# PCB connector - MCVR 1,5/14-STF-3,81

1828469

https://www.phoenixcontact.com/us/products/1828469

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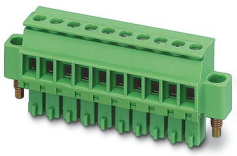


PCB connector, nominal cross section: 1.5 mm$^2$, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MCVR 1,5/..-STF, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 90 °, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

## Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Screwable flange for superior mechanical stability

## Commercial Data

| | |
|---|---|
| Item number | 1828469 |
| Packing unit | 1 pc |
| Minimum order quantity | 50 pc |
| Note | Made to Order (non-returnable) |
| Sales Key | A01 |
| Product Key | AABAEB |
| Catalog Page | Page 193 (C-1-2013) |
| GTIN | 4017918114770 |
| Weight per Piece (including packing) | 12.2 g |
| Weight per Piece (excluding packing) | 12.2 g |
| Customs tariff number | 85366990 |
| Country of origin | DE |

## Technical Data

### Product properties

| | |
|---|---|
| Type | Standard |
| Product line | COMBICON Connectors S |
| Product type | PCB plug |
| Number of positions | 14 |
| Pitch | 3.81 mm |
| Number of connections | 14 |
| Number of rows | 1 |
| Mounting flange | Screw flange |
| Number of potentials | 14 |
| Solder pins per potential | 1 |

### Electrical properties

| | |
|---|---|
| Nominal current $I_N$ | 8 A |
| Nominal voltage $U_N$ | 160 V |
| Degree of pollution | 3 |
| 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 |

### Connection data

Connection technology

| | |
|---|---|
| Type | Standard |
| Connector system | COMBICON MC 1,5 |
| Nominal cross section | 1.5 mm² |
| Type of contact | Female connector |

Interlock

| | |
|---|---|
| Locking type | Screw locking |
| Mounting flange | Screw flange |
| Tightening torque | 0.3 Nm |

Conductor connection

| | |
|---|---|
| Connection method | Screw connection with tension sleeve |
| Conductor/PCB connection direction | 90 ° |
| Conductor cross section solid | 0.14 mm² ... 1.5 mm² |
| Conductor cross section flexible | 0.14 mm² ... 1.5 mm² |
| Conductor cross section AWG | 28 ... 16 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 1.5 mm² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm² ... 0.5 mm² |

| | |
|---|---|
| 2 conductors with same cross section, solid | 0.08 mm² ... 0.5 mm² |
| 2 conductors with same cross section, flexible | 0.08 mm² ... 0.75 mm² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.25 mm² ... 0.34 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 0.5 mm² |
| Cylindrical gauge a x b / diameter | 2.4 mm x 1.5 mm / 1.6 mm |
| Stripping length | 7 mm |
| Tightening torque | 0.22 Nm ... 0.25 Nm |

## Material specifications

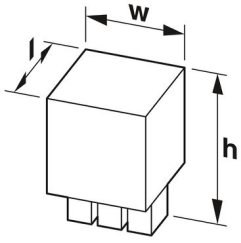
Material data - contact

| | |
|---|---|
| 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 (RAL 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] | 63.73 mm |
| Height [h] | 19.1 mm |
| Length [l] | 10.4 mm |

## Mounting

| | |
|---|---|
| Drive form screw head | Slotted (L) |
| Drive form screw head | Slotted (L) |

