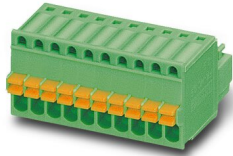


PCB connector - FK-MC 0,5/ 6-ST-2,5

1881367

<https://www.phoenixcontact.com/de/produkte/1881367>

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PCB connector, nominal cross section: 0.5 mm², color: green, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: FK-MC 0,5/.-ST, pitch: 2.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, number of solder pins per potential: 1, plug-in system: COMBICON FK-MC 0,5, locking: without, mounting: without, type of packaging: packed in cardboard

Your advantages

- 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
- Operation and conductor connection from one direction enable integration into front of device
- Quick and convenient testing using integrated test option

PCB connector - FK-MC 0,5/ 6-ST-2,5



1881367

<https://www.phoenixcontact.com/de/produkte/1881367>

Commercial Data

| | |
|--------------------------------------|---------------------------|
| Item number | 1881367 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales Key | E1 - Leiterplattenanschl. |
| Product Key | AAAFCA |
| Catalog Page | Page 168 (C-1-2013) |
| GTIN | 4017918156619 |
| Weight per Piece (including packing) | 3,77 g |
| Weight per Piece (excluding packing) | 3,47 g |
| Customs tariff number | 85366990 |
| Country of origin | DE |

Technical Data

Product properties

| | |
|-----------------------|------------------------|
| Type | Standard |
| Product line | COMBICON Connectors XS |
| Product type | PCB plug |
| Number of positions | 6 |
| Pitch | 2.5 mm |
| Number of connections | 6 |
| Number of rows | 1 |
| Mounting flange | without |
| Number of potentials | 6 |

Electrical properties

| | |
|-----------------------------|--------|
| Nominal current I_N | 4 A |
| Nominal voltage U_N | 160 V |
| Pollution degree | 3 |
| Contact resistance | 2 mΩ |
| Rated voltage (III/3) | 100 V |
| Rated surge voltage (III/3) | 1.5 kV |
| Rated voltage (III/2) | 160 V |
| Rated surge voltage (III/2) | 2.5 kV |

Connection data

Connection technology

| | |
|-----------------------|---------------------|
| Type | Standard |
| Connector system | COMBICON FK-MC 0,5 |
| Nominal cross section | 0.5 mm ² |
| Type of contact | Female connector |

Interlock

| | |
|-----------------|---------|
| Locking type | without |
| Mounting flange | without |

Conductor connection

| | |
|---|--|
| Connection method | Push-in spring connection |
| Conductor/PCB connection direction | 0 ° |
| 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 | 26 ... 20 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 0.5 mm ² |
| Cylindrical gauge a x b / diameter | - / 1.4 mm |
| Stripping length | 8 mm |

PCB connector - FK-MC 0,5/ 6-ST-2,5

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Material specifications

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 | hot-dip tin-plated |
| Metal surface terminal point (top layer) | Tin (4 - 8 μm Sn) |
| Metal surface contact area (top layer) | Tin (4 - 8 μm Sn) |

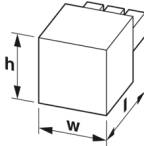
Material data - housing

| | |
|---|--------------|
| Housing color | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| 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 |

Material data – actuating element

| | |
|--|---------------|
| Color of the actuating lever | orange (2003) |
| Insulating material | PBT |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Pitch | 2.5 mm |
| Width [w] | 15.6 mm |
| Height [h] | 11.75 mm |
| Length [l] | 19.05 mm |
| Installed height | 11.75 mm |

Notes

| | |
|--------------------|--|
| Notes on operation | In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load. |
|--------------------|--|

Mechanical tests

Test for conductor damage and slackening

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |

Repeated connection and disconnection

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |

Pull-out test

| | |
|---|---|
| Specification | IEC 60999-1:1999-11 |
| Conductor cross section/conductor type/tractive force setpoint/actual value | 0.2 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 0.5 mm ² / solid / > 20 N |
| | 0.5 mm ² / flexible / > 20 N |

