

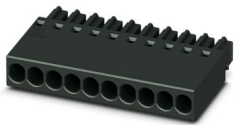
# MCC 0,5/ 8-ST-2,54 - PCB connector



1012272

<https://www.phoenixcontact.com/gb/products/1012272>

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PCB connector, nominal cross section: 0.75 mm<sup>2</sup>, color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Au, contact connection type: Socket, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, 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                          | 1012272       |
| Packing unit                         | 100 pc        |
| Minimum order quantity               | 100 pc        |
| Sales key                            | AAACAA        |
| Product key                          | AAACAA        |
| GTIN                                 | 4055626487984 |
| Weight per piece (including packing) | 0.976 g       |
| Weight per piece (excluding packing) | 0.9 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   | 8                      |
| Pitch                 | 2.54 mm                |
| Number of connections | 8                      |
| Number of rows        | 1                      |
| Number of potentials  | 8                      |

### 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 <sup>2</sup> |
| Contact connection type | Socket               |

#### Interlock

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

#### Conductor connection

|                                    |                                                                                                    |
|------------------------------------|----------------------------------------------------------------------------------------------------|
| Connection method                  | Crimp connection                                                                                   |
| Conductor/PCB connection direction | 0 °                                                                                                |
| Conductor cross section flexible   | 0.14 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> (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

# MCC 0,5/ 8-ST-2,54 - PCB connector

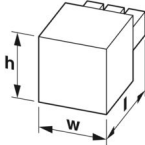
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## Material data - housing

|                                                                   |              |
|-------------------------------------------------------------------|--------------|
| 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]           | 20.82 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.                                                                                                     |

## Mechanical tests

### Tensile strength of crimp connections

|                                                                             |                              |
|-----------------------------------------------------------------------------|------------------------------|
| Result                                                                      | Test passed                  |
| Conductor cross section/conductor type/tractive force setpoint/actual value | 0.14 mm² / flexible / > 18 N |

### Insertion and withdrawal forces

|               |                        |
|---------------|------------------------|
| Specification | IEC 60512-13-2:2006-02 |
| Result        | Test passed            |
| No. of cycles | 100                    |

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|                                     |     |
|-------------------------------------|-----|
| 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 <sub>1</sub>            | 2.1 mΩ                |
| Contact resistance R <sub>2</sub>            | 2.1 mΩ                |
| Insertion/withdrawal cycles                  | 100                   |
| Insulation resistance, neighboring positions | > 5 MΩ                |

### Climatic test

|                                   |                                                                           |
|-----------------------------------|---------------------------------------------------------------------------|
| Specification                     | DIN 50018:2013-05                                                         |
| Corrosive stress                  | 1.0 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Thermal stress                    | 105 °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 %                                       |

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

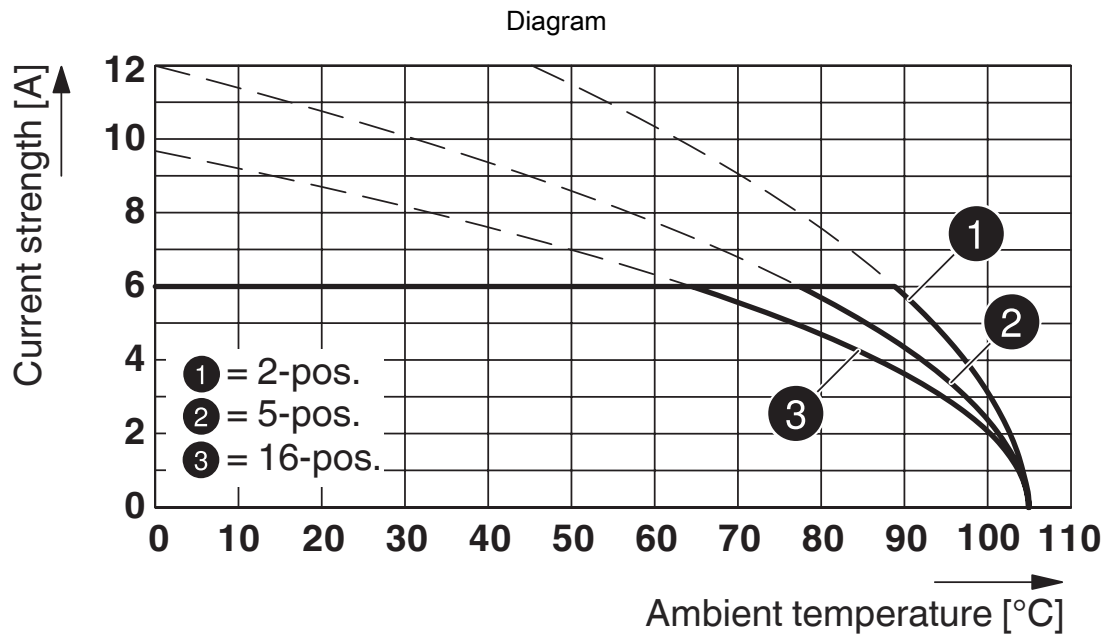
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## Drawings



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/gb/products/1012272>

|  <b>cULus Recognized</b><br>Approval ID: E60425-20110128 |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                           | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Use group B                                                                                                                               | 150 V                 | 6 A                   | 26 - 18           | -                           |
| Use group D                                                                                                                               | 150 V                 | 6 A                   | 26 - 18           | -                           |

|  <b>VDE report with production monitoring</b><br>Approval ID: 40042258 |                       |                       |                   |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                                         | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                                                                                                                         | 160 V                 | 6 A                   | -                 | 0.14 - 0.75                 |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 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% |
|-------------------------------------|----------------------------|

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