# D31PC 2,2/ 6-3,81-Y - PCB connector

1340906

https://www.phoenixcontact.com/us/products/1340906

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PCB connector, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Socket, number of rows: 1, number of positions: 6, product range: D31PC 2,2/.., pitch: 3.81 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: CONNEXIS D, locking: Snap-in locking, mounting method: Latching flange, type of packaging: packed in cardboard

## Your advantages

- Cost-effective connection of crimped conductors in large quantities
- Small component size for applications where space is at a premium
- Intuitive locking mechanism prevents accidental disconnection
- Tools for automatic crimping available as an option

## Commercial data

| | |
|---|---|
| Item number | 1340906 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Note | Made to order (non-returnable) |
| Sales key | AA02 |
| Product key | AABCUE |
| GTIN | 4063151649012 |
| Weight per piece (including packing) | 4.422 g |
| Weight per piece (excluding packing) | 4.911 g |
| Customs tariff number | 85366990 |
| Country of origin | CN |

## Technical data

### Product properties

| | |
|---|---|
| Product type | PCB connector |
| Product family | D31PC 2,2/.. |
| Product line | CONNEXIS Connectors S |
| Number of positions | 6 |
| Pitch | 3.81 mm |
| Number of rows | 1 |

Fitting of components

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

### Electrical properties

Properties

| | |
|---|---|
| Nominal current $I_N$ | 8 A |
| Nominal voltage $U_N$ | 160 V |
| Contact resistance | 5 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

Interlock

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

Conductor connection

| | |
|---|---|
| Connection method | Crimp connection |
| Conductor/PCB connection direction | 0 ° |
| Conductor cross-section AWG | 28 ... 14 |
| Stripping length | 4.5 mm |

### Material specifications

Material data - contact

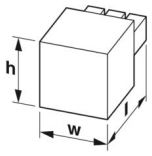
| | |
|---|---|
| Metal surface contact area (top layer) | Tin (Sn) |

Material data - housing

| | |
|---|---|
| Color (Housing) | black (9005) |
| Insulating material | PBT |

| | |
|---|---|
| Insulating material group | II |
| CTI according to IEC 60112 | 400 ≤ CTI < 600 |
| Flammability rating according to UL 94 | V0 |

## Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Pitch | 3.81 mm |
| Width [w] | 38.19 mm |
| Height [h] | 7.15 mm |
| Length [l] | 22.8 mm |

## Notes

| | |
|---|---|
| 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 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. |

## Mechanical tests

Tensile strength of crimp connections

| | |
|---|---|
| Result | Test passed |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | AWG 28 / flexible / > 11 N |

Insertion and withdrawal forces

| | |
|---|---|
| Specification | IEC 60512-13-2:2006-02 |
| Result | Test passed |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 6 N |
| Withdraw strength per pos. approx. | 6 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 $R_1$ | 5 mΩ |
| Contact resistance $R_2$ | 5 mΩ |
| Insertion/withdrawal cycles | 25 |

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 | 50 m/s² (60.1 Hz ... 150 Hz) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |

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) | -55 °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 | 10 |

