

Printed-circuit board connector - FMC 0,5/ 5-ST-2,54 C1 - 1706259

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PCB connector, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm², number of positions: 5, pitch: 2.54 mm, connection method: Push-in spring connection, color: black, contact surface: Gold, Fixed coding of the first position, can be combined with MC(V) 0,5/...-G-2,54...C1 headers



The figure shows a 10-position version of the product

Your advantages

- Gold-plated contacts ensure transfer quality remains stable over the long term
- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Intuitive use through colour coded actuation lever
- Optimized for tight installation situations: operation and conductor connection from one direction



Key Commercial Data

| | |
|--------------|---------------|
| Packing unit | 200 pc |
| GTIN | |
| GTIN | 4046356841139 |

Technical data

Item properties

| | |
|---------------------------|---------------------------------|
| Brief article description | Printed-circuit board connector |
| Plug-in system | MICRO COMBICON - FMC 0,5 |
| Type of contact | Female connector |
| Range of articles | FMC 0,5/...-ST |
| Pitch | 2.54 mm |
| Number of positions | 5 |
| Connection method | Push-in spring connection |
| Locking | without |
| Number of levels | 1 |
| Number of connections | 5 |

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Technical data

Item properties

| | |
|----------------------|---|
| Number of potentials | 5 |
|----------------------|---|

Electrical parameters

| | |
|-----------------------------|--------|
| Nominal current | 6 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) | 2.5 kV |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated surge voltage (II/2) | 2.5 kV |

Connection capacity

| | |
|---|---|
| Connection method | Push-in spring connection |
| Conductor cross section solid | 0.14 mm ² ... 0.5 mm ² |
| Conductor cross section flexible | 0.14 mm ² ... 0.5 mm ² |
| Conductor cross section AWG / kcmil | 26 ... 20 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 0.34 mm ² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.14 mm ² ... 0.25 mm ² |
| Stripping length | 7 mm |

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 | partially gold-plated |
| Metal surface terminal point (top layer) | Tin (5 - 7 µm Sn) |
| Metal surface terminal point (middle layer) | Nickel (2 - 3 µm Ni) |
| Metal surface contact area (top layer) | Gold (0.25 Au) |
| Metal surface contact area (middle layer) | Nickel (2 - 3 µm Ni), |

Material data - housing

| | |
|--|--------------|
| Housing color | black (9005) |
| Insulating material | LCP |
| Insulating material group | IIIa |
| CTI according to IEC 60112 | 175 |
| Flammability rating according to UL 94 | V0 |

Material data – actuating element

| | |
|--|-----|
| Insulating material | LCP |
| CTI according to IEC 60112 | 175 |
| Flammability rating according to UL 94 | V0 |

Dimensions for the product

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Technical data

Dimensions for the product

| | |
|--------------|---------|
| Length [l] | 14 mm |
| Width [w] | 13.2 mm |
| Height [h] | 5.35 mm |
| Pitch | 2.54 mm |

Packaging information

| | |
|----------------------------|---------------------|
| Type of packaging | packed in cardboard |
| Pieces per package | 200 |
| Denomination packing units | Pcs. |

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) |

Termination and connection method

| | |
|--|---------------------|
| Test – repeated connection and release | Test passed |
| Test for conductor damage and slackening | IEC 60999-1:1999-11 |
| | Test passed |

Pull-out test

| | |
|--|--|
| Pull-out test | IEC 60999-1:1999-11 |
| | Test passed |
| Conductor cross section / conductor type / tensile force | 0.14 mm ² / solid / > 10 N |
| | 0.14 mm ² / flexible / > 10 N |
| | 0.5 mm ² / solid / > 20 N |
| | 0.5 mm ² / flexible / > 20 N |

