 BC ... Version	Product data	Packaging
Order No.	1081030000	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 2, IEC: 1000 V / 38 A / 0.5 - 10 mm ²	Box
GTIN (EAN)	4032248843800	180°, PUSH IN, Clamping range, max.: 10 mm ² , Box	UL: 600 V / 35 A / AWG 24 - AWG 8
Qty.	45 pc(s).		

BVFL 7.62HP / BCF 3.81 SN 180MF



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. With adjustable, self-locking pusher for opening the contact point.

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

Type	BVFL 7.62HP/02/180MF2 B ... Version	Product data	Packaging
Order No.	2628330000	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 2, IEC: 1000 V / 38 A / 0.5 - 6 mm ²	Box
GTIN (EAN)	4050118631654	180°, PUSH IN, Clamping range, max.: 6 mm ² , Box	UL: 600 V / 35 A / AWG 24 - AWG 8
Qty.	54 pc(s).		

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Accessories

Coding elements



**Only connects what is supposed to be connected:
the right connection at the right place.**

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

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).			

Recommended wave soldering profiles

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Single Wave:



Double Wave:



Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.