

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

| /ersion | PCB plug-in connector, male header, THT/THR |
|--------------|--|
| | solder connection, Pitch in mm (P): 5.00 mm, |
| | Number of poles: 8, 270°, Tube |
| Order No. | <u>8000072511</u> |
| Туре | MHS 5/08 W T3 B T |
| GTIN (EAN) | 4064675330820 |
| Qty. | 13 pc(s). |
| Product data | IEC: 400 V / 26.8 A |
| | UL: 300 V / 18.5 A |
| Packaging | Tube |

Creation date October 27, 2022 8:42:01 AM CEST



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Technical data

Dimensions and weights

| 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 | 41.38 mm |
| Width (inches) | 1.629 inch | Net weight | 11.343 g |

System specifications

| Type of connection | | Mounting onto the PCB | THT/THR solder |
|--------------------------------------|------------------|--|--|
| Type of conficution | Board connection | Woulding office the FOB | connection |
| Pitch in mm (P) | 5 mm | Pitch in inches (P) | 0.197 inch |
| Outgoing elbow | 270° | Number of poles | 8 |
| 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 tolerand | e (D)+ 0,1 mm | Outside diameter of solder pad | 2.3 mm |
| Template aperture diameter | 2.1 mm | L1 in mm | 35 mm |
| L1 in inches | 1.378 inch | Number of rows | 1 |
| Pin series quantity | 1 | Touch-safe protection acc. to DIN VDE 57 106 | Touch-safe above the printed circuit board |
| Touch-safe protection acc. to DIN VI | DE | Protection degree | |
| 0470 | IP 20 | | IP20 |
| Volume resistance | ≤5 mΩ | Plugging cycles | ≥ 25 |
| Plugging force/pole, max. | 8.5 N | Pulling force/pole, max. | 8.5 N |

Material data

| PA 9T | Colour | black |
|----------|------------------------------------|--|
| RAL 9011 | Insulating material group | I |
| ≥ 600 | Moisture Level (MSL) | 1 |
| V-0 | Contact base material | CuMg |
| CuMg | Contact surface | tinned |
| matt | Storage temperature, min. | -25 °C |
| 55 ℃ | Operating temperature, min. | -50 °C |
| 100 °C | | |
| | RAL 9011 ≥ 600 V-0 CuMg matt 55 °C | RAL 9011 Insulating material group ≥ 600 Moisture Level (MSL) V-0 Contact base material CuMg Contact surface matt Storage temperature, min. 55 °C Operating temperature, min. |

Rated data acc. to IEC

| 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 voltage (Use group F / UL 1059) | 420 V | Rated current (Use group B / UL 1059) | 18.5 A |
| Rated current (Use group D / UL 1059) | 10 A | Clearance distance, min. | 4 mm |
| Creepage distance, min. | 5.6 mm | | |

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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 | 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 | 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. | | | |

- Diameter of solder eyelet 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-format | |



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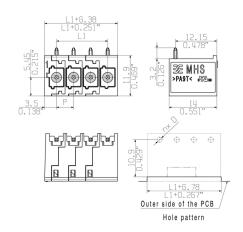
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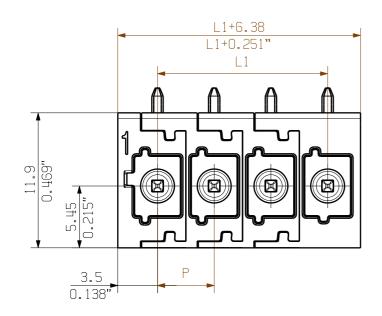
Drawings

