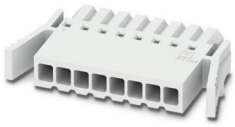
# PTCM 0,5/ 8-PL-2,5 WH - PCB connector

1015458

https://www.phoenixcontact.com/us/products/1015458

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PCB connector, nominal cross section: 0.75 mm$^2$, color: white, nominal current: 6 A, rated voltage (III/2): 160 V, contact connection type: Socket, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: PTCM 0,5/..-PL, pitch: 2.5 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PTSM, locking: Snap-in locking, mounting method: Latching flange, type of packaging: packed in cardboard

## Your advantages

- White design: Stable color when welding and during use
- High current carrying capacity of 6 A in very compact dimensions
- Intuitive locking mechanism prevents accidental disconnection
- Cost-effective connection of crimped conductors in large quantities
- Tools for manual and automatic crimping available as an option

## Commercial data

| | |
|---|---|
| Item number | 1015458 |
| Packing unit | 100 pc |
| Minimum order quantity | 100 pc |
| Sales key | AA01 |
| Product key | AAACPC |
| GTIN | 4055626496627 |
| Weight per piece (including packing) | 1.31 g |
| Weight per piece (excluding packing) | 1.3 g |
| Customs tariff number | 85389099 |
| Country of origin | DE |

# Technical data

## Product properties

| | |
|---|---|
| Product type | PCB connector |
| Product family | PTCM 0,5/..-PL |
| Product line | COMBICON Connectors XS |
| Number of positions | 8 |
| Pitch | 2.5 mm |
| Number of connections | 8 |
| Number of rows | 1 |
| Number of potentials | 8 |

Fitting of components

| | |
|---|---|
| Partial assembly | No |

## Electrical properties

Properties

| | |
|---|---|
| Nominal current $I_N$ | 6 A |
| Nominal voltage $U_N$ | 160 V |
| Contact resistance | 2 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 |
| Note on change in voltage | With a cable cross-section of AWG 18 or 0.75 mm², the rated insulation voltage is reduced to 63 V with a rated surge voltage of 1.5 kV and a pollution degree of 1 or 2, depending on the insulation thickness of the cable used. |

## Connection data

Connection technology

| | |
|---|---|
| Type | Standard |
| Connector system | COMBICON PTSM |
| Nominal cross section | 0.75 mm² |
| Contact connection type | Socket |

Interlock

| | |
|---|---|
| Locking type | Snap-in locking |
| Mounting type | Latching flange |

Conductor connection

| | |
|---|---|
| Connection method | Crimp connection |
| Conductor/PCB connection direction | 0 ° |

| | |
|---|---|
| Conductor cross-section flexible | 0.14 mm² ... 0.75 mm² (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

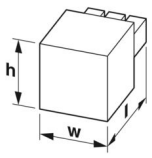
Material data - contact

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

Material data - housing

| | |
|---|---|
| Color (Housing) | white (9010) |
| 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 | 2.5 mm |
| Width [w] | 29.46 mm |
| Height [h] | 3.9 mm |
| Length [l] | 16.2 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. |

| | |
|---|---|
| Note on change in voltage | With a cable cross-section of AWG 18 or 0.75 mm², the rated insulation voltage is reduced to 63 V with a rated surge voltage of 1.5 kV and a pollution degree of 1 or 2, depending on the insulation thickness of the cable used. |

## 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 | 25 |
| Insertion strength per pos. approx. | 3 N |
| Withdraw strength per pos. approx. | 2 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

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 $R_2$ | 2.1 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 | 105 °C/168 h |

| | |
|---|---|
| Power-frequency withstand voltage | 1.39 kV |

Vibration test

| | |
|---|---|
| Specification | IEC 60068-2-6:2007-12 |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 Hz ... 60.1 Hz) |
| Acceleration | 5g (60.1 Hz ... 150 Hz) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |

Shocks

| | |
|---|---|
| Specification | IEC 60068-2-27:2008-02 |
| Pulse shape | Semi-sinusoidal |
| Acceleration | 30g |
| Shock duration | 18 ms |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

Railway application: Oscillation/broadband noise

| | |
|---|---|
| Specification | DIN EN 50155 (VDE 0115-200):2018-05 |
| | IEC 61373:2010-05 |
| Spectrum | Long life test category 1, class B, body mounted |
| Frequency | $f_1$ = 5 Hz to $f_2$ = 150 Hz |
| ASD level | 0.964 $(m/s^2)^2/Hz$ |
| Acceleration | 0.572 g |
| Test duration per axis | 5 h |
| Test directions | X-, Y- and Z-axis |
| Contact interruption | < 1 µs |

