

SV-SMT 7.62IT/04/270MSF4 2.6SN BK RL**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

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Germany

www.weidmueller.com**Product image****OMNIMATE Power for IT networks – scalable to 50 kVA****Tailor-made solutions for special requirements**

More standard-compliance means fewer compromises: OMNIMATE Power for IT networks has integrated features incorporated as standard across the range. This makes the design-in and approvals process simpler and makes them safer and more reliable in operation.

Results for the application and advantages for the user: unlimited use in 400-V IT systems and touch safety according to IEC 61800-5-1 (+ 5.5 mm). The self-snapping one-handed safety flange enables intuitive and safe usage. Operational reliability is guaranteed by the automatic interlock feature during the plug-in process.

In conclusion: You need no additional device covering.

The application-oriented design means that no compromises are necessary during the approval process.

General ordering data

Version	PCB plug-in connector, male header, Middle screw flange, THT/THR solder connection, 7.62 mm, Number of poles: 4, 270°, Solder pin length (l): 2.6 mm, tinned, black, Tape
Order No.	2546090000
Type	SV-SMT 7.62IT/04/270MSF4 2.6SN BK RL
GTIN (EAN)	4050118556124
Qty.	110 pc(s).
Product data	IEC: 1000 V / 41 A UL: 300 V / 40.5 A
Packaging	Tape

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Technical data

Dimensions and weights

Depth	28.3 mm	Depth (inches)	1.114 inch
Height	14 mm	Height (inches)	0.551 inch
Height of lowest version	11.4 mm	Width	38.1 mm
Width (inches)	1.5 inch	Net weight	8.8 g

System specifications

Product family	OMNIMATE Power - series BV/SV 7.62HP	Type of connection	Board connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	7.62 mm
Pitch in inches (P)	0.3 "	Outgoing elbow	270°
Number of poles	4	Number of solder pins per pole	2
Solder pin length (l)	2.6 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 "	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	Protection degree	IP20, when fully mounted
Volume resistance	2.00 mΩ	Tightening torque for screw flange, min.	0.2 Nm
Tightening torque for screw flange, max.	0.3 Nm	Plugging cycles	25
Plugging force/pole, max.	12 N	Pulling force/pole, max.	7 N

Material data

Insulating material	PA 9T	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	Insulation strength	≥ 10 ⁸ Ω
Moisture Level (MSL)	1	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
Clearance, min.	6.9 mm	Creepage distance, min.	9.6 mm

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Technical data

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) 300 V

Rated current (Use group C / UL 1059) 40.5 A

Clearance distance, min. 6.9 mm

Reference to approval values
Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group C / UL 1059) 300 V

Rated current (Use group B / UL 1059) 40.5 A

Rated current (Use group D / UL 1059) 10 A

Creepage distance, min. 9.6 mm

Packing

Packaging	Tape	VPE length	330 mm
VPE width	330 mm	VPE height	60 mm
Tape depth (T2)	15.8 mm	Tape width (W)	56 mm
Tape pocket depth (K0)	15.3 mm	Tape pocket height (A0)	28.4 mm
Tape pocket width (B0)	39.06 mm	Tape pocket separation (P1)	36 mm
Tape hole separation (E)	1.75 mm	Tape pocket separation (F)	26.2 mm
Tape reel diameter \varnothing (A)	330 mm	Surface resistance	$R_s = 10^9 - 10^{12} \Omega$

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	27-46-02-01	ECLASS 13.0	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	<ul style="list-style-type: none"> Additional variants on request Rated current related to rated cross-section & min. No. of poles. P on drawing = pitch 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

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Technical data

Approvals

Approvals



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

Downloads

Product Change Notification	20220105 Material change SV-SMT 7.62 20220105 Materialänderung SV-SMT
Catalogues	Catalogues in PDF-format

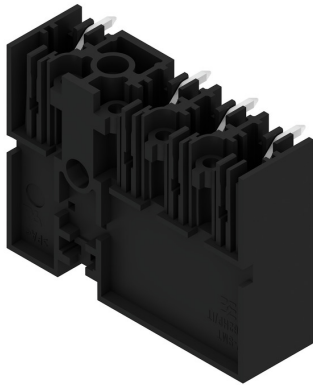
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Drawings

