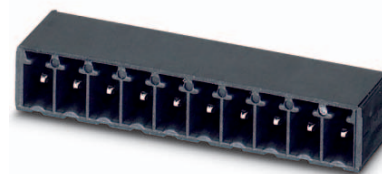


Order No.: 1788589

Type: MC 1,5/ 6-G-3,5 P26 THR

Header, Reflow/wave soldering



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|-------------------------|---------------------|------------------------|---------------------|
| • No. of pos. | 6 | • Nominal current | 8 A |
| • Nominal cross section | 1.5 mm ² | • Nominal voltage | 160 V |
| • Color | black | • Connection direction | 0 ° |
| • Pitch | 3.5 mm | • Type of packaging | packed in cardboard |
| • Mounting type | THR soldering | | |

2 Your advantages

- ✓ Designed for integration into the SMT soldering process
- ✓ Maximum flexibility when it comes to device design – one header for connectors with different connection technologies



Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1788589

3 Table of contents

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1788589 MC 1,5/ 6-G-3,5 P26 THR

4 3D model in PDF can be activated (Acrobat Reader only)



1788589 MC 1,5/ 6-G-3,5 P26 THR**5 item properties**

| | |
|---------------------|-------------------------|
| Order No. | 1788589 |
| Type | MC 1,5/ 6-G-3,5 P26 THR |
| Type of contact | Male connector |
| Range of articles | MC 1,5/..-G-THR |
| Pitch | 3.5 mm |
| Number of positions | 6 |
| Locking | without |
| Mounting type | THR soldering |
| Pin layout | Linear pinning |

5.1 Material data

| | | |
|--|---|----------------|
| Material of metal parts | | |
| Note | WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201 | |
| Contact material | Cu alloy | |
| Surface contact area | Ni 1 µm ... 3 µm , Sn 3 µm ... 5 µm | |
| Soldering area surface | Ni 1 µm ... 3 µm , Sn 3 µm ... 5 µm | |
| Surface characteristics | Tin-plated | |
| Insulating material data | Housing | Housing |
| Insulating material | LCP | |
| CTI according to IEC 60112 | 225 | |
| Flammability rating according to UL 94 | V0 | |
| Color | black (9005) | |

6 Dimensions**6.1 Dimensions for the product**

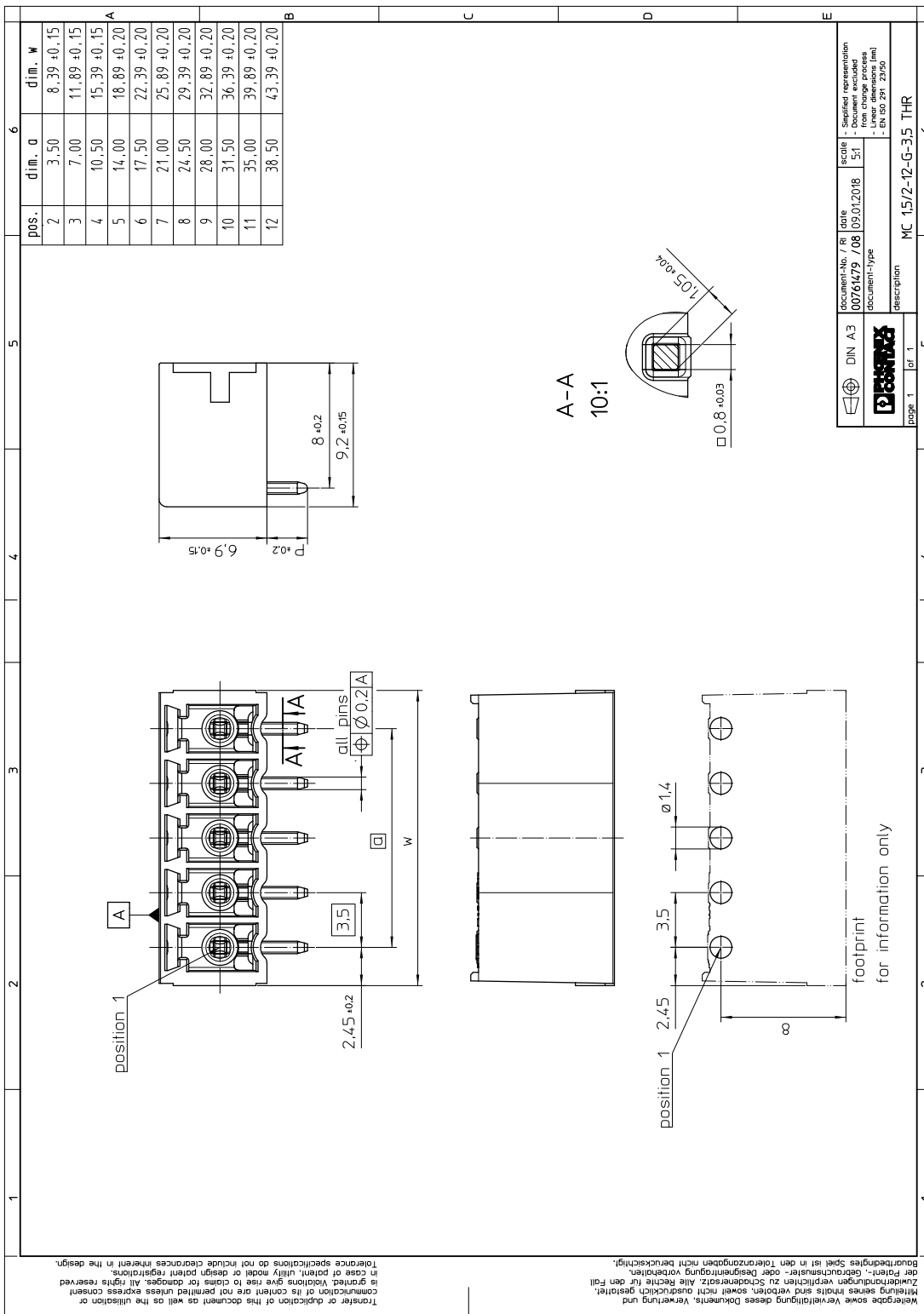
| | |
|-----------------------------|----------|
| Length | 9.2 mm |
| Width | 22.39 mm |
| Height (without solder pin) | 6.9 mm |
| Total height | 9.5 mm |
| Solder pin [P] | 2.6 mm |
| Dimension a | 17.5 mm |

