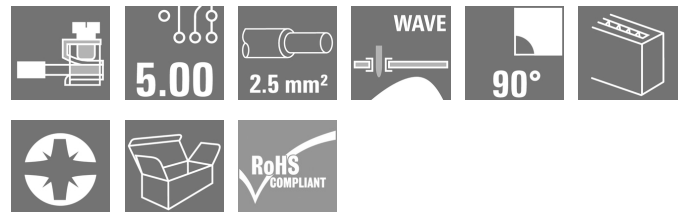


PM 5.00/04/90 3.5SN BK BX

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 Klingenbergstraße 26
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Product image



PCB terminal with leaf spring connection at 5.00 and 5.08 mm pitch. Conductor outlet direction 90°. Suitable for conductor cross-sections up to 2.5 mm².

General ordering data

| | |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version | Printed circuit board terminals, 5.00 mm, 90°, Solder pin length (l): 3.5 mm, tinned, black, Pressure clamp connection, Clamping range, max.: 2.5 mm ² , Box |
| Order No. | 7940008066 |
| Type | PM 5.00/04/90 3.5SN BK BX |
| GTIN (EAN) | 4050118131505 |
| Qty. | 100 Stück |
| Product data | IEC: 600 V / 24 A / 0.13 - 2.5 mm ² UL: 300 V / 15 A / AWG 26 - AWG 14 |
| Packaging | Box |

Erstellungs-Datum May 26, 2023 3:17:17 PM CEST

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Technische Daten

Dimensions and weights

| | | | |
|--------------------------|------------|-----------------|------------|
| Depth | 8 mm | Depth (inches) | 0.315 inch |
| Height | 13.5 mm | Height (inches) | 0.531 inch |
| Height of lowest version | 10 mm | Width | 20.6 mm |
| Width (inches) | 0.811 inch | Net weight | 3.44 g |

Temperatures

| | | | |
|-----------------------------|--------|-----------------------------|--------|
| Operating temperature, min. | -50 °C | Operating temperature, max. | 120 °C |
|-----------------------------|--------|-----------------------------|--------|

System parameters

| | | | |
|--------------------------------------------|------------------------------------------------|----------------------------------------------|---------------------------|
| Product family | OMNIMATE Signal - series PM | Wire connection method | Pressure clamp connection |
| Mounting onto the PCB | THT solder connection | Conductor outlet direction | 90° |
| Pitch in mm (P) | 5 mm | Pitch in inches (P) | 0.197 inch |
| Fitted by customer | Yes | Number of rows | 1 |
| Max. adjacent poles per row | 24 | Solder pin length (l) | 3.5 mm |
| Solder pin dimensions | d = 1.0 mm | Solder eyelet hole diameter (D) | 1.3 mm |
| Solder eyelet hole diameter tolerance (D) | + 0,1 mm | Number of solder pins per pole | 1 |
| Screwdriver blade | 0.6 x 3.5 | Screwdriver blade standard | DIN 5264 |
| Tightening torque, min. | 0.4 Nm | Tightening torque, max. | 0.5 Nm |
| Clamping screw | M 2.5 | Stripping length | 6 mm |
| L1 in mm | 15 mm | L1 in inches | 0.591 inch |
| Touch-safe protection acc. to DIN VDE 0470 | IP 20, above the PCB; with conductor connected | Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch |
| Protection degree | IP20 | | |

Material data

| | | | |
|---------------------------------------|------------------------------------|---------------------------------------|--------|
| Insulating material | Wemid (PA) | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | I |
| Comparative Tracking Index (CTI) | ≥ 600 | UL 94 flammability rating | V-0 |
| Contact material | Copper alloy | Contact surface | tinned |
| Coating | 1-3 µm Ni, 4-6 µm SN | Tinning type | matt |
| Layer structure of solder connection | 1.5...3.5 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. | 120 °C | Temperature range, installation, min. | -25 °C |
| Temperature range, installation, max. | 120 °C | | |

Conductors suitable for connection

| | |
|-------------------------------------------------|----------------------|
| Clamping range, min. | 0.13 mm ² |
| Clamping range, max. | 2.5 mm ² |
| Wire connection cross section AWG, min. | AWG 26 |
| Wire connection cross section AWG, max. | AWG 14 |
| Solid, min. H05(07) V-U | 0.13 mm ² |
| Solid, max. H05(07) V-U | 2.5 mm ² |
| Flexible, min. H05(07) V-K | 0.13 mm ² |
| Flexible, max. H05(07) V-K | 2.5 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.25 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, max. | 1.5 mm ² |