Product image



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Accessories

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:

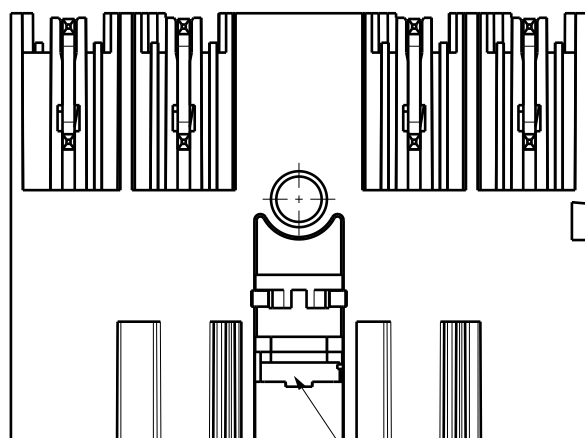
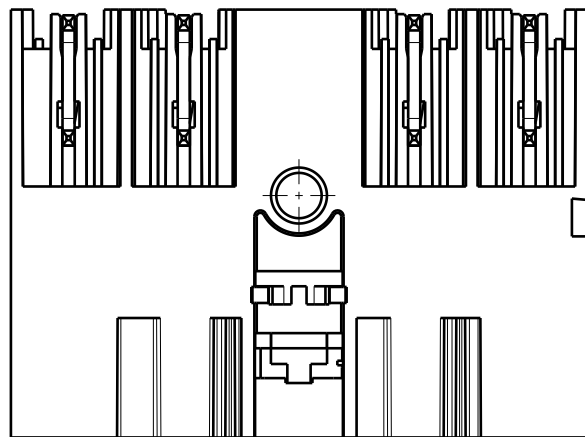
