

Printed-circuit board connector - MC 0,5/12-G-2,5 THT - 1939316

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The figure shows a 10-position version of the product


PCB headers, nominal current: 4 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm², number of positions: 12, pitch: 2.5 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 3.8 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads

Your advantages

- ✓ Designed for integration into the SMT soldering process



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 50 pc |
| GTIN |  4 017918 849764 |
| GTIN | 4017918849764 |

Technical data

Item properties

| | |
|---------------------------|----------------------------|
| Brief article description | Feed-through header |
| Plug-in system | MICRO COMBICON - FK-MC 0,5 |
| Type of contact | Male connector |
| Range of articles | MC 0,5/...-G-THT |
| Pitch | 2.5 mm |
| Number of positions | 12 |
| Mounting type | THR soldering |
| Pin layout | Linear pinning |
| Locking | without |
| Number of levels | 1 |
| Number of connections | 12 |
| Number of potentials | 12 |

Electrical parameters

Printed-circuit board connector - MC 0,5/12-G-2,5 THT - 1939316

Technical data

Electrical parameters

| | |
|-----------------------------|--------|
| Nominal current | 4 A |
| Nom. voltage | 160 V |
| Rated voltage | 32 V |
| Rated voltage (III/2) | 160 V |
| Rated voltage (II/2) | 160 V |
| Rated surge voltage (III/3) | 1.5 kV |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated surge voltage (II/2) | 2.5 kV |

Material data - contact

| | |
|---|---|
| Note | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/ JEDEC JESD 201 |
| Contact material | Cu alloy |
| Surface characteristics | Tin-plated |
| Metal surface contact area (top layer) | Tin (3 - 5 µm Sn) |
| Metal surface contact area (middle layer) | Nickel (1 - 3 µm Ni), |
| Metal surface soldering area (top layer) | Tin (3 - 5 µm Sn) |
| Metal surface soldering area (middle layer) | Nickel (1 - 3 µm Ni) |

Material data - housing

| | |
|---|--------------|
| Housing color | black (9005) |
| Insulating material | PA |
| Insulating material group | IIIa |
| CTI according to IEC 60112 | 250 |
| Flammability rating according to UL 94 | V0 |
| Glow wire flammability index GWFI according to EN 60695-2-12 | 850 |
| Glow wire ignition temperature GWIT according to EN 60695-2-13 | 775 |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |

Dimensions for the product

| | |
|-----------------------------|--------------|
| Length [l] | 10.1 mm |
| Width [w] | 31.9 mm |
| Height [h] | 11.9 mm |
| Pitch | 2.5 mm |
| Height (without solder pin) | 8.1 mm |
| Solder pin [P] | 3.8 mm |
| Pin dimensions | 0.8 x 0.8 mm |

Dimensions for PCB design

| | |
|---------------|--------|
| Hole diameter | 1.4 mm |
|---------------|--------|

Packaging information

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

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Technical data

Packaging information

| | |
|----------------------------|---------|
| Denomination packing units | Pcs. |
| Outer packaging type | Dry bag |

Processing notes

| | |
|---|--|
| Process | Reflow/wave soldering |
| Specification | Following IPC/JEDEC J-STD-020D.1:2008-03 |
| | Following IEC 61760-1:2006-04 |
| | Following IEC 60068-2-58:2005-02 |
| Moisture Sensitive Level | MSL 3 |
| Classification temperature T _c | 245 °C |
| Solder cycles in the reflow | 3 |

Ambient conditions

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

Air clearances and creepage distances

| | |
|---|---------------------|
| Clearances and creepage distances | IEC 60664-1:2007-04 |
| Specification | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 0.8 mm |
| Minimum clearance - inhomogeneous field (III/2) | 1.5 mm |
| Minimum clearance - inhomogeneous field (II/2) | 0.5 mm |
| Minimum creepage distance value (III/3) | 1.3 mm |
| Minimum creepage distance value (III/2) | 1.6 mm |
| Minimum creepage distance value (II/2) | 1.6 mm |

Mechanical tests (A)

| | |
|--|-------------|
| Test specification | IEC 61984 |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 6 N |
| Polarization when inserted requirement >20 N | Test passed |
| Contact holder in insert requirements >20 N | Test passed |

Durability tests (B)

| | |
|--|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Contact resistance R ₁ | 2 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance R ₂ | 2.2 mΩ |
| Impulse withstand voltage at sea level | 2.95 kV |
| Power-frequency withstand voltage | 1.39 kV |
| Insulation resistance, neighboring positions | > 10 TΩ |