Insertion and withdrawal forces

| | |
|-------------------------------------|-------------|
| Result | Test passed |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 6 N |

Contact holder in insert

| | |
|---|------------------------|
| Specification | IEC 60512-15-1:2008-05 |
| Contact holder in insert Requirements >20 N | Test passed |

Resistance of inscriptions

| | |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
| Result | Test passed |

Polarization and coding

| | |
|---------------|------------------------|
| Specification | IEC 60512-13-5:2006-02 |
| Result | Test passed |

Visual inspection

| | |
|---------------|-----------------------|
| Specification | IEC 60512-1-1:2002-02 |
| Result | Test passed |

Dimension check

| | |
|---------------|-----------------------|
| Specification | IEC 60512-1-2:2002-02 |
| Result | Test passed |

Environmental and real-life conditions

Vibration test

| | |
|---------------|-----------------------|
| Specification | IEC 60068-2-6:2007-12 |
|---------------|-----------------------|

PCB connector - FK-MC 0,5/ 6-ST-2,5



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| | |
|------------------------|------------------------|
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 - 60.1 Hz) |
| Sweep speed | 5g (60.1 - 150 Hz) |
| Test duration per axis | 2.5 h |

Durability test

| | |
|--|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level | 2.95 kV |
| Contact resistance R ₁ | 2 mΩ |
| Contact resistance R ₂ | 2.2 mΩ |
| Insertion/withdrawal cycles | 25 |
| Insulation resistance, neighboring positions | > 5 MΩ |

Climatic test

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

Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |

Electrical tests

Thermal test | Test group C

| | |
|----------------------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Tested number of positions | 12 |

Insulation resistance

| | |
|--|-----------------------|
| Specification | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 5 MΩ |

Temperature cycles

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |

Air clearances and creepage distances |

| | |
|--|---|
| Specification | IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 100 V |
| Rated surge voltage (III/3) | 1.5 kV |
| minimum clearance value - non-homogenous field (III/3) | 0.8 mm |

PCB connector - FK-MC 0,5/ 6-ST-2,5



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<https://www.phoenixcontact.com/de/produkte/1881367>

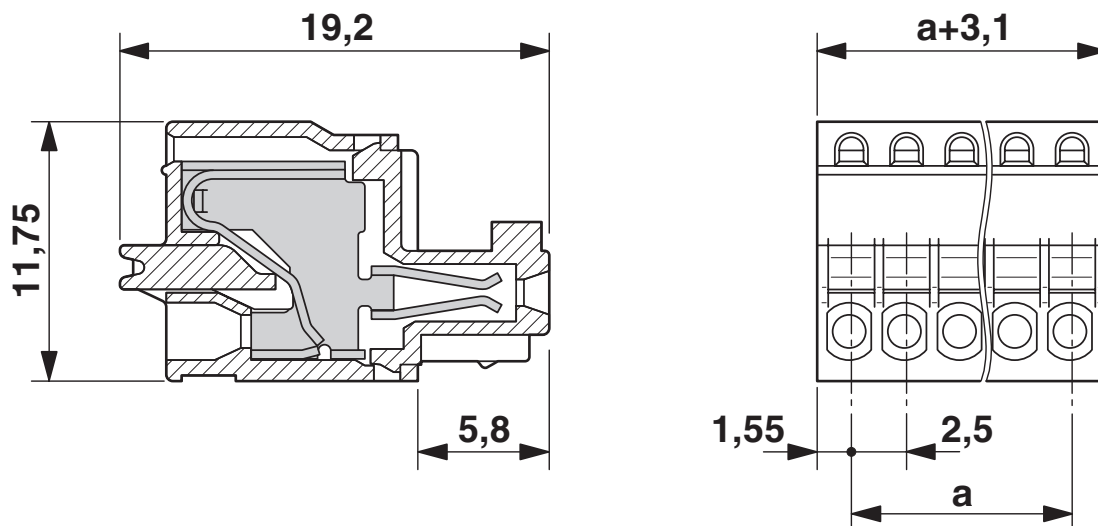
| | |
|--|--------|
| minimum creepage distance (III/3) | 1.8 mm |
| Rated insulation voltage (III/2) | 160 V |
| Rated surge voltage (III/2) | 2.5 kV |
| minimum clearance value - non-homogenous field (III/2) | 1.5 mm |
| minimum creepage distance (III/2) | 1.5 mm |
| Rated insulation voltage (II/2) | 320 V |
| Rated surge voltage (II/2) | 2.5 kV |
| minimum clearance value - non-homogenous field (II/2) | 1.5 mm |
| minimum creepage distance (II/2) | 1.6 mm |

