

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26 D-32758 Detmold Germany

www.weidmueller.com

Product image





OMNIMATE[®] 4.0 - the next evolution step

OMNIMATE[®] 4.0 follows the trend of One Cable Technology (OCT). The modular concept enables the fast configuration of hybrid interfaces, which transmit data, signals and energy in a single connector. As a result, you can reduce the cabling effort in a wide variety of applications, simplify maintenance and accelerate automation processes. The unique SNAP IN connection is the backbone and speeds up the wiring process.

The fastest connection yet

- Fast, safe, and tool-free wiring due to unique SNAP IN connection
- Ready for Robot through "wire ready" delivery with open clamping point
- Optical and acoustic feedback indicates proper wiring
- **Create your own configuration**
- Flexible configuration and ordering via the Weidmüller Configurator (WMC)
- Dispatch within three days even for individually configured products
- Automatic offer preparation for the configurated product

Simply configuration of modular hybrid connectors

• Flexible combination options for power, signal and data transmission

• Future-proof Single-Pair Ethernet technology

General ordering data

Version	PCB plug-in connector, male header, THT/THR solder connection, Pitch in mm (P): 5.00 mm, Number of poles: 9, 270°, Tube
Order No.	<u>8000072512</u>
Туре	MHS 5/09 W T3 B T
GTIN (EAN)	4064675330844
Qty.	11 pc(s).
Product data	IEC: 400 V / 26.8 A UL: 300 V / 14 A
Packaging	Tube

Creation date October 11, 2022 8:19:15 PM CEST

Technical data



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Dimensions	and	weights
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Depth	14 mm	Depth (inches)	0.551 inch
Height	14.1 mm	Height (inches)	0.555 inch
Height of lowest version	10.9 mm	Width	46.38 mm
Width (inches)	1.826 inch	Net weight	4.132 g

System specifications

Type of connection		Mounting onto the PCB	THT/THR solder	
	Board connection		connection	
Pitch in mm (P)	5 mm	Pitch in inches (P)	0.197 inch	
Outgoing elbow	270°	Number of poles	9	
Number of solder pins per pole	1	Solder pin length (I)	3.2 mm	
Solder pin dimensions	1.0 x 1.0 mm	Solder eyelet hole diameter (D)	1.4 mm	
Solder eyelet hole diameter tolerance (D)+ 0,1 mm		Outside diameter of solder pad	2.3 mm	
Template aperture diameter	2.1 mm	L1 in mm	40 mm	
L1 in inches	1.575 inch	Number of rows	1	
Pin series quantity	4	Touch-safe protection acc. to DIN VDE	Touch-safe above the	
		57 106	printed circuit board	
Touch-safe protection acc. to DIN VI 0470	JE IP 20	Protection degree	IP20	
Volume resistance	≤5 mΩ	Plugging cycles	≥ 25	
Plugging force/pole, max.	8.5 N	Pulling force/pole, max.	8.5 N	

Material data

Insulating material	PA 9T	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	Moisture Level (MSL)	1
UL 94 flammability rating	V-0	Contact base material	CuMg
Contact material	CuMg	Contact surface	tinned
Tinning type	matt	Storage temperature, min.	-25 °C
Storage temperature, max.	55 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	100 °C		

Rated data acc. to IEC

tostad	200	to	etan	d a	rd

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	26.8 A
Rated current, max. number of poles (Tu=20°C)	19.7 A	Rated current, min. number of poles (Tu=40°C)	23.1 A
Rated current, max. number of poles (Tu=40°C)	16.9 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Clearance, min.	4 mm
Creepage distance, min.	5.4 mm		

Rated data acc. to UL 1059

Rated voltage (Use group B / UL 1059) 300 V	Rated voltage (Use group D / UL 1059) 300 V
Rated current (Use group B / UL 1059) 14 A	Rated current (Use group D / UL 1059) 10 A

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Classifications			
ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	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
Important note			
IPC conformity	standards and norms an	s are developed, manufactured and deliv d comply with the assured properties in 1 A-610 "Class 2". Further claims on the pro	the data sheet resp. fulfill decorative properties
Notes	Rated current related	to rated cross-section & min. No. of poles	
	• P on drawing = pitch		
		to the component itself. Clearance and cr lance with the relevant application stand	reepage distances to other components are to ards.
	Diameter of solder ey	elet D = 1.4+0.1mm	
	Long term storage of	the product with average temperature of	50 °C and average humidity 70%, 36 months
Downloads			
Engineering Data	CAD data – STEP		
Catalogues	Catalogues in PDF-for	mat	

Drawings



Weidmüller Interface GmbH & Co. KG Klingenbergstraße 26

Hole pattern

D-32758 Detmold Germany

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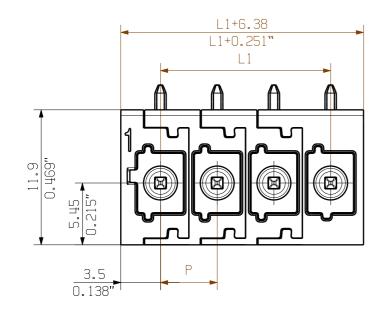
Product imageDimensional drawingImage: state of the PCB

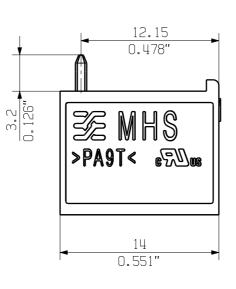
Creation date October 11, 2022 8:19:15 PM CEST

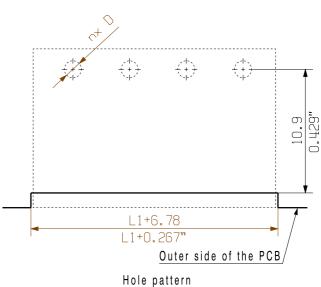
Catalogue status 07.10.2022 / We reserve the right to make technical changes.