Thermal tests (C)

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Technical data

Thermal tests (C)

| | |
|---|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 12 |
| Conductor cross section | 0.5 mm ² |
| Test current | 4 A |
| Upper limiting temperature requirements <100 °C | Test passed |

Climatic tests (D)

| | |
|--|---|
| Specification | ISO 6988:1985-02 |
| Cold stress | -40 °C/2 h |
| Thermal stress | 100 °C/168 h |
| Corrosive stress | 0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle |
| Impulse withstand voltage at sea level | 2.95 kV |
| Power-frequency withstand voltage | 1.39 kV |

Environmental and durability tests (E)

| | |
|---------------------------------------|-------------------------------------|
| Specification | IEC 61984:2008-10 |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

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 |

Standards and Regulations

| | |
|--|--------|
| Connection in acc. with standard | EN-VDE |
| | CUL |
| Flammability rating according to UL 94 | V0 |

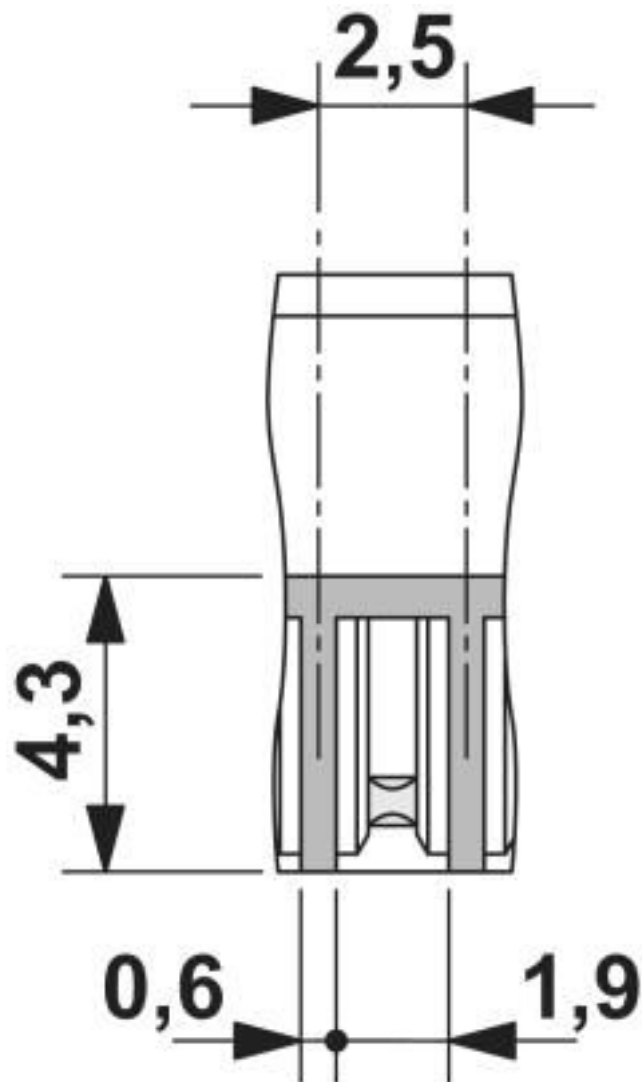
Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Drawings