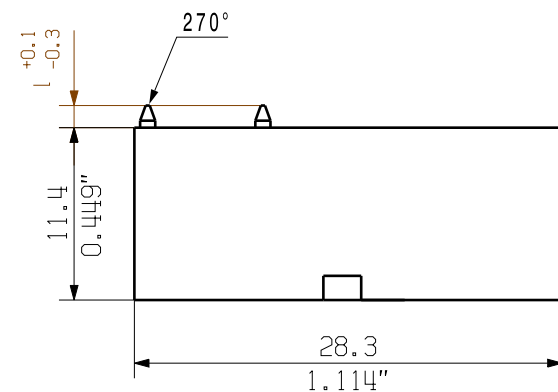
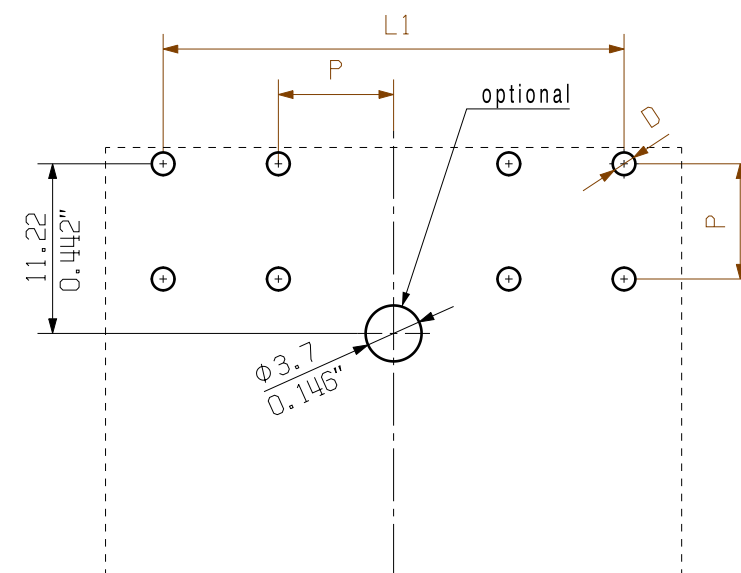
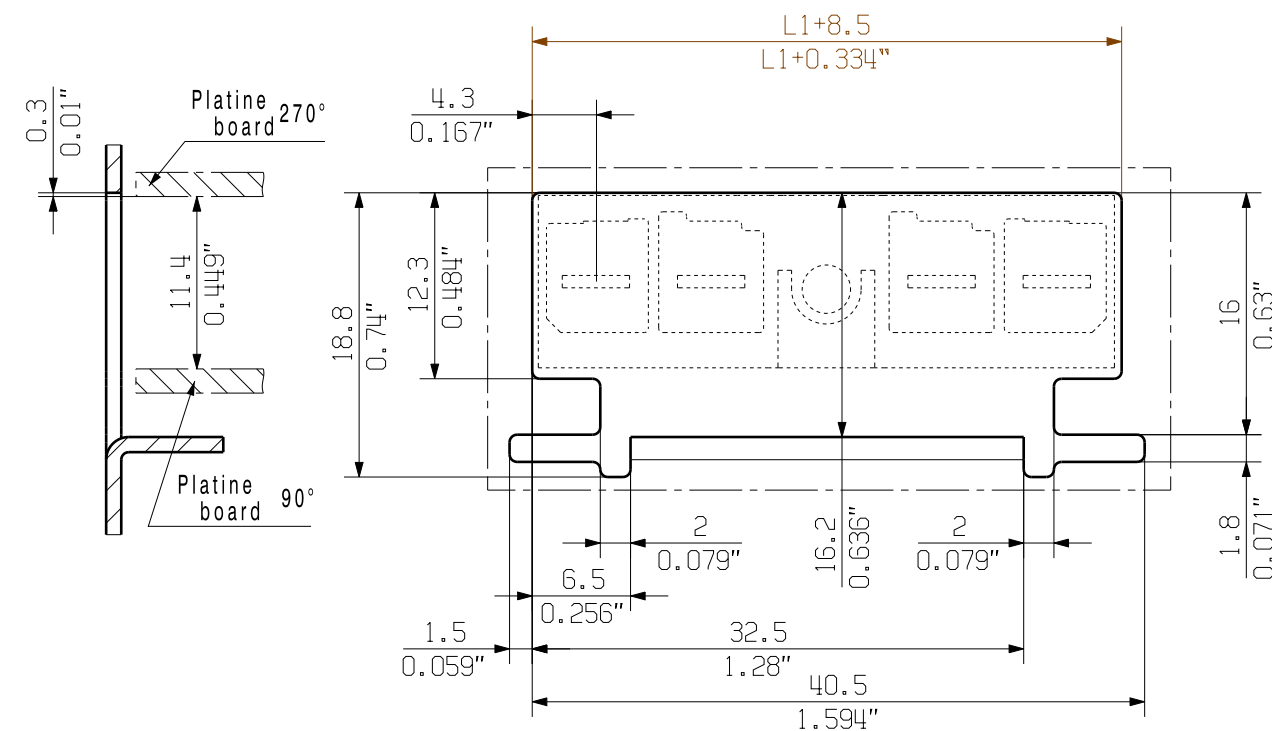
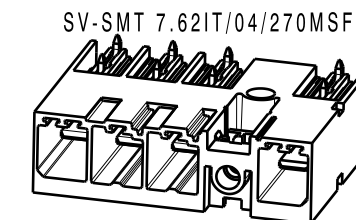
Design your individual connectors simply by using the

