

MCC 0,5/ 6-ST-2,54 - PCB connector

1012270

<https://www.phoenixcontact.com/us/products/1012270>



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PCB connector, nominal cross section: 0.75 mm², color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Au, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MCC 0,5/..-ST, pitch: 2.54 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON FMC 0,5, locking: without, mounting method: without, type of packaging: packed in cardboard



Your advantages

- Cost-effective connection of crimped conductors in large quantities
- Gold-plated contacts ensure transfer quality remains stable over the long term
- Small component size for applications where space is at a premium
- Tools for manual and automatic crimping available as an option

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1012270 |
| Packing unit | 100 pc |
| Minimum order quantity | 100 pc |
| Sales key | AA01 |
| Product key | AAACAA |
| GTIN | 4055626489322 |
| Weight per piece (including packing) | 0.814 g |
| Weight per piece (excluding packing) | 0.804 g |
| Customs tariff number | 85366990 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|-----------------------|------------------------|
| Product type | PCB connector |
| Product family | MCC 0,5/..-ST |
| Product line | COMBICON Connectors XS |
| Number of positions | 6 |
| Pitch | 2.54 mm |
| Number of connections | 6 |
| Number of rows | 1 |
| Number of potentials | 6 |

Electrical properties

Properties

| | |
|-----------------------------|--------|
| Nominal current I_N | 6 A |
| Nominal voltage U_N | 160 V |
| Contact resistance | 2.1 mΩ |
| Rated voltage (III/3) | 160 V |
| Rated surge voltage (III/3) | 2.5 kV |
| Rated voltage (III/2) | 160 V |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated voltage (II/2) | 320 V |
| Rated surge voltage (II/2) | 2.5 kV |

Connection data

Connection technology

| | |
|-------------------------|----------------------|
| Type | Standard |
| Connector system | COMBICON FMC 0,5 |
| Nominal cross section | 0.75 mm ² |
| Contact connection type | Socket |

Interlock

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

Conductor connection

| | |
|------------------------------------|--|
| Connection method | Crimp connection |
| Conductor/PCB connection direction | 0 ° |
| Conductor cross-section flexible | 0.14 mm ² ... 0.75 mm ² (Maximum external diameter of the insulation 1.9 mm) |
| Conductor cross-section AWG | 26 ... 18 (Maximum external diameter of the insulation 1.9 mm) |
| Stripping length | 4.1 mm ... 4.5 mm |

Material specifications

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Material data - contact

| | |
|--|-----------|
| Metal surface contact area (top layer) | Gold (Au) |
|--|-----------|

Material data - housing

| | |
|---|--------------|
| Color (Housing) | black (9005) |
| 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 |

Dimensions

| | |
|---------------------|----------|
| Dimensional drawing | |
| Pitch | 2.54 mm |
| Width [w] | 15.74 mm |
| Height [h] | 3.95 mm |
| Length [l] | 16 mm |

Notes

| | |
|---------------------|---|
| Note on the contact | The information on the basic material and the finish properties of the crimp contacts is to be found in the E-Shop in the technical data for the respective crimp contact. |
| Note on application | All laboratory tests are performed in combination with the crimp contacts specified as accessories. |
| Note on application | The current depends on the crimp contact and conductor cross-section used. |
| Note on application | The corresponding crimp contacts are to be found in the "Accessories" tab. |
| Note on application | The crimp contacts may only be processed with approved crimping tools. |
| Note on the contact | These connectors conform to DIN EN 61984, connectors without switching power (COC). When used for their intended purpose, they must not be plugged in or disconnected live or under load. |

Mechanical tests

| | |
|---|--|
| Tensile strength of crimp connections | |
| Result | Test passed |
| Conductor cross-section/conductor type/tractive force | 0.14 mm ² / flexible / > 18 N |

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setpoint/actual value

Insertion and withdrawal forces

| | |
|-------------------------------------|------------------------|
| Specification | IEC 60512-13-2:2006-02 |
| Result | Test passed |
| No. of cycles | 100 |
| Insertion strength per pos. approx. | 2 N |
| Withdraw strength per pos. approx. | 3 N |