Flange

| | |
|---|---|
| Tightening torque | 0.3 Nm |

## Environmental and real-life conditions

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

Air clearances and creepage distances |

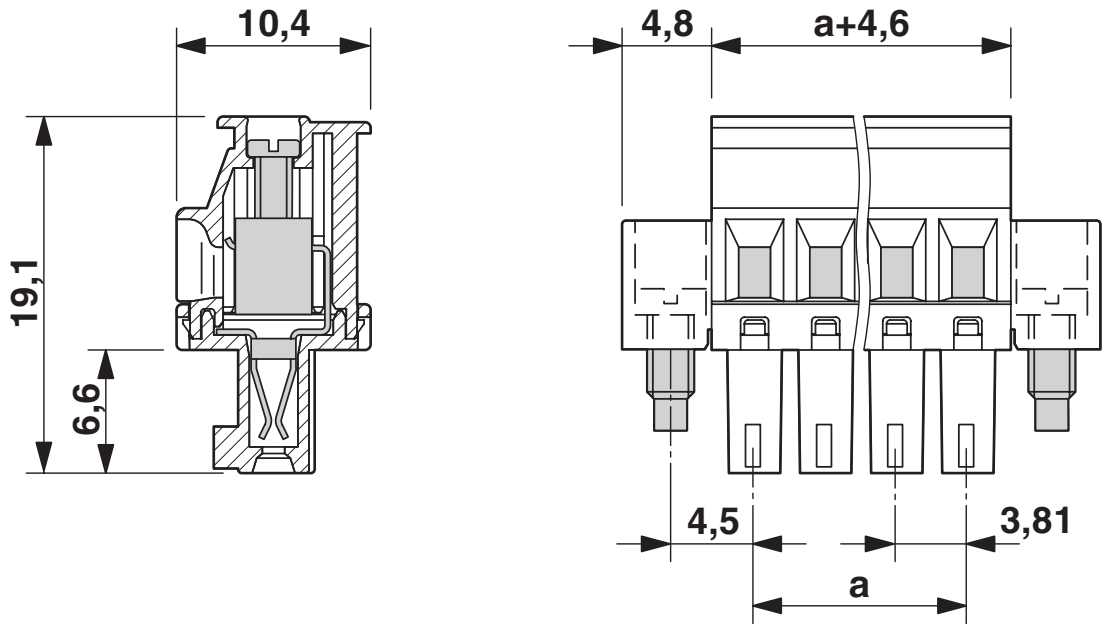
| | |
|---|---|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 160 V |
| Rated surge voltage (III/3) | 2.5 kV |
| minimum clearance value - non-homogenous field (III/3) | 1.5 mm |
| minimum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

## Drawings

Dimensional drawing



## Approvals

**CSA**
Approval ID: 13631

| | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $mm^2$ |
|---|---|---|---|---|
| Use group B | | | | |
| | 300 V | 8 A | 28 - 16 | - |
| Use group D | | | | |
| | 300 V | 8 A | 28 - 16 | - |

**IECEE CB Scheme**
Approval ID: DE1-60987-B1B2

| | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $mm^2$ |
|---|---|---|---|---|
| | 160 V | 8 A | - | 0.2 - 1.5 |

**EAC**
Approval ID: B.01687

**cULus Recognized**
Approval ID: E60425-20110128

| | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $mm^2$ |
|---|---|---|---|---|
| Use group B | | | | |
| | 300 V | 8 A | 30 - 14 | - |
| Use group D | | | | |
| | 300 V | 8 A | 30 - 14 | - |

**VDE Zeichengenehmigung**
Approval ID: 40011723

| | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $mm^2$ |
|---|---|---|---|---|
| | 160 V | 8 A | - | - |

## 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 |

## Environmental Product Compliance

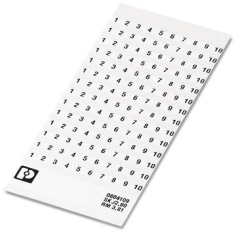
| | |
|---|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

## Accessories

### Marker card

Marker card - SK  3,81/2,8:FORTL.ZAHLEN - 0804109

https://www.phoenixcontact.com/us/products/0804109



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 3.81 mm, lettering field size: 3.81 x 2.8 mm

### Screwdriver

Screwdriver - SZS 0,4X2,5 VDE - 1205037

https://www.phoenixcontact.com/us/products/1205037

Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

## Marker pen

Marker pen - B-STIFT - 1051993

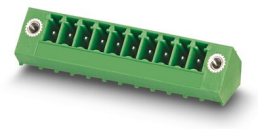
https://www.phoenixcontact.com/us/products/1051993

Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

## PCB header

PCB header - SMC 1,5/14-GF-3,81 - 1827541

https://www.phoenixcontact.com/us/products/1827541

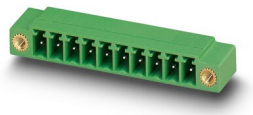


PCB headers, nominal cross section: 1.5 $mm^2$, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: SMC 1,5/..-GF, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

## PCB header

PCB header - MC 1,5/14-GF-3,81 - 1827981

https://www.phoenixcontact.com/us/products/1827981



PCB headers, nominal cross section: 1.5 mm$^2$, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MC 1,5/..-GF, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

## PCB header

PCB header - MCD 1,5/14-G1F-3,81 - 1843046

https://www.phoenixcontact.com/us/products/1843046

PCB headers, nominal cross section: 1.5 mm$^2$, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 28, number of rows: 2, number of positions: 14, number of connections: 28, product range: MCD 1,5/..-G1F, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

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