Packaging specifications

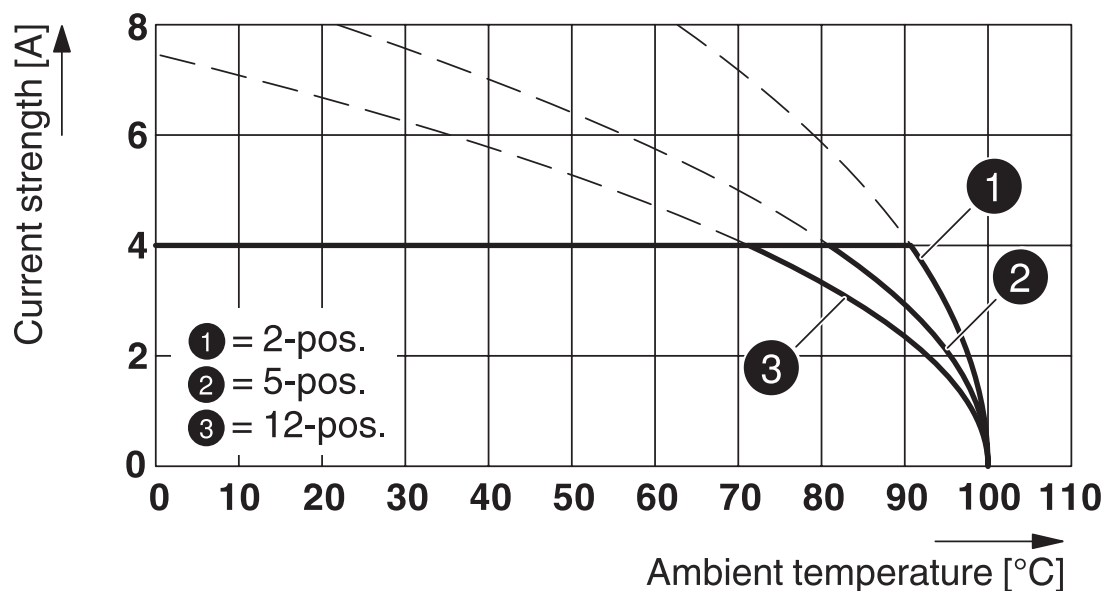
| | |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