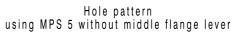


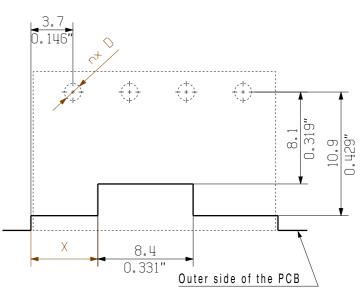
Allgemeingueltige Kundenzeichnung, aktueller Stand nur auf Anfrage General customer drawing, topical version only if required

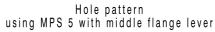








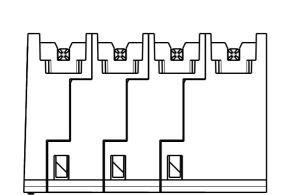




Further Dim. & Info. See data sheet

General tolerance: DIN ISO 2768-mK

	P038108			Prim PLI	
RoHS			Max noo	Max	
	First Issue Date		Max. nos	X. 110S.	
	27.01.2021		Modifi		
	$\square \oplus$			Date	Name
	$\Box \Psi$		Drawn	27.01.2021	Tauber-Reglin
			Responsible		Stuckmann, P
Scale: ./	. Size:	A 3	Approved	07.04.2021	Sapina, Sveto
Drawings	Assembly				



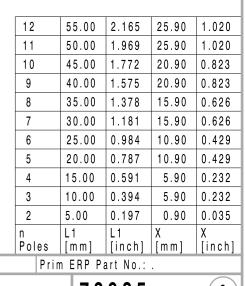
For the mounting of PCBs, it should be noted that the rated data relates only to the PCB components alone.

The neccessary creepage and clearance paths must be observed in connection with the respective applicant 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.

Weidmueller PCB components are tested according to the DIN EN 61984 or to the DIN EN 60947-7-4 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 occuring of electrical, mechanical, thermic and corrosive stress will be satisfied.

	M 1/1	n Pol	les	L1 [m	m]	L1 [inch]	X [m	m]	X [inch]
LM	Part No.: .		Prin	ηEF	RP Pa	art No.:			
e	idmüller			4	73	985 ^{no.} 2	of	2	O Issue no. sheets
lin, Pet etos	MH	łS	5/	. W	/ T3				
	Product file:								







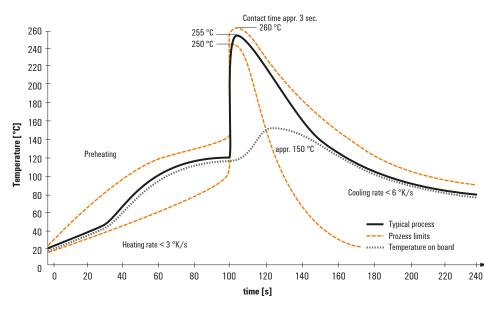
Wave Solder Profile

Recommended wave solderding profiles

Weidmüller 🟵

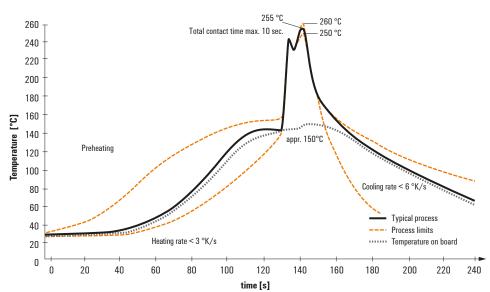
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Double Wave:

Single 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.

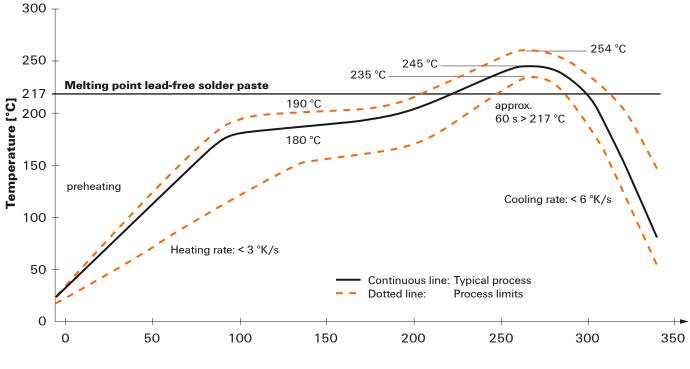
Reflow Solder Profile

Recommended reflow soldering profile



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Time [sec]

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 $\leq +3$ 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 -6K/s solder is cured. Board and components cool down while avoiding cold cracks.

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 PVP03-3,50

 PVS02-5,00
 1-1986160-3
 1377680000
 1531000000
 1546228-5
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 ELFP10210
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 ELVP03100
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