Insulation resistance

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

Air clearances and creepage distances |

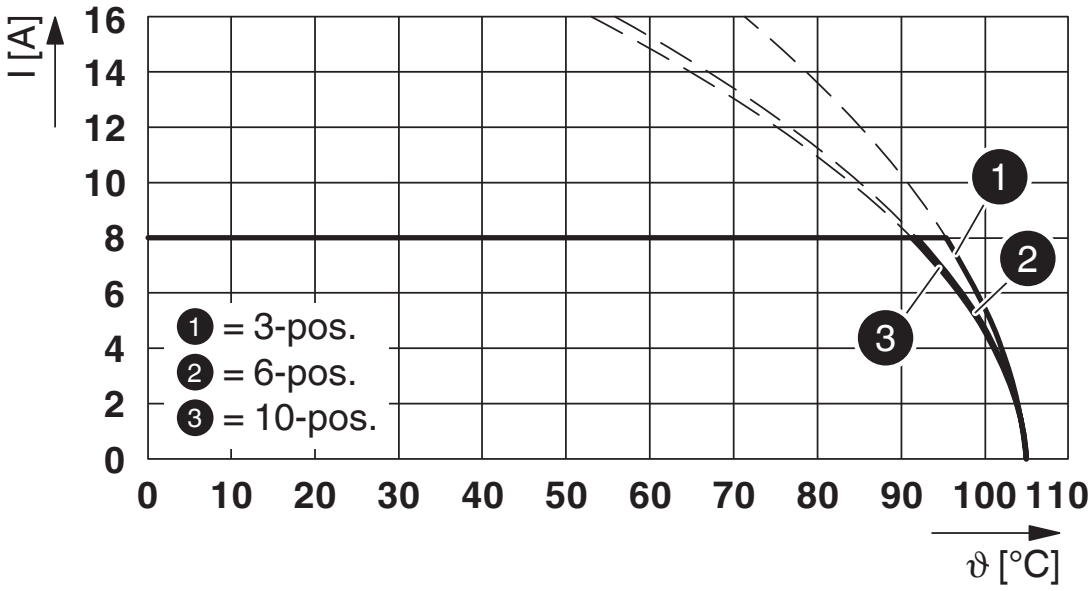
| | |
|---|---|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | II |
| Comparative tracking index (IEC 60112) | CTI ≥400 to <600 |
| Rated insulation voltage (III/3) | 160 V |
| Rated surge voltage (III/3) | 2.5 kV |
| minimum clearance value - non-homogenous field (III/3) | 1.5 mm |
| minimum creepage distance (III/3) | 2.2 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) | 2.2 mm |