Drawings

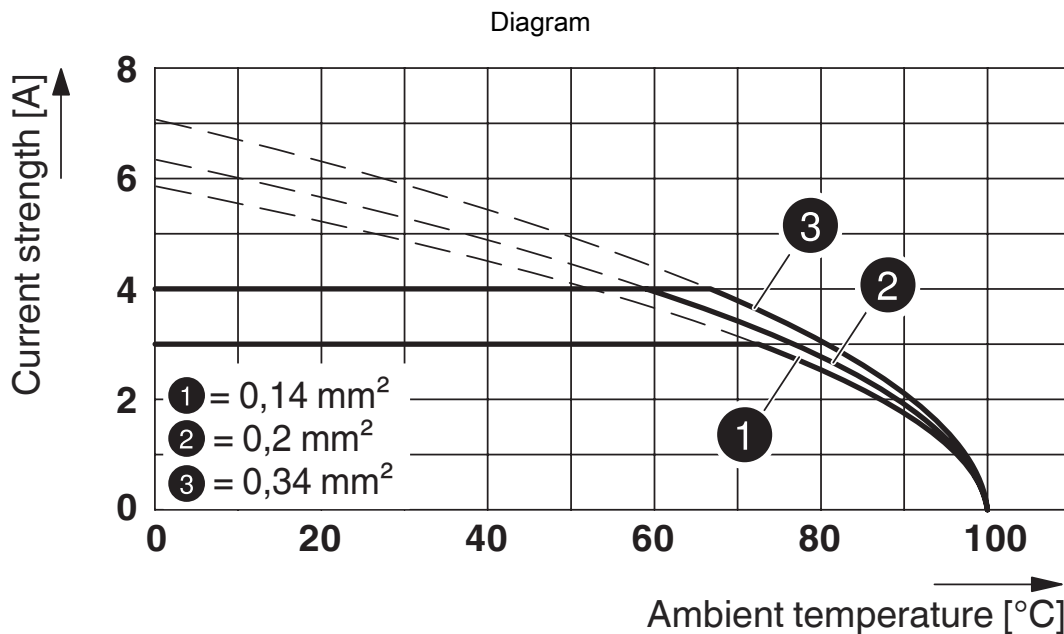
Dimensional drawing



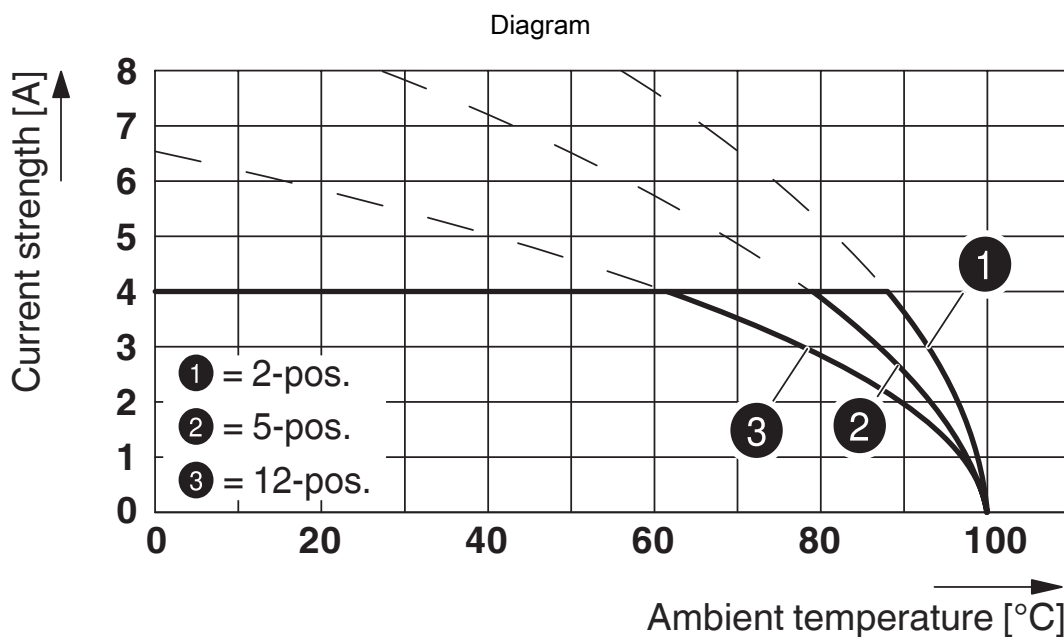
Diagram



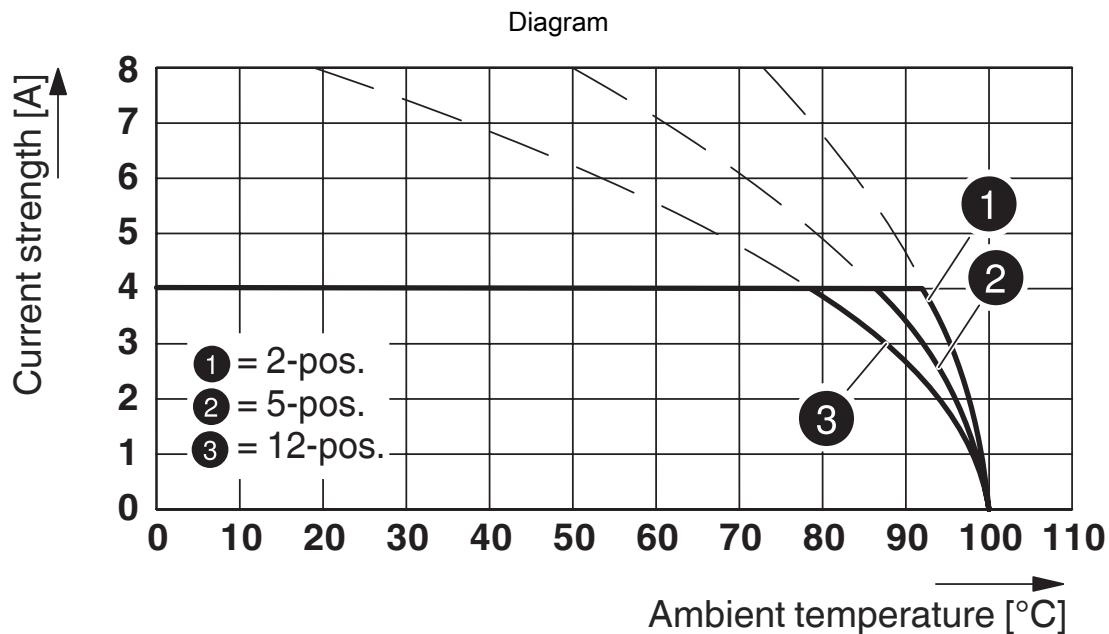