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 |
| Frequency | 10 - 500 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 Hz ... 60.1 Hz) |
| Acceleration | 5g (60.1 Hz ... 500 Hz) |
| Test duration per axis | 2 h |
| Test directions | X-, Y- and Z-axis |

Durability test

| | |
|--|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level | 2.95 kV |
| Contact resistance R_1 | 2.1 m Ω |
| Contact resistance R_2 | 2.1 m Ω |
| Insertion/withdrawal cycles | 100 |
| Insulation resistance, neighboring positions | > 5 M Ω |

Climatic test

| | |
|------------------|---|
| Specification | DIN 50018:2013-05 |
| Corrosive stress | 1.0 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle |
| Thermal stress | 105 °C/168 h |

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| | |
|---|---|
| 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 | 16 |

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

| | |
|--|---------------------|
| Air clearances and creepage distances | |
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 160 V |
| Rated surge voltage (III/3) | 2.5 kV |
| minimum clearance value - non-homogenous field (III/3) | 1.5 mm |
| minimum creepage distance (III/3) | 2 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) | 0.8 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 |
|-------------------|---------------------|

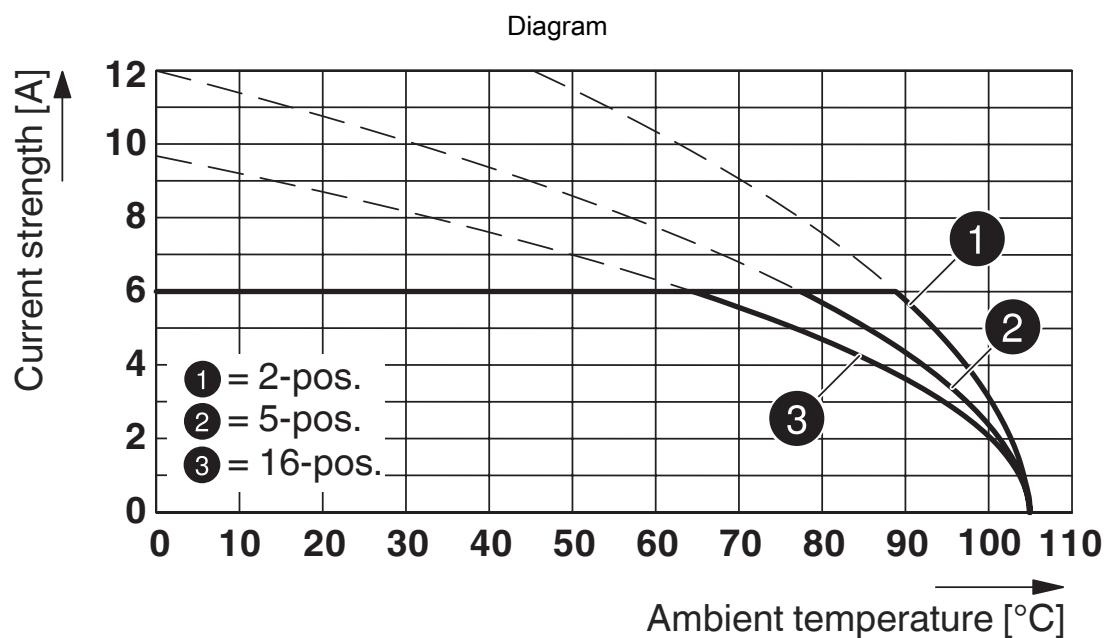
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Drawings



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

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Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1012270>

| cULus Recognized | | | | |
|------------------------------|-----------------------|-----------------------|-------------------|----------------------|
| Approval ID: E60425-20110128 | | | | |
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| B | 150 V | 6 A | 26 - 18 | - |
| D | 150 V | 6 A | 26 - 18 | - |

| VDE report with production monitoring | | | | |
|---------------------------------------|-----------------------|-----------------------|-------------------|----------------------|
| Approval ID: 40042258 | | | | |
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | 160 V | 6 A | - | 0.14 - 0.75 |

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27460202 |
| ECLASS-15.0 | 27460202 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC002638 |
|----------|----------|

UNSPSC

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

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

EF3.0 Climate Change

| | |
|---------|---------------|
| CO2e kg | 0.027 kg CO2e |
|---------|---------------|

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