

# PC 35 HC/ 4-STF-15,00 - PCB connector



1762615

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PCB connector, nominal cross section: 35 mm<sup>2</sup>, color: green, nominal current: 125 A, rated voltage (III/2): 1000 V, contact surface: Ag, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: PC 35 HC/...-STF, pitch: 15 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 35, locking: Screw locking mechanism, mounting method: 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
- Integrated double steel spring provides additional safety in the event of temperature and power fluctuations
- Screwable flange for superior mechanical stability
- Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1762615       |
| Packing unit                         | 25 pc         |
| Minimum order quantity               | 25 pc         |
| Sales key                            | AA05          |
| Product key                          | AAEACA        |
| GTIN                                 | 4046356441230 |
| Weight per piece (including packing) | 132.694 g     |
| Weight per piece (excluding packing) | 132.6 g       |
| Customs tariff number                | 85366990      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                       |                        |
|-----------------------|------------------------|
| Product type          | PCB connector          |
| Product family        | PC 35 HC/...-STF       |
| Product line          | COMBICON Connectors XL |
| Type                  | Standard               |
| Number of positions   | 4                      |
| Pitch                 | 15 mm                  |
| Number of connections | 4                      |
| Number of rows        | 1                      |
| Number of potentials  | 4                      |
| Mounting type         | Screw flange           |

### Electrical properties

#### Properties

|                             |         |
|-----------------------------|---------|
| Nominal current $I_N$       | 125 A   |
| Nominal voltage $U_N$       | 1000 V  |
| Contact resistance          | 0.12 mΩ |
| Rated voltage (III/3)       | 1000 V  |
| Rated surge voltage (III/3) | 8 kV    |
| Rated voltage (III/2)       | 1000 V  |
| Rated surge voltage (III/2) | 8 kV    |
| Rated voltage (II/2)        | 1000 V  |
| Rated surge voltage (II/2)  | 6 kV    |

### Connection data

#### Connection technology

|                         |                    |
|-------------------------|--------------------|
| Type                    | Standard           |
| Connector system        | COMBICON PC 35     |
| Nominal cross section   | 35 mm <sup>2</sup> |
| Contact connection type | Socket             |

#### Interlock

|                   |                         |
|-------------------|-------------------------|
| Locking type      | Screw locking mechanism |
| Mounting type     | Screw flange            |
| Tightening torque | 0.8 Nm                  |

#### Conductor connection

|  |  |
|--|--|
| Connection method                              | Screw connection with tension sleeve       |
| Conductor/PCB connection direction             | 0 °  |
| Conductor cross-section rigid                  | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Single-conductor/terminal point multi-stranded | 0.5 mm <sup>2</sup> ... 35 mm <sup>2</sup> |

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|   |  |
|---|--|
| Conductor cross-section flexible  | 0.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>   |
| Conductor cross-section AWG   | 20 ... 2   |
| Conductor cross-section flexible, with ferrule without plastic sleeve                     | 1 mm <sup>2</sup> ... 35 mm <sup>2</sup>   |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve                      | 1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>   |
| 2 conductors with same cross section, solid   | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible  | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>  |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Cylindrical gauge a x b / diameter  | - / 8.0 mm   |
| Stripping length  | 20 mm  |
| Drive form screw head   | Slotted (L)  |
| Tightening torque   | 2.5 Nm ... 4.5 Nm ( $\leq 25 \text{ mm}^2 = 2.5 \text{ Nm}$ ; $> 25 \text{ mm}^2 = 4.5 \text{ Nm}$ ) |

## 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                     | Selective coating  |
| Metal surface terminal point (top layer)    | Tin (5 - 7 $\mu\text{m}$ Sn)   |
| Metal surface terminal point (middle layer) | Nickel (2 - 4 $\mu\text{m}$ Ni)  |
| Metal surface contact area (top layer)      | Silver (4 - 8 $\mu\text{m}$ Ag)  |

### 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               | 15 mm |

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|            |         |
|------------|---------|
| Width [w]  | 84.4 mm |
| Height [h] | 40 mm   |
| Length [l] | 52 mm   |

## Mounting

### Flange

|                   |        |
|-------------------|--------|
| Tightening torque | 0.8 Nm |
|-------------------|--------|

## Notes

|         |  |
|---------|--|
| General | In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load. |
|---------|--|

## Mechanical tests

### Test for conductor damage and slackening

|               |                     |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result        | Test passed         |

### Pull-out test

|   |   |
|---|---|
| Specification   | IEC 60999-1:1999-11                     |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | 0.5 mm <sup>2</sup> / solid / > 20 N    |
|   | 0.5 mm <sup>2</sup> / flexible / > 20 N |
|   | 35 mm <sup>2</sup> / stranded / > 190 N |
|   | 35 mm <sup>2</sup> / flexible / > 190 N |

### Insertion and withdrawal forces

|                                     |                        |
|-------------------------------------|------------------------|
| Specification                       | IEC 60512-13-2:2006-02 |
| Result                              | Test passed            |
| No. of cycles                       | 50                     |
| Insertion strength per pos. approx. | 15 N                   |
| Withdraw strength per pos. approx.  | 11 N                   |