Type: FK-MC 0,5/...-ST-2,5 with MCD 0,5/...-G1-2,5 HT BK



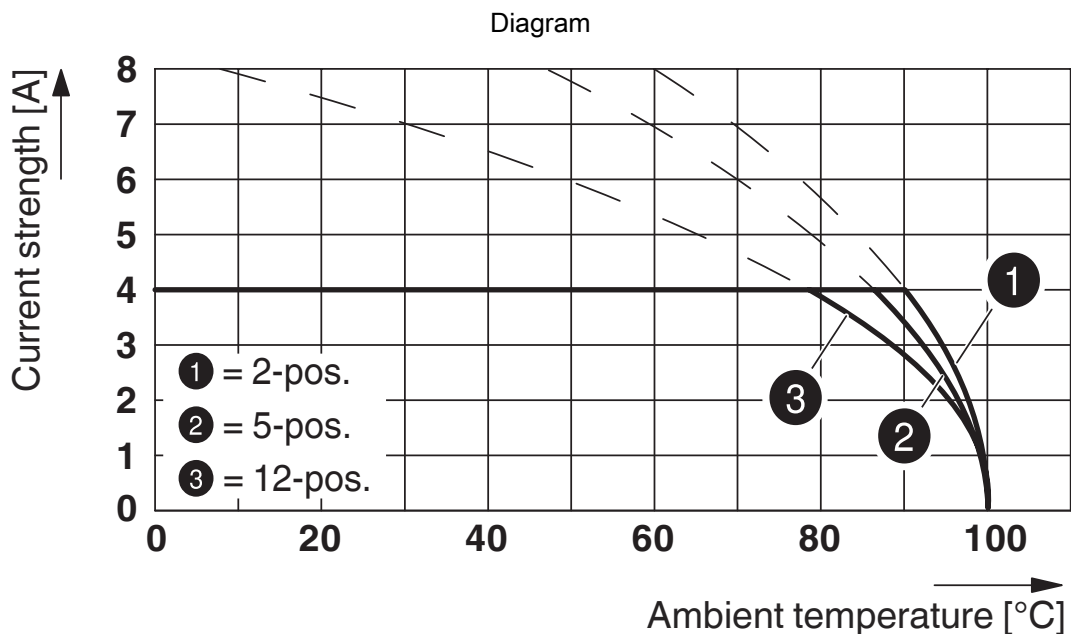
Type: FK-MC 0,5/...-ST-2,5 with MC 0,5/...-G-2,5