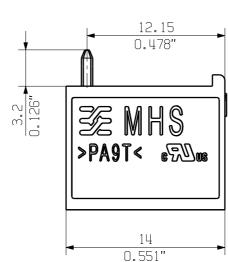
Product image

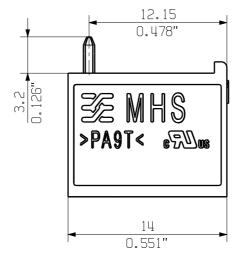


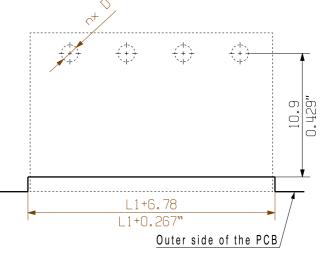
Dimensional drawing



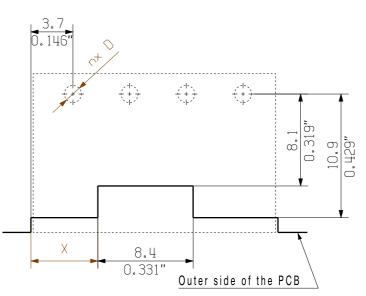








Hole pattern using MPS 5 without middle flange lever



Hole pattern using MPS 5 with middle flange lever

| 12 | | 55.00 | 2.165 | 25.90 | 1.020 |
|----------------------|----|-------|--------|-------|--------|
| 11 | | 50.00 | 1.969 | 25.90 | 1.020 |
| 10 | | 45.00 | 1.772 | 20.90 | 0.823 |
| 9 | | 40.00 | 1.575 | 20.90 | 0.823 |
| 8 | | 35.00 | 1.378 | 15.90 | 0.626 |
| 7 | | 30.00 | 1.181 | 15.90 | 0.626 |
| 6 | | 25.00 | 0.984 | 10.90 | 0.429 |
| 5 | | 20.00 | 0.787 | 10.90 | 0.429 |
| 4 | | 15.00 | 0.591 | 5.90 | 0.232 |
| 3 | | 10.00 | 0.394 | 5.90 | 0.232 |
| 2 | | 5.00 | 0.197 | 0.90 | 0.035 |
| n | | L1 | L1 | χ | Χ |
| Pol | es | [mm] | [inch] | [mm] | [inch] |
| Prim ERP Part No.: . | | | | | |

Drawing no.

0

Issue no

Further Dim. & Info. See data sheet

DIN I

Scale: ./.

Drawings Assembly

| General tolerance: DIN ISO 2768-mK | | | | | M 1/1 |
|---------------------------------------|------------------|-----------|------------|----------------|-------------|
| | B000400 | | | Prim PLM | Part No.: . |
| ROMS | P038108 · | Max. nos. | | Weidmüller | |
| | First Issue Date | | | | |
| | 27.01.2021 | Modifi | cation | | |
| | | | Date | Name | |
| | | Drawn | 27.01.2021 | Tauber-Reglin, | M |

Stuckmann, Pet

Product file:

07.04.2021 | Sapina, Svetos

Responsible

Size: A3 Approved

MHS 5/... W T3 ...

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

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.



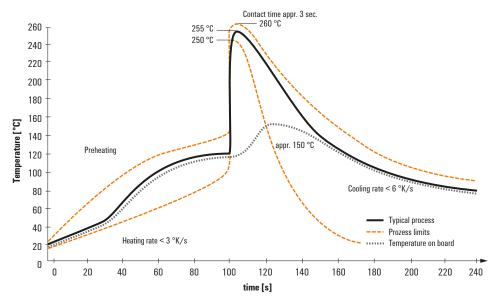
Recommended wave solderding profiles

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Fon: +49 5231 14-0 Fax: +49 5231 14-292083 www.weidmueller.com

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.

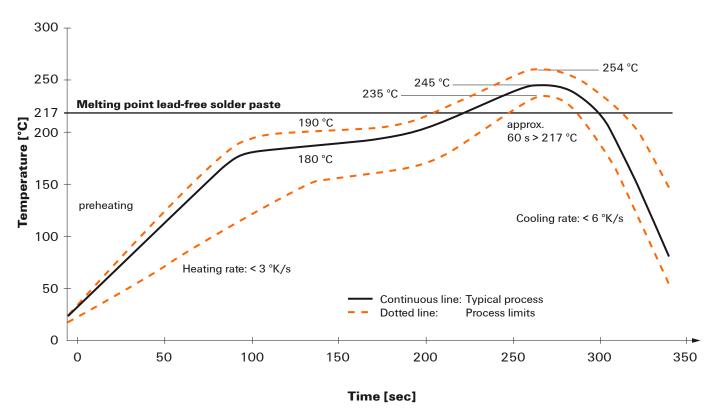


Recommended reflow soldering profile

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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 $\leq +3$ 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.