6.2 Dimensions for PCB design

| | |
|----------------|-----------|
| Hole diameter | 1.4 mm |
| Pin dimensions | 0,8 x 0,8 |

1788589 MC 1,5/ 6-G-3,5 P26 THR

7 Series drawing



1788589 MC 1,5/ 6-G-3,5 P26 THR**8 Packaging information**

| | |
|--------------------|---------------------|
| Type of packaging | packed in cardboard |
| Pieces per package | 50 |

9 Application**9.1 Processing notes**

| | |
|----------------------------------|--|
| Process | Reflow/wave soldering |
| Specification | Following IPC/JEDEC J-STD-020E:2014-12 |
| Specification | Following IEC 61760-1:2006-04 |
| Specification | Following IEC 60068-2-58:2015-03 |
| Moisture Sensitive Level | MSL 1 |
| Classification temperature T_c | max. 260 °C |
| Solder cycles in the reflow | 3 |
| swash circumference | see dimensional drawing |

9.2 Temperature limit values

| | |
|---|--|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C (dependent on the derating curve) |

1788589 MC 1,5/ 6-G-3,5 P26 THR**10 Mechanical tests**

| Mechanical test group A | |
|-------------------------------------|------------------------|
| Specification | IEC 61984:2008-10 |
| Visual examination | Test passed |
| Specification | IEC 60512-1-1:2002-02 |
| Dimensional test | Test passed |
| Specification | IEC 60512-1-2:2002-02 |
| Resistance of marking | Test passed |
| Specification | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force | Test passed |
| Specification | IEC 60512-13-2:2006-02 |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 5 N |
| Polarization and coding | Test passed |
| Specification | IEC 60512-13-5:2006-02 |
| Test force | 20 N |
| Contact retention in insert | Test passed |
| Specification | IEC 60512-15-1:2008-05 |
| Test force per pos. | 20 N |

1788589 MC 1,5/ 6-G-3,5 P26 THR**11 Electrical tests****11.1 Electrical data**

| | |
|---|---------------------------|
| Rated current / conductor cross section | 8 A / 1.5 mm ² |
| Rated insulation voltage (III/2) | 160 V |
| Rated surge voltage (III/2) | 2.5 kV |
| Contact resistance | 1.3 mΩ |
| Degree of pollution | 2 |