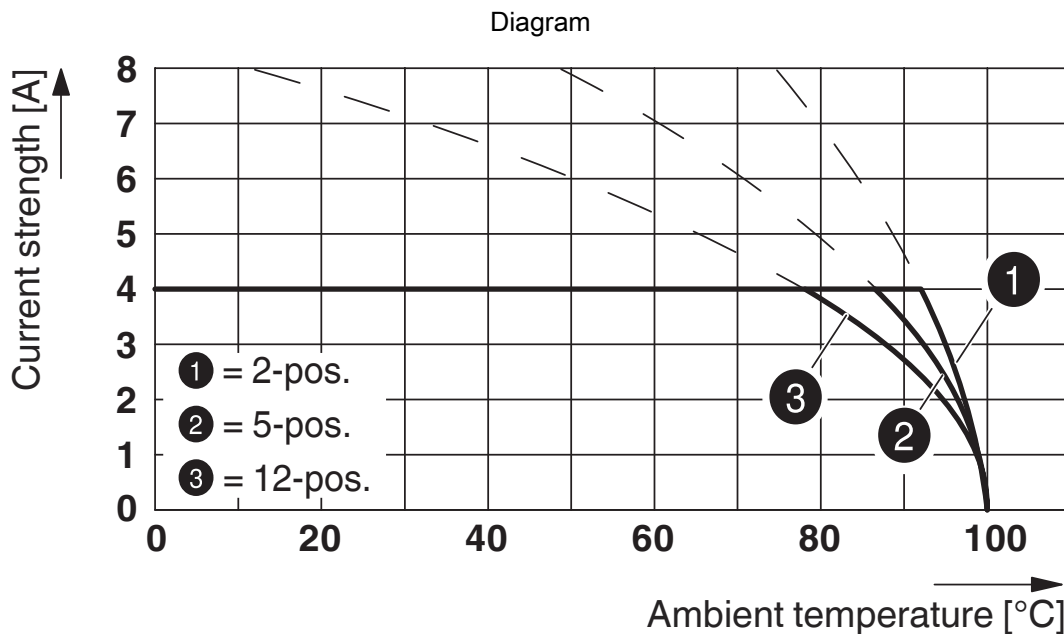
Type: FK-MC 0,5/...-ST-2,5 with MCD 0,5/...-G1-2,5