Erstellungs-Datum May 26, 2023 3:17:17 PM CEST

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w. wire end ferrule, DIN 46228 pt 1, min. 0.25 mm²

w. wire end ferrule, DIN 46228 pt 1, max. 1.5 mm²

| Clampable conductor | Cross-section for conductor connection | Type | fine-wired |
|------------------------------|----------------------------------------|------------------------------|------------------------------|
| 0.25 mm ² | | nominal | 0.5 mm ² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0.5/12 OR |
| | 1.5 mm ² | wire end ferrule | Stripping length |
| Recommended wire-end ferrule | | | H0.5/6 |
| 0.75 mm ² | | nominal | 0.75 mm ² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0.75/12 W |
| | 1.5 mm ² | wire end ferrule | Stripping length |
| Recommended wire-end ferrule | | | H0.75/6 |
| 1 mm ² | | nominal | 1 mm ² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H1.0/12 GE |
| | 1.5 mm ² | wire end ferrule | Stripping length |
| Recommended wire-end ferrule | | | H1.0/6 |
| 0.25 mm ² | | nominal | 0.25 mm ² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0.25/10 HBL |
| | 1.5 mm ² | wire end ferrule | Stripping length |
| Recommended wire-end ferrule | | | H0.25/5 |
| 0.34 mm ² | | nominal | 0.34 mm ² |
| | wire end ferrule | Stripping length | nominal 8 mm |
| | | Recommended wire-end ferrule | H0.34/10 TK |

Reference text Length of ferrules is to be chosen depending on the product and the rated voltage., The outside diameter of the plastic collar should not be larger than the pitch (P)

Rated data acc. to IEC

| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C) | 24 A |
|---------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------|-------------------|
| Rated current, max. number of poles (Tu=20°C) | 24 A | Rated current, min. number of poles (Tu=40°C) | 24 A |
| Rated current, max. number of poles (Tu=40°C) | 24 A | Rated voltage for surge voltage class / pollution degree II/2 | 600 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 250 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 | Short-time withstand current resistance | 3 x 1s with 120 A |

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Rated data acc. to CSA

| | | | |
|-----------------------------------|--------|-----------------------------------|--------|
| Rated voltage (Use group B / CSA) | 300 V | Rated voltage (Use group D / CSA) | 300 V |
| Rated current (Use group B / CSA) | 15 A | Rated current (Use group D / CSA) | 10 A |
| Wire cross-section, AWG, min. | AWG 26 | Wire cross-section, AWG, max. | AWG 14 |

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 B / UL 1059) | 15 A | Rated current (Use group D / UL 1059) | 10 A |
| Wire cross-section, AWG, min. | AWG 26 | Wire cross-section, AWG, max. | AWG 14 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Packing

| | | | |
|-----------|-------|------------|--------|
| Packaging | Box | VPE length | 150 mm |
| VPE width | 90 mm | VPE height | 45 mm |

Type tests

| | | | |
|-------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Test: Durability of markings | Test | mark of origin, type identification, pitch, type of material, approval marking UL, approval marking CSA, durability | |
| | Evaluation | available | |
| Test: Clampable cross section | Standard | DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02 | |
| | Conductor type | Type of conductor and conductor cross-section | solid 0.14 mm ² |
| | | Type of conductor and conductor cross-section | stranded 0.14 mm ² |
| | | Type of conductor and conductor cross-section | solid 2.5 mm ² |
| | | Type of conductor and conductor cross-section | stranded 2.5 mm ² |
| | | Type of conductor and conductor cross-section | AWG 26/1 |
| | | Type of conductor and conductor cross-section | AWG 26/19 |
| | | Type of conductor and conductor cross-section | AWG 14/1 |
| | | Type of conductor and conductor cross-section | AWG 14/19 |
| Evaluation | passed | | |