Mechanical tests according to standard

| | |
|-------------------------------------|------------------------|
| Test specification | IEC 61984 |
| Visual inspection | IEC 60512-1-1:2002-02 |
| Dimension check | IEC 60512-1-2:2002-02 |
| Resistance of inscriptions | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force | IEC 60512-13-2:2006-02 |
| No. of cycles | 100 |
| Insertion strength per pos. approx. | 2 N |
| Withdraw strength per pos. approx. | 2 N |
| Polarization and coding | IEC 60512-13-5:2006-02 |
| Contact holder in insert | IEC 60512-15-1:2008-05 |
| Test force per pos. | 20 N |

Air clearances and creepage distances

| | |
|-----------------------------------|---------------------|
| Clearances and creepage distances | IEC 60664-1:2007-04 |
| Specification | IEC 60664-1:2007-04 |

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Technical data

Air clearances and creepage distances

| | |
|---|--------|
| 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 |

Electrical tests - Function

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
|---------------|---------------------|

Temperature cycles

| | |
|--------------------------------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Test current (minimum cross section) | 3 A DC |
| Test current (maximum cross section) | 6 A DC |
| Temperature cycles | 192 |

Current carrying capacity / derating curves

| | |
|------------------|--|
| Caption | Type: FMC 0,5/...-ST-2,54 with MC 0,5/...-G-2,54 P20 THR R.. |
| Specification | IEC 61984:2008-10 |
| Reduction factor | 0.8 |
| Note | Representation based on IEC 60512-5-2:2002-02 |
| | For number of positions, see diagram |

Mechanical tests (A)

| | |
|--|-------------|
| Test specification | IEC 61984 |
| Insertion strength per pos. approx. | 2 N |
| Withdraw strength per pos. approx. | 2 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 | 2.7 mΩ |
| Insertion/withdrawal cycles | 100 |
| Contact resistance R ₂ | 2.6 mΩ |
| Impulse withstand voltage at sea level | 2.95 kV |
| Power-frequency withstand voltage | 1.39 kV |

Thermal tests (C)

| | |
|---|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 16 |
| Conductor cross section | 0.5 mm ² |
| Test current | 6 A DC |
| Upper limiting temperature requirements <100 °C | Test passed |

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Technical data

Climatic tests (D)

| | |
|--|--|
| Specification | DIN 50018:2013-05 |
| Cold stress | -40 °C/2 h |
| Thermal stress | 100 °C/168 h |
| Corrosive stress | 1.0 dm ³ SO ₂ on 300 dm ³ /40 °C/3 cycles |
| Impulse withstand voltage at sea level | 2.95 kV |
| Power-frequency withstand voltage | 1.39 kV |

Environmental and durability tests (E)

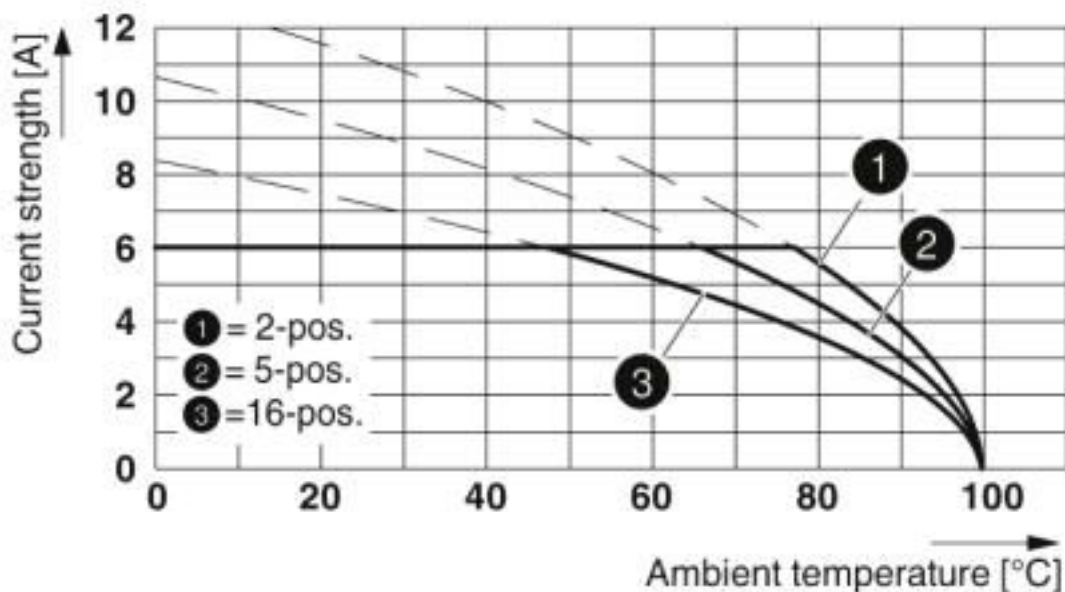
| | |
|---------------------------------------|--|
| Specification | IEC 61984:2008-10 |
| Result, degree of protection, IP code | Back of hand safety with IP10 access probe |