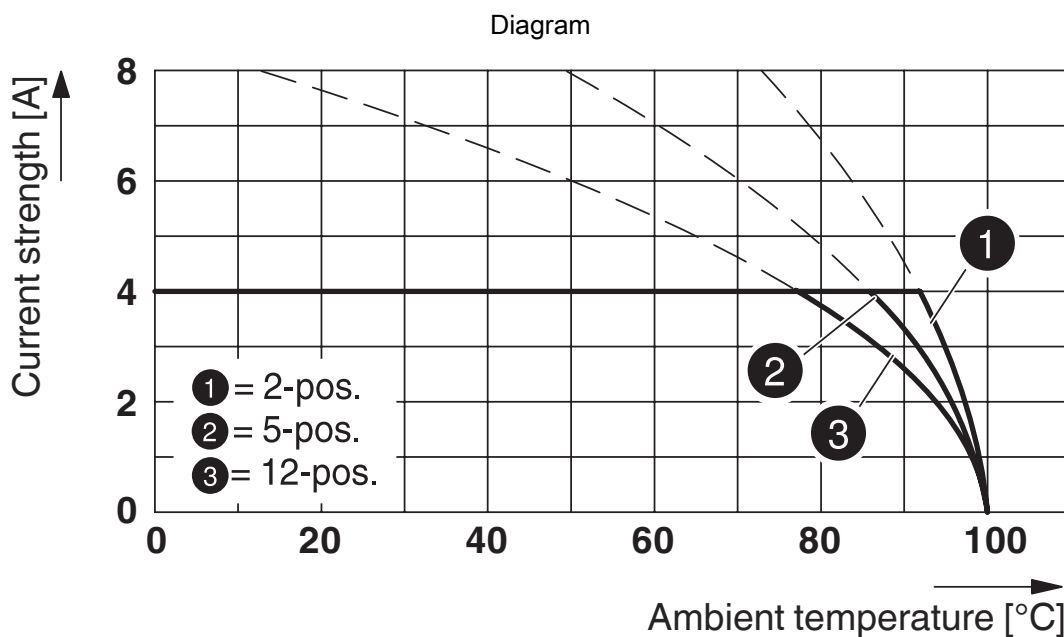
Type: FK-MC 0,5/...-ST-2,5 with MCV 0,5/...-G-2,5



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



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



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

PCB connector - FK-MC 0,5/ 6-ST-2,5





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Approvals

|  IECEE CB Scheme Approval ID: DE1-56068-B1B2 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| | 100 V | 4 A | - | 0.2 - 0.5 |

|  EAC Approval ID: B.01687 | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

|  cULus Recognized Approval ID: E60425-19930913 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| Use group B | 125 V | 4 A | 28 - 20 | - |

| CCA Approval ID: CCA/ DE1 34250 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| | 100 V | 4 A | - | 0.2 - 0.5 |

|  VDE report with production monitoring Approval ID: 40013394 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| | 100 V | 4 A | - | 0.2 - 0.5 |

PCB connector - FK-MC 0,5/ 6-ST-2,5



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<https://www.phoenixcontact.com/de/produkte/1881367>

Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27440309 |
| ECLASS-10.0.1 | 27440309 |
| ECLASS-11.0 | 27460202 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002638 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

PCB connector - FK-MC 0,5/ 6-ST-2,5



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<https://www.phoenixcontact.com/de/produkte/1881367>

Environmental Product Compliance

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

PCB connector - FK-MC 0,5/ 6-ST-2,5

1881367

<https://www.phoenixcontact.com/de/produkte/1881367>

Accessories

Screwdriver

Screwdriver - SZS 0,4X2,0 - 1205202

<https://www.phoenixcontact.com/de/produkte/1205202>

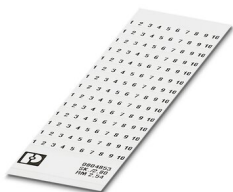


Micro screwdriver, bladed, size: 0.4 x 2.0 x 60 mm, 2-component grip, with non-slip grip and twist cap

Marker card

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

<https://www.phoenixcontact.com/de/produkte/0804853>



Marker 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

PCB connector - FK-MC 0,5/ 6-ST-2,5

1881367

<https://www.phoenixcontact.com/de/produkte/1881367>

Crimping pliers

Crimping pliers - CRIMPFOX 6 - 1212034

<https://www.phoenixcontact.com/de/produkte/1212034>

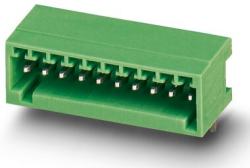


Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

PCB header

PCB header - MC 0,5/ 6-G-2,5 - 1881480

<https://www.phoenixcontact.com/de/produkte/1881480>



PCB headers, nominal cross section: 0.5 mm², color: green, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MC 0,5/...-G, pitch: 2.5 mm, conductor/PCB connection direction: 0 °, pin layout: Linear pinning, solder pin [P]: 3.8 mm, number of solder pins per potential: 1, plug-in system: COMBICON FK-MC 0,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