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Technische Daten

| | | | |
|-----------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------------|
| Test for damage to and accidental loosening of conductors | Standard | DIN EN 60999-1 section 9.4 / 12.00 | |
| | Requirement | 0.2 kg | |
| | Conductor type | Type of conductor and conductor cross-section | stranded 0.25 mm ² |
| | | Type of conductor and conductor cross-section | AWG 26/1 |
| | | Type of conductor and conductor cross-section | AWG 26/19 |
| | Evaluation | passed | |
| | Requirement | 0.3 kg | |
| | Conductor type | Type of conductor and conductor cross-section | solid 0.5 mm ² |
| | | Evaluation | passed |
| | Requirement | 0.7 kg | |
| Conductor type | Type of conductor and conductor cross-section | solid 2.5 mm ² | |
| | Type of conductor and conductor cross-section | stranded 2.5 mm ² | |
| | Type of conductor and conductor cross-section | AWG 14/1 | |
| | Type of conductor and conductor cross-section | AWG 14/19 | |
| Evaluation | passed | | |
| Pull-out test | Standard | DIN EN 60999-1 section 9.5 / 12.00 | |
| | Requirement | ≥10 N | |
| | Conductor type | Type of conductor and conductor cross-section | stranded 0.25 mm ² |
| | | Type of conductor and conductor cross-section | AWG 26/1 |
| | | Type of conductor and conductor cross-section | AWG 26/19 |
| | Evaluation | passed | |
| | Requirement | ≥20 N | |
| | Conductor type | Type of conductor and conductor cross-section | H05V-K0.5 |
| | | Evaluation | passed |
| | Requirement | ≥50 N | |
| Conductor type | Type of conductor and conductor cross-section | H07V-U2.5 | |
| | Type of conductor and conductor cross-section | H07V-K2.5 | |
| | Type of conductor and conductor cross-section | AWG 14/1 | |
| | Type of conductor and conductor cross-section | AWG 14/19 | |
| Evaluation | passed | | |

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Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002643 | ETIM 7.0 | EC002643 |
| ETIM 8.0 | EC002643 | ECLASS 9.0 | 27-44-04-01 |
| ECLASS 9.1 | 27-44-04-01 | ECLASS 10.0 | 27-44-04-01 |
| ECLASS 11.0 | 27-46-01-01 | ECLASS 12.0 | 27-46-01-01 |

Environmental Product Compliance

| | |
|------------|--------------------------------------|
| REACH SVHC | Lead 7439-92-1 |
| SCIP | c2abd024-c370-41bc-90fc-5ba34b090103 |

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"> • Rated current related to rated cross-section & min. No. of poles. • Wire end ferrule without plastic collar to DIN 46228/1 • Wire end ferrule with plastic collar to DIN 46228/4 • The data given under CSA relates to a cUL approval - E60693 • 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. • Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months |

Approvals

| | |
|-------------------------|-------------------------------------------------------------------------------------|
| Approvals |  |
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate No. (cURus) | E60693 |

Downloads

| | |
|------------|--------------------------------------------------------------|
| Catalogues | Catalogues in PDF-format |
| Brochures | FL DRIVES EN FL DRIVES DE |

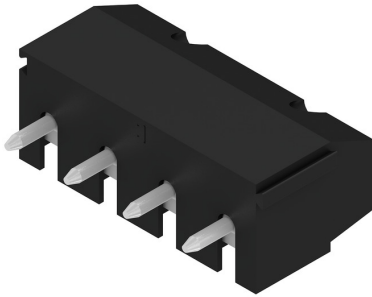
PM 5.00/04/90 3.5SN BK BX

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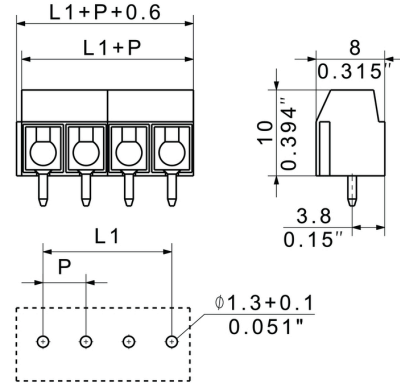
www.weidmueller.com