11.2 Air and creepage distances

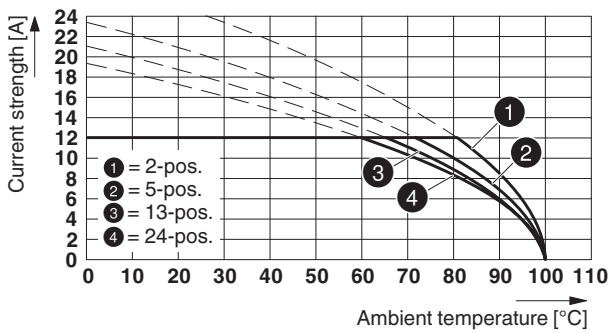
| | | | |
|---|---------------------|--------|--------|
| Component | Header | | |
| Specification | IEC 60664-1:2007-04 | | |
| Mains type | unearthed mains | | |
| Insulating material group | IIIa | | |
| Comparative tracking index (IEC 60112:2003-01) | CTI 225 | | |
| Rated insulation voltage | 160 V | 160 V | 250 V |
| Rated surge voltage | 2.5 kV | 2.5 kV | 2.5 kV |
| Degree of pollution | 3 | 2 | 2 |
| Overvoltage category | III | III | II |
| Minimum clearance case A (inhomogeneous field) | 1.5 mm | 1.5 mm | 1.5 mm |
| Minimum value of the creepage path requirement in acc. with table | 2.5 mm | 1.6 mm | 2.5 mm |

1788589 MC 1,5/ 6-G-3,5 P26 THR

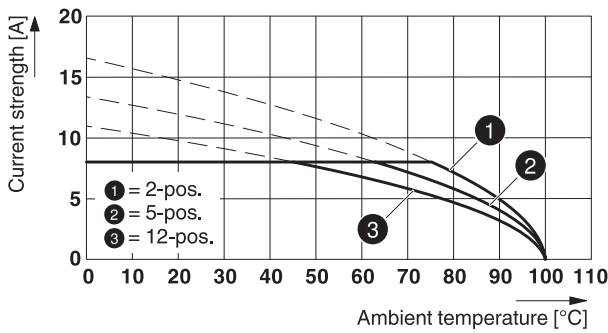
12 Current carrying capacity/derating curves

| | |
|-------------------------|---|
| Specification | IEC 61984:2008-10 |
| Note | Representation based on IEC 60512-5-2:2002-02 |
| Reduction factor | 0.8 |
| Number of positions | See diagram |
| Conductor cross section | 1.5 mm ² |
| Note | |

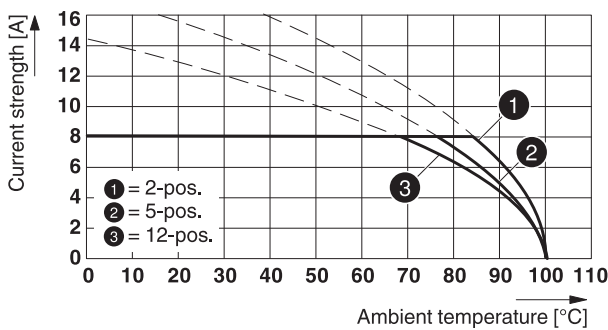
Type: MC 1,5/...-ST(F)-3,5 with MC 1,5/...-G(F)-3,5 P... THR



Type: MCVR 1,5/...-ST-3,5 with MC 1,5/...-G-3,5 P...THR



Type: FMC 1,5/...-ST-3,5 with MC 1,5/...-G-3,5 P26 THR



1788589 MC 1,5/ 6-G-3,5 P26 THR**13 Environmental and durability tests****13.1 Vibration test**

| | |
|------------------------|------------------------|
| Specification | IEC 60068-2-6:2007-12 |
| Result | Test passed |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 - 60.1 Hz) |
| Acceleration | 5 g (60.1 - 150 Hz) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |

14 Classification for connectors

| | |
|-----------------------------------|--|
| Specification | IEC 61984:2008-10 |
| Main features | Connectors without switching capacity (COC) |
| Construction form | Fixed connectors |
| Strain relief elements | without strain relief |
| Protection against electric shock | Not encapsulated - touch-proof when inserted |
| Protection class | |
| Protective conductor | without PE |
| Lock | no |

15 Approvals**VDE Gutachten mit Fertigungsüberwachung **

| | | | | |
|----------------------------|-------|--|--|--|
| mm ² /AWG/kcmil | | | | |
| Voltage | 160 V | | | |
| Current | 8 A | | | |

cULus Recognized 

| | | | | |
|----------------------------|-------|-------|--|--|
| Use group | B | D | | |
| mm ² /AWG/kcmil | | | | |
| Voltage | 300 V | 300 V | | |
| Current | 8 A | 8 A | | |

IECEE CB Scheme 

| | | | | |
|----------------------------|-------|--|--|--|
| mm ² /AWG/kcmil | | | | |
| Voltage | 160 V | | | |
| Current | 8 A | | | |

EAC 

1788589 MC 1,5/ 6-G-3,5 P26 THR**16 Commercial Data**

| | |
|--------------------|--|
| Order No. | 1788589 |
| Type | MC 1,5/ 6-G-3,5 P26 THR |
| Pieces per package | 50 |
| Net weight | 1.6 g |
| GTIN | 4046356611688 |
| | Information that applies locally, see link on page 1 |
| Country of origin | Information that applies locally, see link on page 1 |

