

# MCC 1/11-STZF-3,81 - PCB connector



1852451

<https://www.phoenixcontact.com/us/products/1852451>

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The figure shows an 10-position version

PCB connector, nominal cross section: 1 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact connection type: Socket, number of potentials: 11, number of rows: 1, number of positions: 11, number of connections: 11, product range: MCC 1/..-STZF, pitch: 3.81 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: Screw locking mechanism, mounting method: Screw flange, type of packaging: packed in cardboard, Corresponding female crimp contacts with current [A] and conductor cross-section range [mm<sup>2</sup>] data: 5A/MCC-MT 0,2-0,35 (1859988); 8A/MCC-MT 0,5-1,0 (1859991)

## Your advantages

- Inexpensive connection of large quantities of preassembled conductors
- Screwable flange for superior mechanical stability
- Pull-out aid facilitates handling and allows the tensile force to be reduced at the contact point

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1852451                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AA02                           |
| Product key                          | AABCAB                         |
| GTIN                                 | 4017918143961                  |
| Weight per piece (including packing) | 4.138 g                        |
| Weight per piece (excluding packing) | 3.647 g                        |
| Customs tariff number                | 85366990                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Product type          | PCB connector         |
| Product family        | MCC 1/..-STZF         |
| Product line          | COMBICON Connectors S |
| Type                  | Standard              |
| Number of positions   | 11                    |
| Pitch                 | 3.81 mm               |
| Number of connections | 11                    |
| Number of rows        | 1                     |
| Number of potentials  | 11                    |
| Mounting type         | Screw flange          |

### Electrical properties

#### Properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 8 A    |
| Nominal voltage $U_N$       | 160 V  |
| 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 MC 1,5   |
| Nominal cross section   | 1 mm <sup>2</sup> |
| Contact connection type | Socket            |

#### Interlock

|               |                         |
|---------------|-------------------------|
| Locking type  | Screw locking mechanism |
| Mounting type | Screw flange            |

#### Conductor connection

|                                    |   |
|------------------------------------|---|
| Connection method                  | Crimp connection                          |
| Conductor/PCB connection direction | 0 °                                       |
| Conductor cross-section flexible   | 0.2 mm <sup>2</sup> ... 1 mm <sup>2</sup> |
| Conductor cross-section AWG        | 24 ... 18                                 |

### Material specifications

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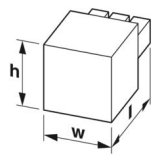
## Material data - contact

|  |          |
|--|----------|
| Metal surface contact area (top layer) | Tin (Sn) |
|--|----------|

## Material data - housing

|   |              |
|---|--------------|
| Color (Housing)   | 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       |

## Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Pitch               | 3.81 mm  |
| Width [w]           | 52.3 mm  |
| Height [h]          | 8.7 mm   |
| Length [l]          | 23.1 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. |

## Environmental and real-life conditions

### Ambient conditions

|   |                  |
|---|------------------|
| 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                                    |
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |

## Electrical tests

### 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)                      | 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 |
|-------------------|---------------------|

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## Drawings

Dimensional drawing



Diagram



Type: MCC 1/...-ST-3,81 with MC 1,5/...-G-3,81; contact: MCC-MT 0,5 - 1,0

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1852451>

|  <b>cULus Recognized</b><br>Approval ID: E60425-20110128 |  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|---|--|-----------------------|-----------------------|-------------------|-----------------------------|
| B   |  | 300 V                 | 5 A                   | 24 - 22           | -                           |
| D   |  | 300 V                 | 5 A                   | 24 - 22           | -                           |

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## Classifications

### ECLASS

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

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | 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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