PCB connector - FK-MC 0,5/ 6-ST-2,5

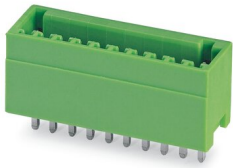
1881367

<https://www.phoenixcontact.com/de/produkte/1881367>

PCB header

PCB header - MCV 0,5/ 6-G-2,5 - 1881590

<https://www.phoenixcontact.com/de/produkte/1881590>



PCB headers, nominal cross section: 0.5 mm², color: green, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MCV 0,5/...-G, pitch: 2.5 mm, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON FK-MC 0,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

PCB header

PCB header - MCD 0,5/ 6-G1-2,5 - 1894846

<https://www.phoenixcontact.com/de/produkte/1894846>



PCB headers, nominal cross section: 0.5 mm², color: green, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 12, number of rows: 2, number of positions: 6, number of connections: 12, product range: MCD 0,5/...-G1, pitch: 2.5 mm, pin layout: Linear pinning, solder pin [P]: 3.8 mm, number of solder pins per potential: 1, plug-in system: COMBICON FK-MC 0,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

PCB connector - FK-MC 0,5/ 6-ST-2,5

1881367

<https://www.phoenixcontact.com/de/produkte/1881367>

PCB header

PCB header - MCD 0,5/ 6-G1-2,5 HT BK - 1961180

<https://www.phoenixcontact.com/de/produkte/1961180>

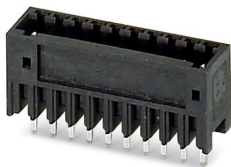


PCB headers, nominal cross section: 0.5 mm^2 , color: black, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 12, number of rows: 2, number of positions: 6, number of connections: 12, product range: MCD 0,5/...-G1-HT, pitch: 2.5 mm, pin layout: Linear pinning, solder pin [P]: 3.8 mm, number of solder pins per potential: 1, plug-in system: COMBICON FK-MC 0,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, Standard component made of highly temperature resistant plastic; suitable for reflow process. User information and design recommendations on Through Hole Reflow Technology can be found at: "Downloads".

PCB header

PCB header - MCV 0,5/ 6-G-2,5 THT - 1963573

<https://www.phoenixcontact.com/de/produkte/1963573>



PCB headers, nominal cross section: 0.5 mm^2 , color: black, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MCV 0,5/...-G-THT, pitch: 2.5 mm, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON FK-MC 0,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, For user information and design recommendations for through-hole reflow technology, go to: Downloads

PCB connector - FK-MC 0,5/ 6-ST-2,5

1881367

<https://www.phoenixcontact.com/de/produkte/1881367>

PCB header

PCB header - MC 0,5/ 6-G-2,5 THT R44 - 1963683

<https://www.phoenixcontact.com/de/produkte/1963683>

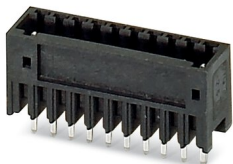


PCB headers, nominal cross section: 0.5 mm², color: black, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MC 0,5/..-G-THT, pitch: 2.5 mm, pin layout: Linear pinning, solder pin [P]: 3.8 mm, number of solder pins per potential: 1, plug-in system: COMBICON FK-MC 0,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: 44 mm wide tape, For user information and design recommendations for through-hole reflow technology, go to: Downloads

PCB header

PCB header - MCV 0,5/ 6-G-2,5 THT R44 - 1963793

<https://www.phoenixcontact.com/de/produkte/1963793>



PCB headers, nominal cross section: 0.5 mm², color: black, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MCV 0,5/..-G-THT, pitch: 2.5 mm, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON FK-MC 0,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: 44 mm wide tape, User information and design recommendations on Through Hole Reflow Technology can be found at: "Downloads"

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