Environmental Product Compliance

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

Drawings

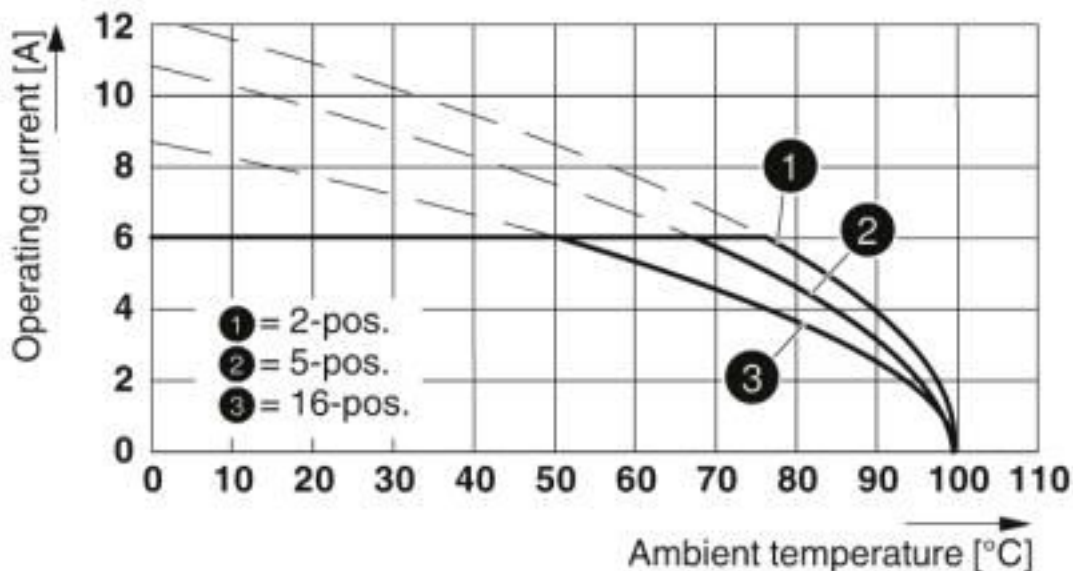
Diagram



Type: FMC 0,5/...-ST-2,54 with MC 0,5/...-G-2,54 P20 THR R..

