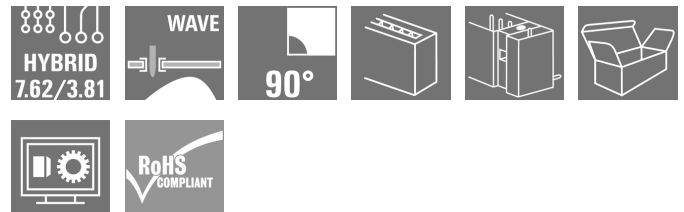
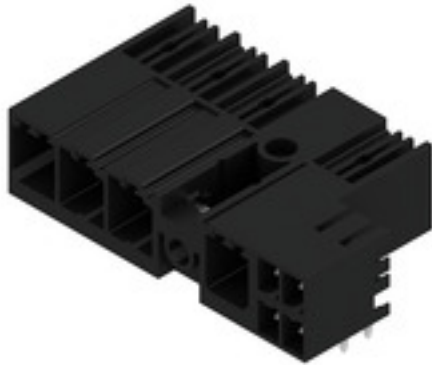


**SV 7.62HP/04/90MSF4 SC/04R SN BK BX**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

www.weidmueller.com

**Product image**



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**

Version	PCB plug-in connector, male header, closed side, Middle screw flange, THT solder connection, 7.62 mm, Number of poles: 4, 90°, Solder pin length (l): 3.5 mm, tinned, black, Box
Order No.	<a href="#">1090370000</a>
Type	SV 7.62HP/04/90MSF4 SC/04R SN BK BX
GTIN (EAN)	4032248858842
Qty.	36 Stück
Product data	IEC: 1000 V / 41 A UL: 300 V / 35 A
Packaging	Box

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## Technische Daten

### Dimensions and weights

Depth	28.3 mm	Depth (inches)	1.114 inch
Height	14.9 mm	Height (inches)	0.587 inch
Height of lowest version	11.4 mm	Width	46.69 mm
Width (inches)	1.838 inch	Net weight	12.028 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 "	Outgoing elbow	90°
Number of poles	4	Number of solder pins per pole	2
Solder pin length (l)	3.5 mm	Solder pin length tolerance	+0.1 / -0.3 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	30.48 mm
L1 in inches	1.2 "	L2 in mm	3.81 mm
L2 in inch	0.15 "	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	Tightening torque for screw flange, min.	0.2 Nm
Tightening torque for screw flange, max.	0.3 Nm	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	UL 94 flammability rating	V-0
Contact material	Cu-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.	40- °C	Storage temperature, max.	70 °C
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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**Technische Daten**

**Rated data acc. to CSA**

Institute (CSA)				Certificate No. (CSA)	
				200039-1121690	
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group C / CSA)	300 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		
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 C / UL 1059)	300 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		
Clearance distance, min.	6.9 mm	Creepage distance, min.	9.6 mm		
Reference to approval values	Specifications are maximum values, details - see approval certificate.				

**Packing**

Packaging	Box	VPE length	351 mm
VPE width	138 mm	VPE height	43 mm

**Technical data - hybrid**

Pitch in mm (hybrid)	nominal	3.81 mm	
	Hybrid component	Signal	
Pitch in mm (Signal)	3.81 mm		
Pitch in inch (hybrid)	Hybrid component	Signal	
	nominal	0.15 inch	
Pitch in inches (Signal)	0.15 inch		
Pole count (hybrid)	nominal	4	
	Hybrid component	Signal	
Number of poles (Signal)	4		
Number of solder pins per pole (hybrid)	Hybrid component	Signal	
	nominal	1	
Number of solder pins per pole (Signal)	1		
Solder pin dimensions (hybrid)	Solder pin dimensions	0.8 x 0.8 mm	
	Hybrid component	Signal	
Solder pin dimensions (Signal)	0.8 x 0.8 mm		
Solder pin dimensions = d tolerance (hybrid)	Solder pin dimensions = d tolerance	Lower tolerance with prefix (reveals minimum)	-0,03
		Upper tolerance with prefix (reveals maximum)	+0,01
		Tolerance, unit	mm
	Hybrid component	Signal	