## Packaging specifications

| | |
|---|---|
| Type of packaging | packed in cardboard |

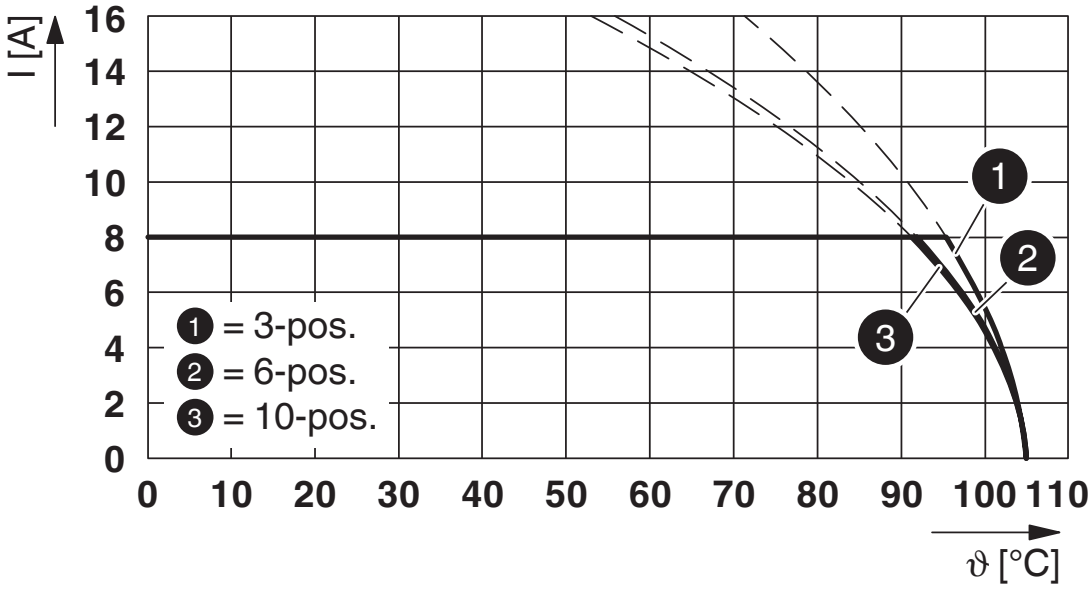
## Drawings

Diagram



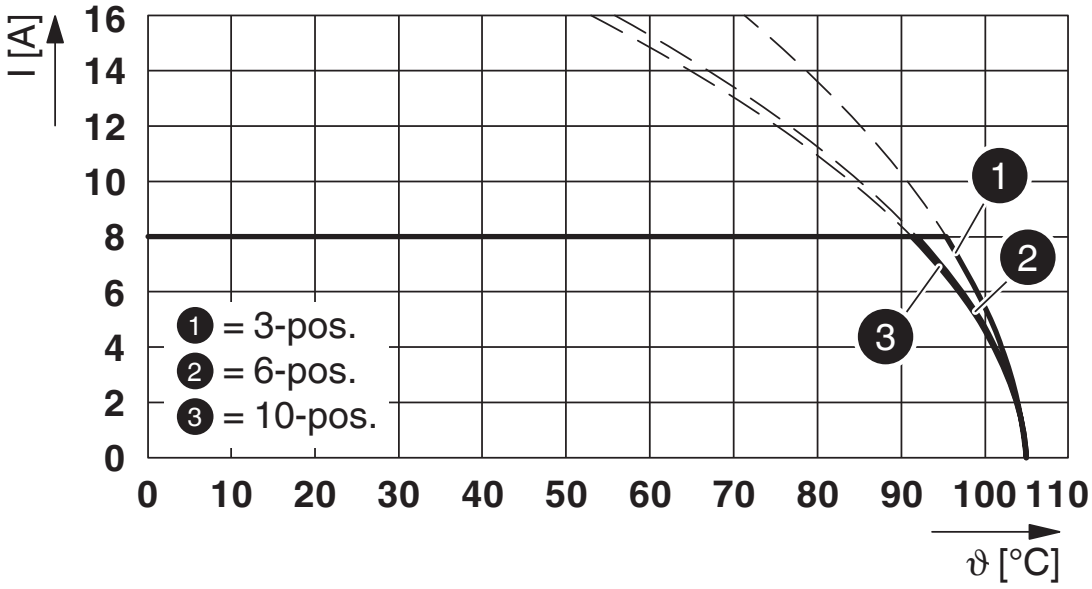

Type: D31PC 2,2/...-3,81-Y with D31H 2,2/...-H-3,81-Y

Diagram



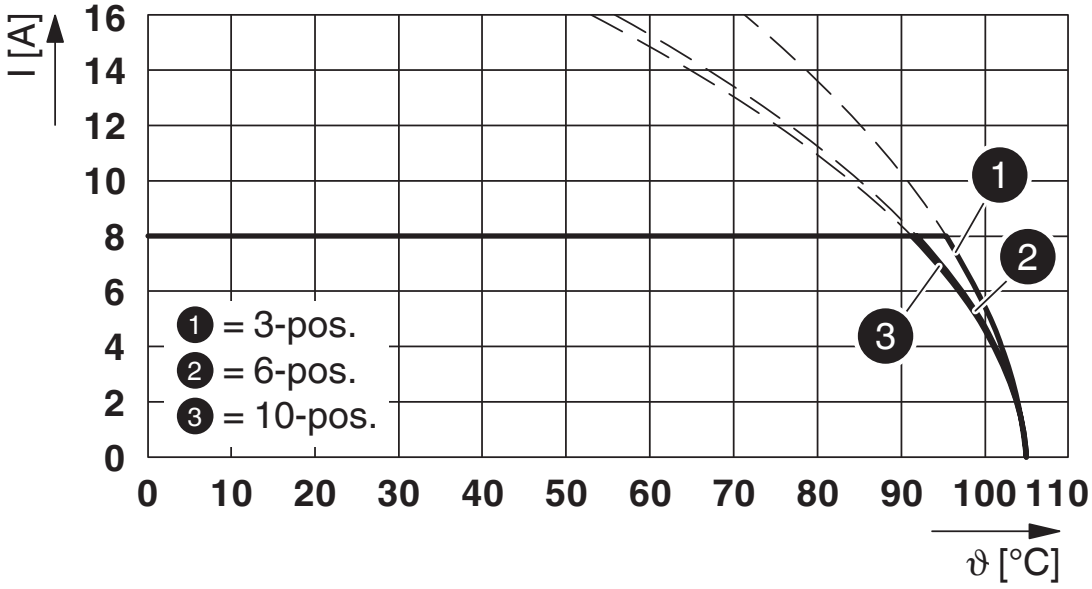

Type: D31PC 2,2/...-3,81-Y with D31H 2,2/...-V-3,81-Y

Diagram




Type: D31PC 2,2/...-3,81-Y with D31H 2,2/...-PT-3,81-Y

Diagram




Type: D31PC 2,2/...-3,81-Y with D31H 2,2/...-FH-3,81-Y

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1340906

**UL Recognized**
Approval ID: E118976-20240617

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 250 V | 9.75 A | 14 | - |

## Classifications

### ECLASS

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

### ETIM

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

## 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 | 0.052 kg CO2e |


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