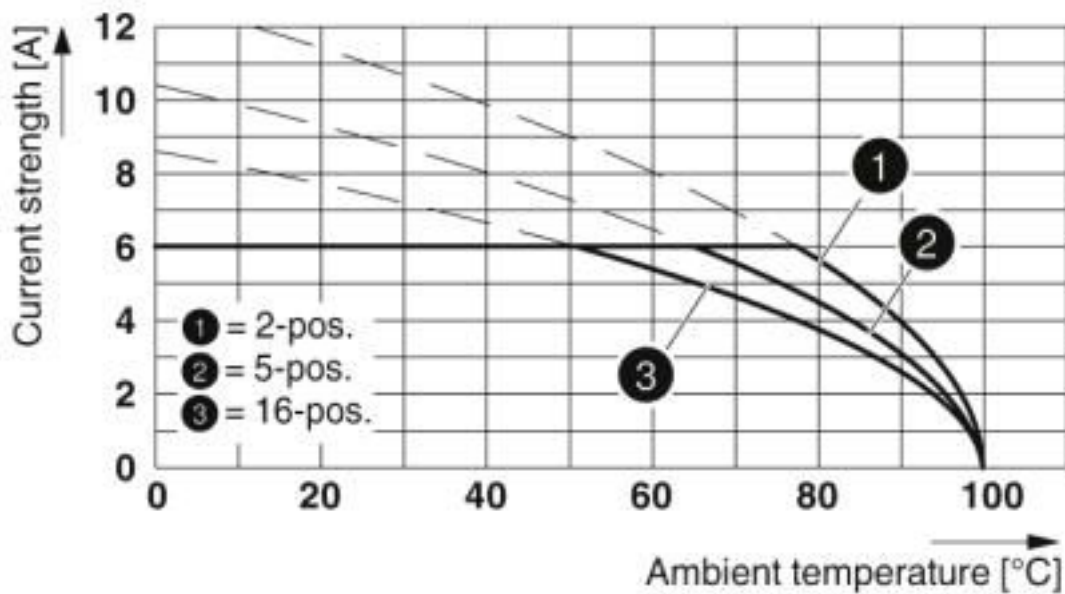
Printed-circuit board connector - FMC 0,5/ 5-ST-2,54 C1 - 1706259

Diagram



Type: FMC 0,5/...-ST-2,54 with MC 0,5/...-G-2,54 SMD R..

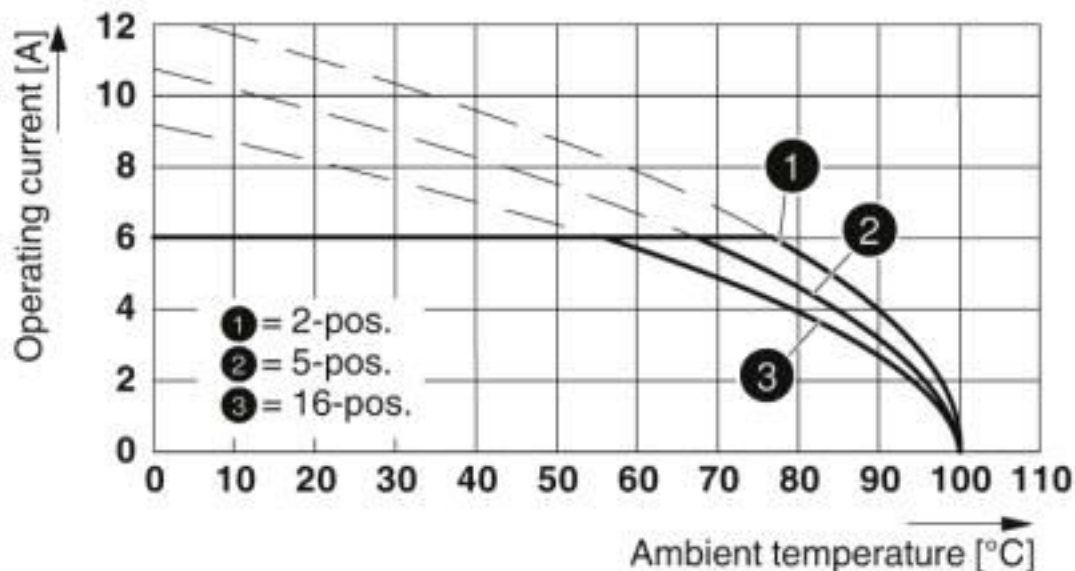
Diagram



Type: FMC 0,5/...-ST-2,54 with MCV 0,5/...-G-2,54 P20 THR R..

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Diagram



Type FMC 0,5/...-ST-2,54 with MCV 0,5/...-G-2,54 SMD R..

Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27440309 |
| eCl@ss 4.0 | 27260700 |
| eCl@ss 4.1 | 27260700 |
| eCl@ss 5.0 | 27260700 |
| eCl@ss 5.1 | 27260700 |
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440309 |
| eCl@ss 8.0 | 27440309 |
| eCl@ss 9.0 | 27440309 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002643 |
| ETIM 5.0 | EC002638 |
| ETIM 6.0 | EC002638 |
| ETIM 7.0 | EC002638 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211801 |
| UNSPSC 7.0901 | 39121432 |
| UNSPSC 11 | 39121432 |
| UNSPSC 12.01 | 39121432 |

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Classifications

UNSPSC

| | |
|-------------|----------|
| UNSPSC 13.2 | 39121409 |
| UNSPSC 18.0 | 39121409 |
| UNSPSC 19.0 | 39121409 |
| UNSPSC 20.0 | 39121409 |
| UNSPSC 21.0 | 39121409 |

Approvals


Approvals


Approvals


IECEE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

Ex Approvals

Approval details

| | | | |
|----------------------------|---|---|-----------|
| IECEE CB Scheme |  | http://www.iecee.org/ | DE1-63595 |
| Nominal voltage UN | 160 V | | |
| Nominal current IN | 6 A | | |
| mm ² /AWG/kcmil | 0.14-.5 | | |

| | | | |
|---|---|---|----------|
| VDE Gutachten mit Fertigungsüberwachung |  | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40042258 |
| Nominal voltage UN | 160 V | | |
| Nominal current IN | 6 A | | |
| mm ² /AWG/kcmil | 0.14-.5 | | |

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

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Approvals

| | | | |
|----------------------------|-------|---|-----------------|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-19920306 |
| | B | C | |
| Nominal voltage UN | 150 V | 50 V | |
| Nominal current IN | 6 A | 6 A | |
| mm ² /AWG/kcmil | 26-20 | 26-20 | |

Accessories

Accessories

Cable end sleeve

Ferrule - A 0,25- 7 - 3202478



Ferrule, length: 7 mm, color: silver

Ferrule - A 0,34- 7 - 3009202



Ferrule, length: 7 mm, color: silver

Crimping tool

Crimping pliers - CRIMPFOX 6 - 1212034



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

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

Screwdriver tools

Screwdriver - SZS 0,4X2,0 - 1205202



Micro screwdriver, bladed, size: 0.4 x 2.0 x 60 mm, 2-component grip, with non-slip grip and twist cap

Additional products

Printed-circuit board connector - MC 0,5/ 5-G-2,54 P20THRR44C1 - 1706221



PCB headers, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm², number of positions: 5, pitch: 2.54 mm, color: black, contact surface: Gold, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, Fixed coding of the first position, can be combined with the FMC 0,5/...-ST-2,54 C1 connector

Printed-circuit board connector - MCV 0,5/ 5-G-2,54 P20THRR44C1 - 1706184



PCB headers, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm², number of positions: 5, pitch: 2.54 mm, color: black, contact surface: Gold, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, Fixed coding of the first position, can be combined with the FMC 0,5/...-ST-2,54 C1 connector

Printed-circuit board connector - MC 0,5/ 5-G-2,54 SMDR24C1 - 1706146



PCB headers, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm², number of positions: 5, pitch: 2.54 mm, color: black, contact surface: Gold, mounting: SMD soldering, pin layout: Linear pad geometry, Fixed coding of the first position, can be combined with the FMC 0,5/...-ST-2,54 C1 connector

Printed-circuit board connector - FMC 0,5/ 5-ST-2,54 C1 - 1706259

Accessories

Printed-circuit board connector - MCV 0,5/ 5-G-2,54 SMDR44C1 - 1706108

PCB headers, nominal current: 6 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm², number of positions: 5, pitch: 2.54 mm, color: black, contact surface: Gold, mounting: SMD soldering, pin layout: Linear pad geometry, solder pin [P]: 2 mm, Fixed coding of the first position, can be combined with the FMC 0,5/...-ST-2,54 C1 connector



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