General ordering data

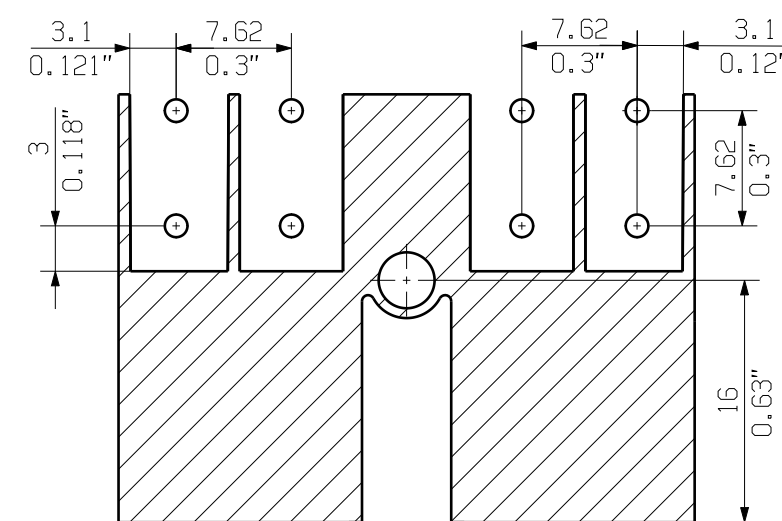
Type	BV/SV 7.62HP KO	Version	Product data	Packaging
Order No.	1937590000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4032248608881	of poles: 1		
Qty.	50 pc(s).			

pos. 1 2 3 4 5

Technical drawing of a 5-position rotary switch assembly. The drawing shows five positions (1 to 5) around a central axis. Dimensions are given in millimeters: $L1+7.62$ (total length), $L1$ (length to the center of the first contact), P (pitch between contacts), d (contact diameter), and 5.7 (height of the contact). The central position (3) is marked with a crosshair.

VKMU nur für MSF-Varianten /
square nut only for MSF-variants

hole pattern



paste free area
max. dimension

SO = ohne voreilenden Kontakt/
without leading pin

$$D = \emptyset 1.4 + 0.1 / -0.05$$
$$d = 0.8 \times 1.0$$

POL = Pol/pole

PE = Voreilender Kontakt / leading pin

P = Raster / pitch 7.62

MF= Mittelflansch
middle flange

MSF= Mittelschraubflansch
middle flange with screw




For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone. The necessary creepage and clearance paths must be observed in connection with the respective application in accordance to IEC 664 / VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application. Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

1.5
2.6
3.5
l
[mm]

GENERAL TOLERANCE:
DIN ISO 2768-m

SV 7.62IT/05/...M(S)F5	5	38.10	1.50	Pol	Pol	Pol	Pol	MF	PE				
SV 7.62IT/05/...M(S)F4				Pol	Pol	Pol	MF	Pol	Pol				
SV 7.62IT/05/...M(S)F3				Pol	Pol	MF	Pol	Pol	Pol				
SV 7.62IT/05/...M(S)F2				PE	MF	Pol	Pol	Pol	Pol				
SV 7.62IT/04/...M(S)F4	4	30.48	1.20	Pol	Pol	Pol	MF	PE					
SV 7.62IT/04/...M(S)F3				Pol	Pol	MF	Pol	Pol					
SV 7.62IT/04/...M(S)F2				PE	MF	Pol	Pol	Pol					
SV 7.62IT/03/...M(S)F3	3	22.86	0.90	Pol	Pol	MF	PE						
SV 7.62IT/03/...M(S)F2				PE	MF	Pol	Pol						
SV 7.62IT/02/...M(S)F2 SO													
description	no of poles	L1 [mm]	L1 [inch]	1	2	3	4	5	6	7	8	9	
				position MF									

	EC00002212	Prim PLM Part No.: 225880		Prim ERP Part No.: 2499550000		
	First Issue Date 14.11.2016	Max. nos.	Weidmüller 		63450 Drawing no. 4	Issue n.
		Modification			Sheet 16 of 17 sheets	
		Date	Name	SV-SMT 7.62HP/IT../90/270... STISTLEISTE MALE HEADER		
		Drawn 30.08.2019	Helis, Maria			
		Responsible 09.10.2019	Döhner, Karl			
Scale: 2:1	Size: A2	Approved 09.10.2019	Leng, Thomas	Product file: 7407 BLF 7.50HP		
Drawings Assembly						

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.

We reserve the right to make technical changes.

Recommended reflow soldering profile

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Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:

- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically $\leq +3\text{K/s}$. In parallel the solder paste is 'activated'. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at $\geq -6\text{K/s}$ solder is cured. Board and components cool down while avoiding cold cracks.