Zeichnungen

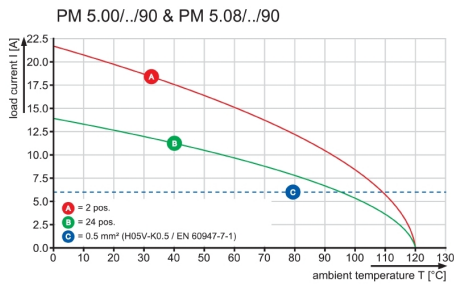
Product image



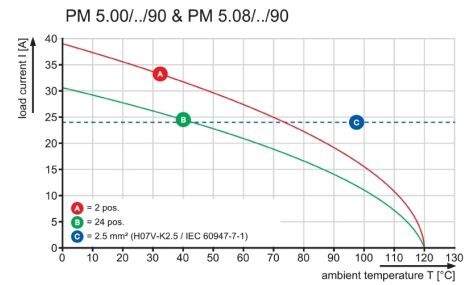
Dimensional drawing



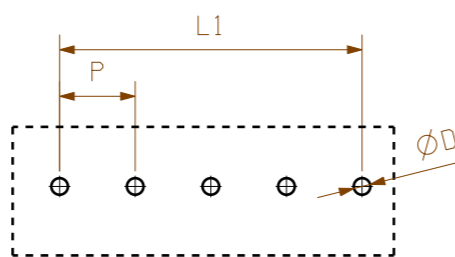
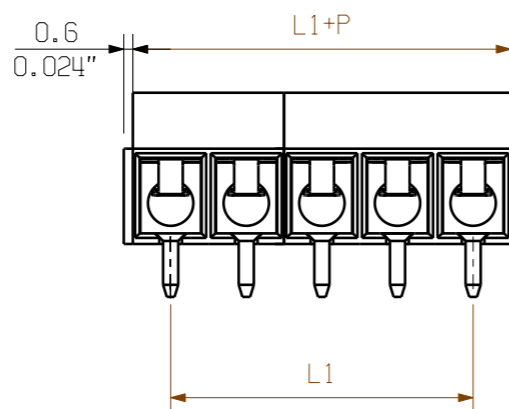
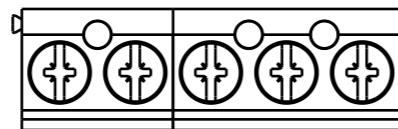
Graph



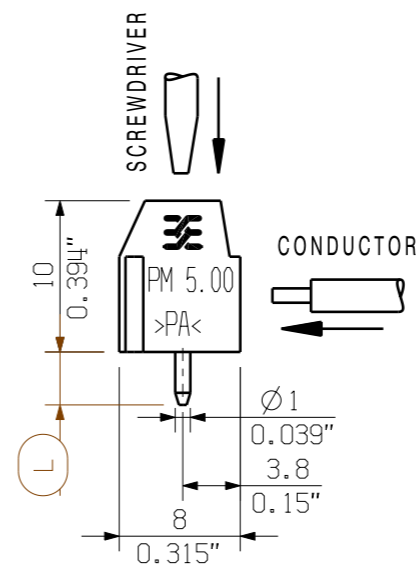
Graph



09



PCB LAYOUT



L = 3.5 +/- 0.2
 P = 5.00
 L1 = (N-1)XP

KUNDENZEICHNUNG
 CUSTOMER DRAWING

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

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.

| | | |
|----|---------|-----------|
| 14 | 65.00 | 2.559 |
| 13 | 60.00 | 2.362 |
| 12 | 55.00 | 2.165 |
| 11 | 50.00 | 1.969 |
| 10 | 45.00 | 1.772 |
| 9 | 40.00 | 1.575 |
| 8 | 35.00 | 1.378 |
| 7 | 30.00 | 1.181 |
| 6 | 25.00 | 0.984 |
| 5 | 20.00 | 0.787 |
| 4 | 15.00 | 0.591 |
| 3 | 10.00 | 0.394 |
| 2 | 5.00 | 0.197 |
| N | L1 [mm] | L1 [inch] |

| | | | | | | | |
|---------------------------------------------|--|--------------------------|--|------------------------------------------------------------------|--|------------------------------------------------|--|
| GENERAL TOLERANCE: DIN ISO 2768-m | | 91688/5 20.01.17 MA_J | | 01 | | Cat.no.: . | |
| RoHS COMPLIANT | | Max. nos. | | Modification | | Weidmüller | |
| Scale: 5/1 | | Supersedes: . | | Date | | Name | |
| | | | | 12.03.2005 | | HE_J | |
| | | | | 23.01.2017 | | MA_J | |
| | | | | | | ZHOU_N | |
| | | | | | | XU_S | |
| | | | | PM 5.00/.../90 ... LEITERPLATTENKLEMME PCB TERMINAL | | | |
| | | | | Product file: PM 5.00 | | 7062 | |
| | | | | C 41698 | | Drawing no. Issue no. Sheet 01 of 01 sheets | |

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Recommended wave soldering profiles

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 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.