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**Technische Daten**

Solder pin dimensions = d tolerance (Signal)	-0,03 / +0,01 mm			
Diameter of solder eyelet (hybrid)	Hybrid component	Signal		
	nominal	1.3 mm		
PCB hole diameter (Signal)	1.3 mm			
Tolerance of the diameter of the solder eyelet (hybrid)	Hybrid component	Signal		
	Solder eyelet hole diameter tolerance (D)	± 0.1 mm		
PCB hole diameter tolerance (Signal)	± 0.1 mm			
L2 in mm	3.81 mm			
L2 in inch	0.15 "			
Number of rows (hybrid)	Hybrid component	Signal		
Number of rows (Signal)	2			
Contact material (hybrid)	Hybrid component	Signal		
	Contact material	CuMg		
Contact material (Signal)	CuMg			
Contact surface (hybrid)	Hybrid component	Signal		
	Contact surface	tinned		
Contact surface (Signal)	tinned			
Layer structure of the solder connection (hybrid)	Hybrid component	Signal		
	Layer structure of the solder connection	Layer strength	min.	1 µ
			max.	3 µ
		Material	Ni	
		Layer strength	min.	4 µ
			max.	8 µ
Material		Sn		
Layer structure of the solder connection (Signal)	1-3 µ Ni / 4-8 µ Sn			
Layer structure of the plug contact (hybrid)	Hybrid component	Signal		
	Layer structure of the plug contact	Layer strength	min.	1 µ
			max.	3 µ
		Material	Ni	
		Layer strength	min.	4 µ
			max.	8 µ
Material		Sn		
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 (hybrid)	Hybrid component	Signal		
	nominal	320 V		
Rated voltage for overvoltage class / pollution severity level II/2 (Signal)	320 V			
Rated voltage for overvoltage class / pollution severity level III/2 (hybrid)	Hybrid component	Signal		
	nominal	160 V		
Rated voltage for overvoltage class / pollution severity level III/2 (Signal)	160 V			
Rated voltage for overvoltage class / pollution severity level III/3 (hybrid)	Hybrid component	Signal		
	nominal	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 (hybrid)	Hybrid component	Signal		
	nominal	2.5 kV		
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 (hybrid)	Hybrid component	Signal		
	nominal	2.5 kV		

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**Technische Daten**

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 (hybrid)	Hybrid component	Signal
	nominal	2.5 kV
Rated impulse voltage for overvoltage class/pollution severity level III/3 (Signal)	2.5 kV	
Rated current, number of poles (Tu=40°C) (hybrid)	Hybrid component	Signal
	min.	12.7 A
Rated current, number of poles (Tu=20°C) (hybrid)	Hybrid component	Signal
	min.	14.2 A
Short-time withstand current capacity (hybrid)	Hybrid component	Signal
	Short-time withstand current resistance	3 x 1s with 80 A
Short-time withstand current resistance (Signal)	3 x 1s with 80 A	
Creepage distance (hybrid)	Hybrid component	Signal
	min.	4.38 mm
Clearance distance (hybrid)	Hybrid component	Signal
	min.	3.6 mm
Rated voltage (Use group B / CSA) (Hybrid)	Hybrid component	Signal
	nominal	300 V
Rated voltage (Use group B / CSA) (Signal)	300 V	
Rated voltage (Use group C / CSA) (Hybrid)	Hybrid component	Signal
	nominal	50 V
Rated voltage (Use group C / CSA) (Signal)	50 V	
Rated current (Use group B / CSA) (Hybrid)	Hybrid component	Signal
	nominal	9 A
Rated current (Use group B / CSA) (Signal)	9 A	
Rated current (Use group C / CSA) (Hybrid)	Hybrid component	Signal
	nominal	9 A
Rated current (Use group C / CSA) (Signal)	9 A	
Rated current (Use group D / CSA) (Hybrid)	Hybrid component	Signal
	nominal	9 A
Rated current (Use group D / CSA) (Signal)	9 A	
Rated voltage (Use group B / UL 1059) (Hybrid)	Hybrid component	Signal
	nominal	300 V
Rated voltage (Use group B / UL 1059) (Signal)	300 V	
Rated voltage (Use group C / UL 1059) (Hybrid)	Hybrid component	Signal
	nominal	50 V
Rated voltage (Use group C / UL 1059) (Signal)	50 V	
Rated voltage (Use group D / UL 1059) (Hybrid)	Hybrid component	Signal
Rated current (Use group B / UL 1059) (Hybrid)	Hybrid component	Signal
	nominal	5 A
Rated current (Use group B / UL 1059) (Signal)	5 A	
Rated current (Use group C / UL 1059) (Hybrid)	Hybrid component	Signal
	nominal	5 A

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## Technische Daten

Rated current (Use group C / UL 1059) 5 A  
 (Signal)

Rated current (Use group D / UL 1059) | Hybrid component | Signal  
 (Hybrid)

### Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	EC002637	ETIM 9.0	EC002637
ECLASS 9.0	27-44-04-02	ECLASS 9.1	27-44-04-02
ECLASS 10.0	27-44-04-02	ECLASS 11.0	27-46-02-01
ECLASS 12.0	27-46-03-01	ECLASS 13.0	27460301

### 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
- 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.
  - MFX and MSFX: X= Position of the middle flange e.g. MF2, MSF3
  - 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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## Technische Daten

### Downloads

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	<a href="#">FL DRIVES EN</a> <a href="#">MB DEVICE MANUF. EN</a> <a href="#">FL DRIVES DE</a> <a href="#">FL HEATING ELECTR EN</a> <a href="#">FL APPL_INVERTER EN</a> <a href="#">FL_BASE_STATION_EN</a> <a href="#">FL ELEVATOR EN</a> <a href="#">FL POWER SUPPLY EN</a> <a href="#">FL 72H SAMPLE SER EN</a> <a href="#">PO OMNIMATE EN</a> <a href="#">PO OMNIMATE EN</a>





## 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.