17 corresponding plugs

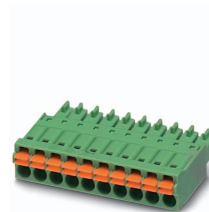
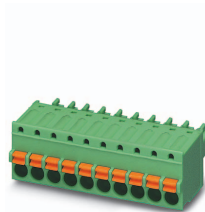
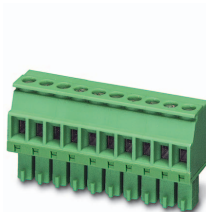
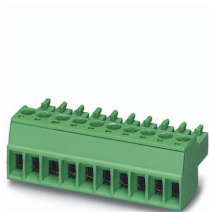
| Order No. | Type |
|-----------|----------------------|
| 1772650 | TFMC 1,5/ 6-ST-3,5 |
| 1840405 | MC 1,5/ 6-ST-3,5 |
| 1862894 | MCVW 1,5/ 6-ST-3,5 |
| 1863194 | MCVR 1,5/ 6-ST-3,5 |
| 1939950 | FK-MCP 1,5/ 6-ST-3,5 |
| 1952306 | FMC 1,5/ 6-ST-3,5 |

18 Accessories

| Description | Order No. | Type |
|-------------|-----------|-----------------------|
| | 1841161 | MC 1,5/10-LWL 1,5-3,5 |
| | 1841187 | MC 1,5/10-LWL 2,3-3,5 |
| | 1841200 | MC 1,5/10-LWL 4-3,5 |

1788589 MC 1,5/ 6-G-3,5 P26 THR

19 Combination tests

**MC 1,5/..-G-THR****MC 1,5/..-ST****MCVR 1,5/..-ST****FK-MCP 1,5/..-ST****FMC 1,5/..-ST****Mechanical tests (A)**

| | | | | |
|---|-------------------|-------------------|--------------------|-------------------|
| Insertion/withdrawal force per position | approx. 8 N / 5 N | approx. 8 N / 6 N | approx. 12 N / 9 N | approx. 8 N / 6 N |
| Polarization when inserted Requirement >20 N | Test passed | Test passed | Test passed | Test passed |
| Contact holder in insert Requirements >20 N | Test passed | Test passed | Test passed | Test passed |

Durability tests (B)

| | | | | |
|--|---------|----------|----------|---------|
| Contact resistance R ₁ | 1.3 mΩ | 3.6 mΩ | 1.6 mΩ | 2 mΩ |
| Insertion/withdrawal cycles | 25 | 25 | 25 | |
| Contact resistance R ₂ | 1.3 mΩ | 3.7 mΩ | 1.6 mΩ | |
| Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs) | 2.95 kV | 2.95 kV | 2.95 kV | 2.95 kV |
| Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz) | 1.39 kV | 1.39 kV | 1.39 kV | 1.39 kV |
| Insulation resistance Requirements > 5 MΩ | > 4 TΩ | > 0.5 TΩ | > 0.2 TΩ | |

Thermal tests (C)

| | | | | |
|--|---------------------|---------------------|---------------------|---------------------|
| Tested number of positions | 20 | 12 | 12 | 12 |
| Tested conductor cross section | 1.5 mm ² | 1.5 mm ² | 1.5 mm ² | 0.5 mm ² |
| Test current | 8 A | 8 A | 8 A | 8 A |
| Upper limiting temperature Requirements < 100°C | Test passed | Test passed | Test passed | Test passed |

Climatic tests (D)

| | | | | |
|--|---|---|---|---|
| Test sequence 1: low temperature storage | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h | -40 °C/2 h |
| Test sequence 2: heat storage | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h | 100 °C/168 h |
| Test sequence 3: noxious gas storage (ISO 6988) | 0.2 dm ³ SO ₂ on 300 dm ³ / 40 °C/1 cycle | 0.2 dm ³ SO ₂ on 300 dm ³ / 40 °C/1 cycle | 0.2 dm ³ SO ₂ on 300 dm ³ / 40 °C/1 cycle | 0.2 dm ³ SO ₂ on 300 dm ³ / 40 °C/1 cycle |
| Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs) | 2.95 kV | 2.95 kV | 2.95 kV | 2.95 kV |
| Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz) | 1.39 kV | 1.39 kV | 1.39 kV | 1.39 kV |

Environmental and endurance tests (E)

| | | | | |
|----------------------|--|--|--|--|
| Specification | IEC 61984:2008-10 | IEC 61984:2008-10 | IEC 61984:2008-10 | |
| Degree of protection | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger | Finger safety with IP20 test finger |