

SV 7.62HP/04/90MF4 SC/06R SN BK BX SO
Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com


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 flange, THT solder connection, 7.62 mm, Number of poles: 4, 90°, Solder pin length (l): 3.5 mm, Box
Order No.	2486020000
Type	SV 7.62HP/04/90MF4 SC/06R SN BK BX SO
GTIN (EAN)	4050118496741
Qty.	36 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

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	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 inch	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 inch	Pin series quantity	2
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

Material data

Insulating material	PA GF	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 500	UL 94 flammability rating	V-0
Contact material	Copper alloy	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

Rated data acc. to CSA

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

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Technical data

Rated data acc. to UL 1059

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

Packing

Packaging	Box	VPE length	338 mm
VPE width	130 mm	VPE height	33 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)	Hybrid component	Signal	
	nominal	6	
Number of poles (Signal)	6		
Number of solder pins per pole (hybrid)	Hybrid component	Signal	
	nominal	1	
Number of solder pins per pole (Signal)	1		
Solder pin dimensions (hybrid)	Hybrid component	Signal	
	Solder pin dimensions	0.8 x 0.8 mm	
Solder pin dimensions (Signal)	0.8 x 0.8 mm		
Solder pin dimensions = d tolerance (hybrid)	Hybrid component	Signal	
	Solder pin dimensions = d tolerance	Lower tolerance with prefix (reveals minimum)	-0,03
		Upper tolerance with prefix (reveals maximum)	+0,01
		Tolerance, unit	mm
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	7.62 mm		
L2 in inch	0.3 inch		
Number of rows (hybrid)	Hybrid component	Signal	
	Number of rows	2	
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		

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Technical data

Layer structure of the solder connection (hybrid)	Layer structure of the solder connection	Material	Ni		
		Layer strength	min.	1 μ	
			max.	3 μ	
		Material	Sn		
	Layer strength	min.	4 μ		
		max.	8 μ		
	Hybrid component	Signal			
Layer structure of the solder connection (Signal)	1-3 μ Ni / 4-8 μ Sn				
Layer structure of the plug contact (hybrid)	Layer structure of the plug contact	Material	Ni		
		Layer strength	min.	1 μ	
			max.	3 μ	
		Material	Sn		
	Layer strength	min.	4 μ		
		max.	8 μ		
	Hybrid component	Signal			
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			
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)	Short-time withstand current resistance	3 x 1s with 80 A			
	Hybrid component	Signal			
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			

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Rated voltage (Use group B / CSA) (Hybrid)	Hybrid component nominal	Signal 300 V
Rated voltage (Use group B / CSA) (Signal)	300 V	
Rated voltage (Use group C / CSA) (Hybrid)	Hybrid component nominal	Signal 50 V
Rated voltage (Use group C / CSA) (Signal)	50 V	
Rated current (Use group B / CSA) (Hybrid)	Hybrid component nominal	Signal 9 A
Rated current (Use group B / CSA) (Signal)	9 A	
Rated current (Use group C / CSA) (Hybrid)	Hybrid component nominal	Signal 9 A
Rated current (Use group C / CSA) (Signal)	9 A	
Rated current (Use group D / CSA) (Hybrid)	Hybrid component nominal	Signal 9 A
Rated current (Use group D / CSA) (Signal)	9 A	
Rated voltage (Use group B / UL 1059) (Hybrid)	Hybrid component nominal	Signal 300 V
Rated voltage (Use group B / UL 1059) (Signal)	300 V	
Rated voltage (Use group C / UL 1059) (Hybrid)	Hybrid component nominal	Signal 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 nominal	Signal 5 A
Rated current (Use group B / UL 1059) (Signal)	5 A	
Rated current (Use group C / UL 1059) (Hybrid)	Hybrid component nominal	Signal 5 A
Rated current (Use group C / UL 1059) (Signal)	5 A	
Rated current (Use group D / UL 1059) (Hybrid)	Hybrid component	Signal

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	ECLASS 11.0	27-46-02-01

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	- MFX and MSFX: X= Position of the middle flange e.g. MF2, MSF3 - Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

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Technical data

Downloads

Brochure/Catalogue

[Catalogues in PDF-format](#)

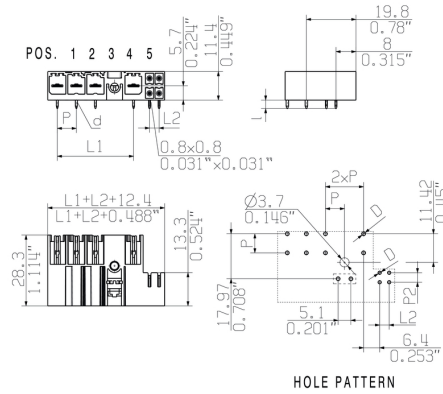
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Drawings

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
		POS. 1 2 3 4 5 						

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.

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