Railway application: Shocks

| | |
|---|---|
| Specification | DIN EN 50155 (VDE 0115-200):2018-05 |
| | IEC 61373:2010-05 |
| Pulse shape | Semi-sinusoidal |
| Acceleration | 30g |
| Shock duration | 18 ms |
| Number of shocks per direction | 3 |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |
| Contact interruption | < 1 µs |
| Result | Test passed |

Ambient conditions

| | |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C ... 105 °C (dependent on the derating curve) |

## Electrical tests

Thermal test | Test group C

| | |
|---|---|
| Specification | IEC 60512-5-1:2002-02 |
| Tested number of positions | 8 |

Insulation resistance

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

Air clearances and creepage distances |

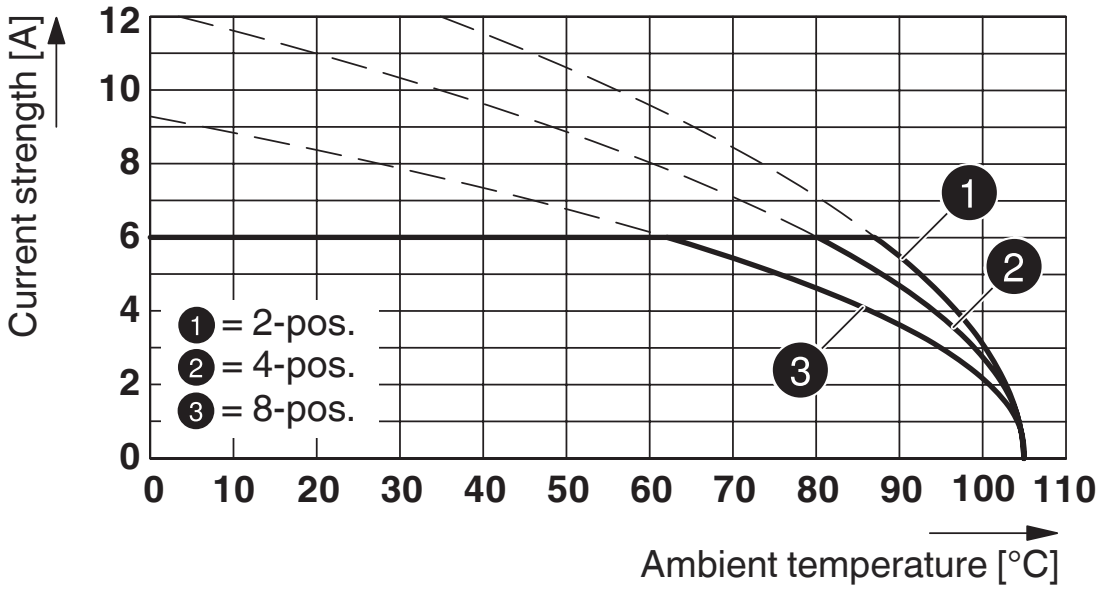
| | |
|---|---|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 160 V |
| Rated surge voltage (III/3) | 2.5 kV |
| minimum clearance value - non-homogenous field (III/3) | 1.5 mm |
| minimum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