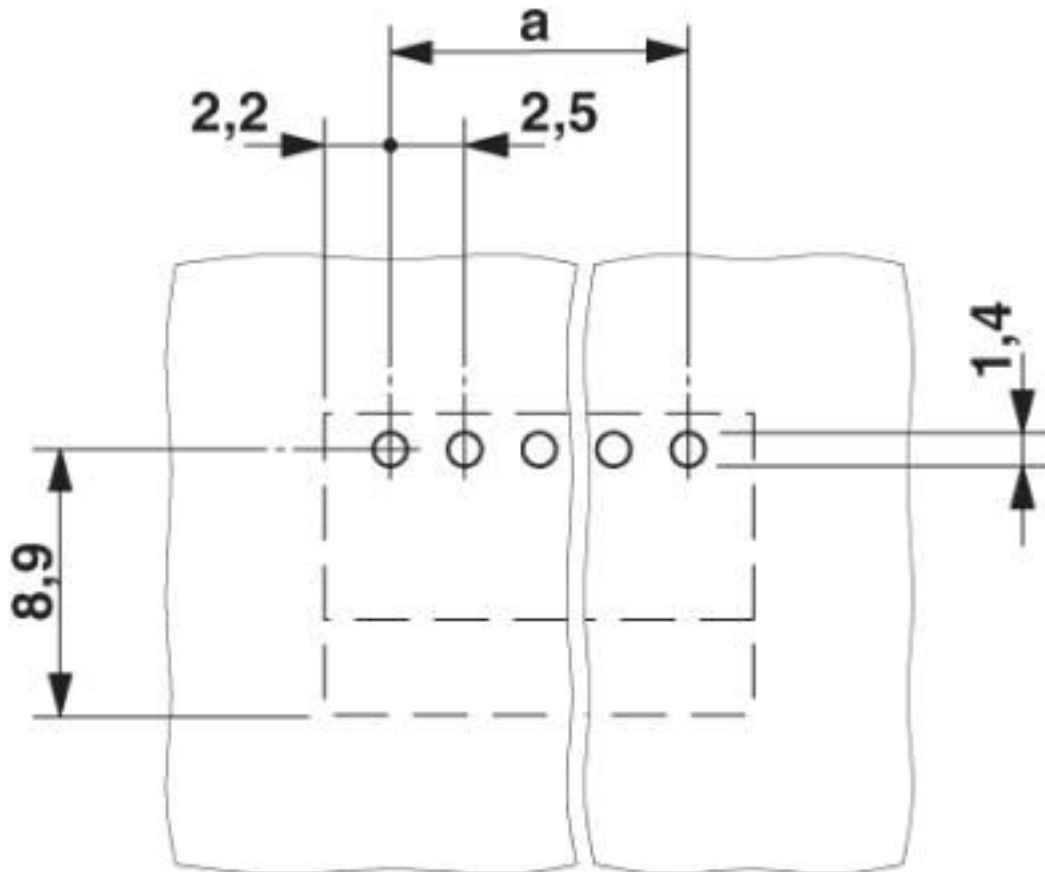
Printed-circuit board connector - MC 0,5/12-G-2,5 THT - 1939316

Dimensional drawing



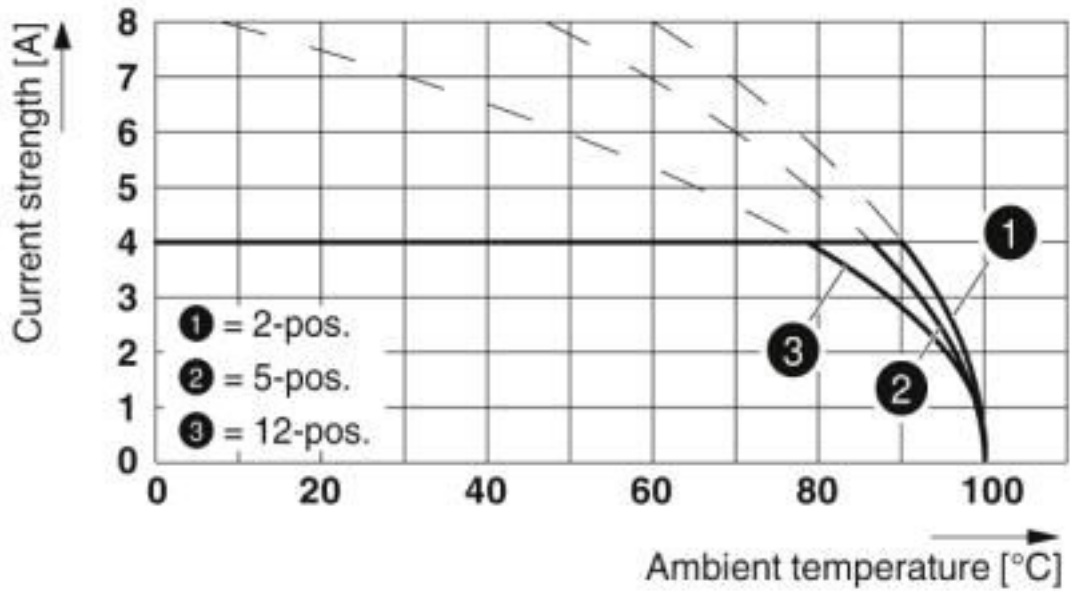
Printed-circuit board connector - MC 0,5/12-G-2,5 THT - 1939316

Drilling diagram



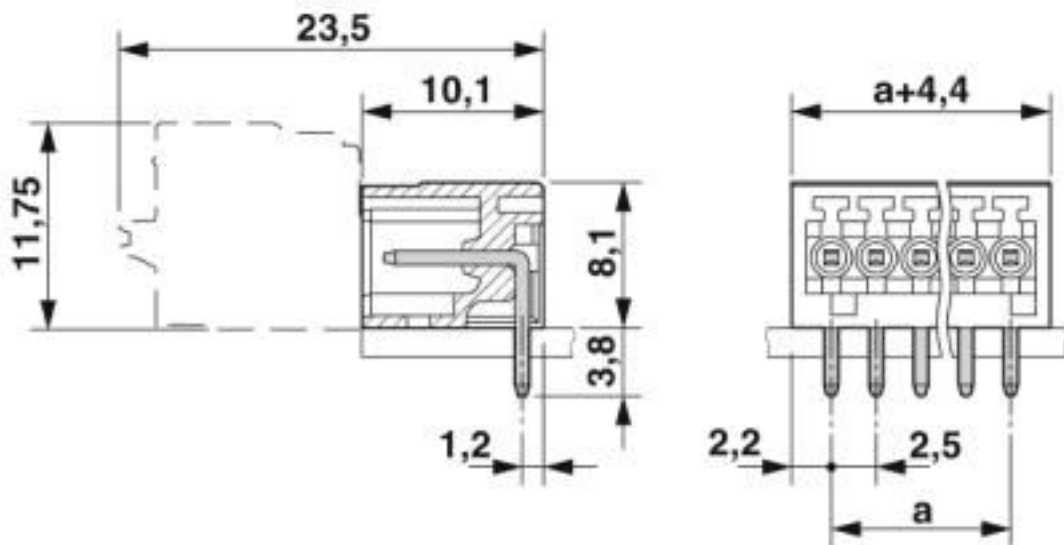
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Diagram



Type: FK-MC 0,5/...-ST-2,5 with MC 0,5/...-G-2,5 THT

Dimensional drawing



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27440402 |
| eCl@ss 4.0 | 27260700 |
| eCl@ss 4.1 | 27260700 |
| eCl@ss 5.0 | 27260700 |

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Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 5.1 | 27260700 |
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440402 |
| eCl@ss 8.0 | 27440402 |
| eCl@ss 9.0 | 27440402 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002637 |
| ETIM 5.0 | EC002637 |
| ETIM 6.0 | EC002637 |
| ETIM 7.0 | EC002637 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11 | 39121409 |
| UNSPSC 12.01 | 39121409 |
| UNSPSC 13.2 | 39121409 |
| UNSPSC 18.0 | 39121409 |
| UNSPSC 19.0 | 39121409 |
| UNSPSC 20.0 | 39121409 |
| UNSPSC 21.0 | 39121409 |

Approvals

Approvals

Approvals

CCA / IEC EE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

Ex Approvals

Approval details

| | |
|--------------------|----------------|
| CCA | CCA/ DE1 34250 |
| Nominal voltage UN | 32 V |
| Nominal current IN | 4 A |

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Approvals

| | | | |
|--------------------|------|---|----------------|
| IECEE CB Scheme | | http://www.iecee.org/ | DE1-56068-B1B2 |
| Nominal voltage UN | 32 V | | |
| Nominal current IN | 4 A | | |

| | | | |
|---|------|---|----------|
| VDE Gutachten mit Fertigungsüberwachung | | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40013394 |
| Nominal voltage UN | 32 V | | |
| Nominal current IN | 4 A | | |

| | | | |
|-----|--|--|---------|
| EAC | | | B.01687 |
|-----|--|--|---------|

| | | | |
|--------------------|-------|---|-----------------|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-19930913 |
| Nominal voltage UN | 125 V | | |
| Nominal current IN | 4 A | | |

Accessories

Accessories

Coding element

Coding profile - CP-MC 0,5 - 1881435

Coding profile, is inserted into the groove in the header, red insulating material



Labeled terminal marker

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Accessories

Marker card - SK 2,54/2,8:FORTL.ZAHLEN - 0804853



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 99, mounting type: adhesive, for terminal block width: 2.54 mm, lettering field size: 2.54 x 2.8 mm

Additional products

Printed-circuit board connector - FK-MC 0,5/12-ST-2,5 - 1881422



PCB connector, nominal current: 4 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm², number of positions: 12, pitch: 2.5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>

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