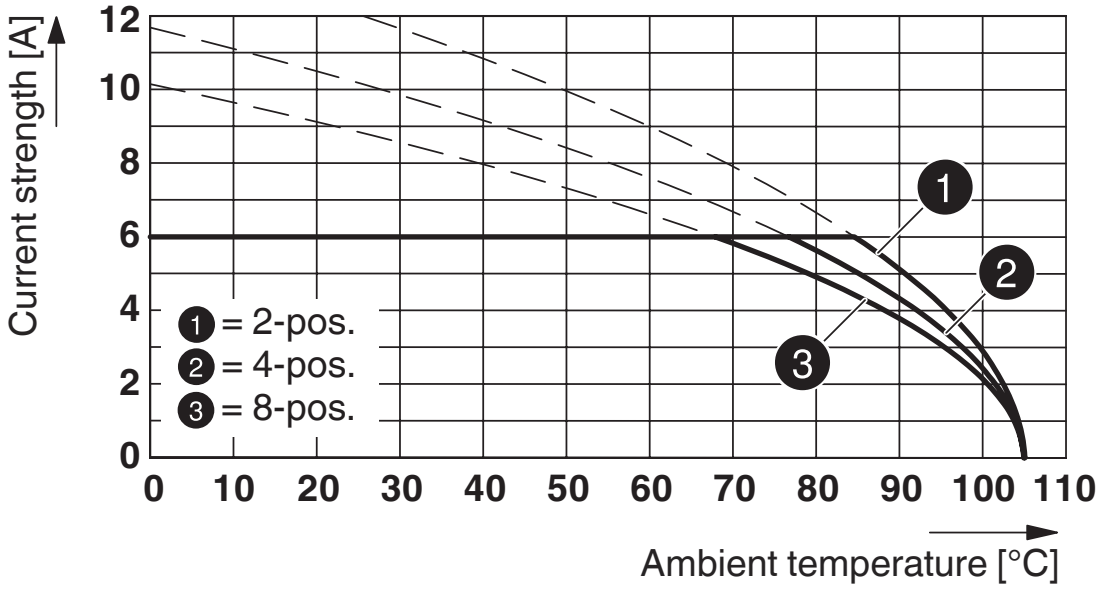
## Drawings

Diagram



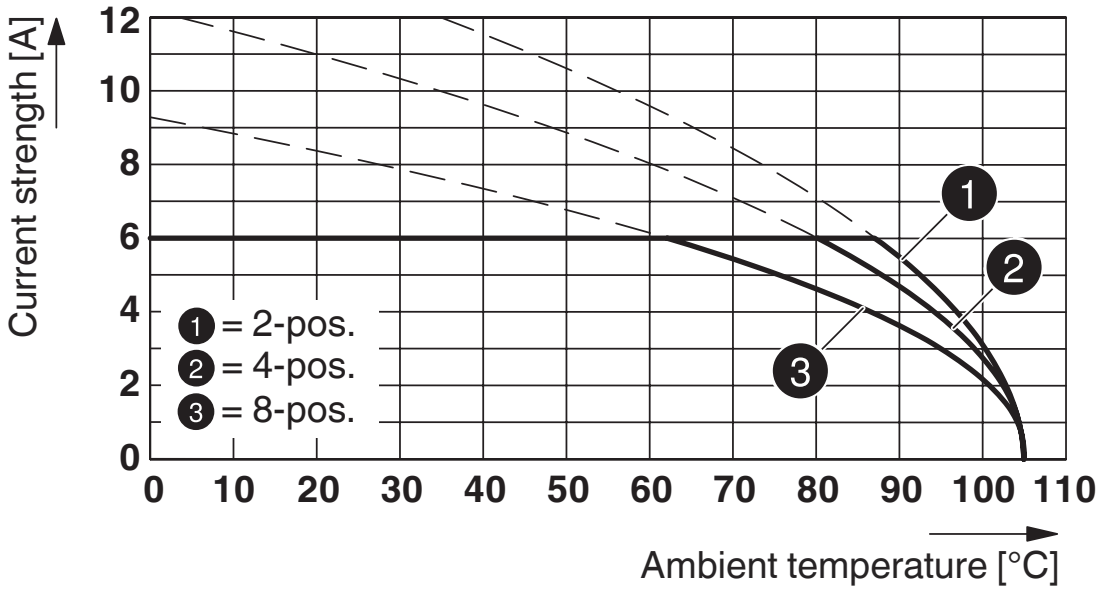

Type: PTCM 0,5/...-PL-2,5 WH with PTSM 0,5/...-HH-2,5-THR WH R...

Diagram




Type: PTCM 0,5/...-PL-2,5 WH with PTCM 0,5/...-PI-2,5 WH

Diagram




Type: PTCM 0,5/...-PL-2,5 WH with PTSM 0,5/...-HH(0)-2,5-SMD WH R...

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1015458

**cULus Recognized**
Approval ID: E60425-20101209

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 150 V | 6 A | 22 - 18 | - |
| D | | | | |
| | 150 V | 6 A | 22 - 18 | - |

**VDE approval of drawings**
Approval ID: 40048497

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 160 V | 6 A | - | 0.14 - 0.75 |

## Classifications

### ECLASS

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

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC002638 |

### UNSPSC

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

## 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% |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 0.021 kg CO2e |


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