### Torque test

|               |                     |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
|---------------|---------------------|

### Resistance of inscriptions

|               |                        |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
| Result        | Test passed            |

### Polarization and coding

|               |                                    |
|---------------|------------------------------------|
| Specification | IEC 60512-7:1993-08 (Polarization) |
| Result        | Test passed                        |

### Visual inspection

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-1:2002-02 |
| Result        | Test passed           |

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## Dimension check

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-2:2002-02 |
| Result        | Test passed           |

## Environmental and real-life conditions

### Vibration test

|                        |                             |
|------------------------|-----------------------------|
| Specification          | IEC 60068-2-6:1995-03       |
| 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           |

### Durability test

|  |                     |
|--|---------------------|
| Specification                          | IEC 60512-5:1992-08 |
| Impulse withstand voltage at sea level | 9.8 kV              |
| Contact resistance R <sub>1</sub>      | 0.12 mΩ             |
| Contact resistance R <sub>2</sub>      | 0.15 mΩ             |
| Insertion/withdrawal cycles            | 50                  |

### Climatic test

|                                   |   |
|-----------------------------------|---|
| Specification                     | ISO 6988:1985-02  |
| Corrosive stress                  | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Thermal stress                    | 100 °C/168 h  |
| Power-frequency withstand voltage | 4.26 kV   |

### Shocks

|                 |                                   |
|-----------------|-----------------------------------|
| Specification   | IEC 61373:1999-01                 |
| Pulse shape     | Semi-sinusoidal                   |
| Acceleration    | 30g                               |
| Shock duration  | 18 ms                             |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

### 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

### Thermal test | Test group C

|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-1:2002-02 |
| Tested number of positions | 6                     |

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## Insulation resistance

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | $10^{12} \Omega$      |

## Air clearances and creepage distances |

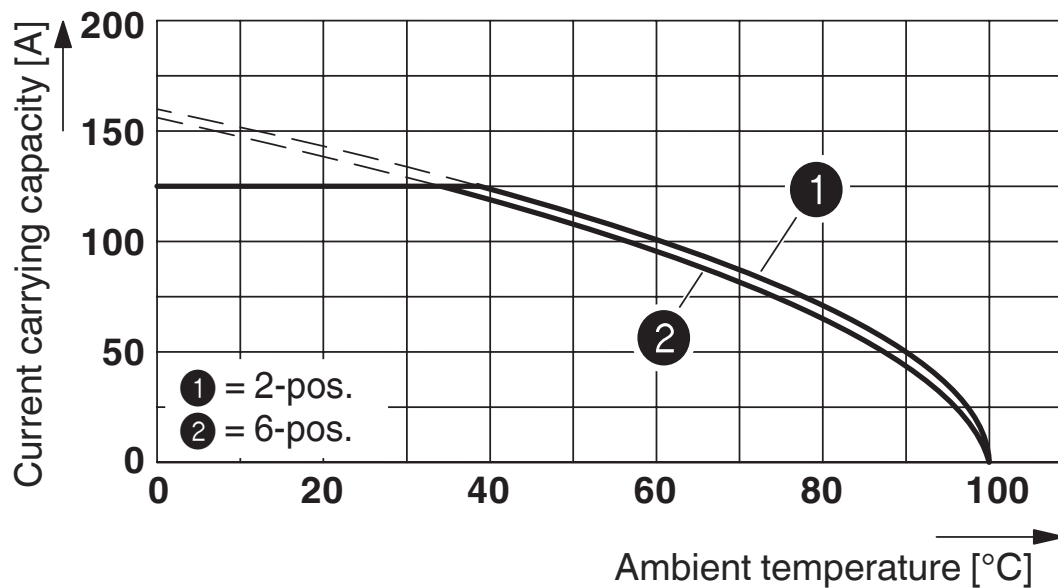
|  |                     |
|--|---------------------|
| Specification  | IEC 60664-1:2007-04 |
| Insulating material group                              | I                   |
| Comparative tracking index (IEC 60112)                 | CTI 600             |
| Rated insulation voltage (III/3)                       | 1000 V              |
| Rated surge voltage (III/3)                            | 8 kV                |
| minimum clearance value - non-homogenous field (III/3) | 8 mm                |
| minimum creepage distance (III/3)                      | 12.5 mm             |
| Rated insulation voltage (III/2)                       | 1000 V              |
| Rated surge voltage (III/2)                            | 8 kV                |
| minimum clearance value - non-homogenous field (III/2) | 8 mm                |
| minimum creepage distance (III/2)                      | 8 mm                |
| Rated insulation voltage (II/2)                        | 1000 V              |
| Rated surge voltage (II/2)                             | 6 kV                |
| minimum clearance value - non-homogenous field (II/2)  | 5.5 mm              |
| minimum creepage distance (II/2)                       | 5.5 mm              |

## Packaging specifications

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

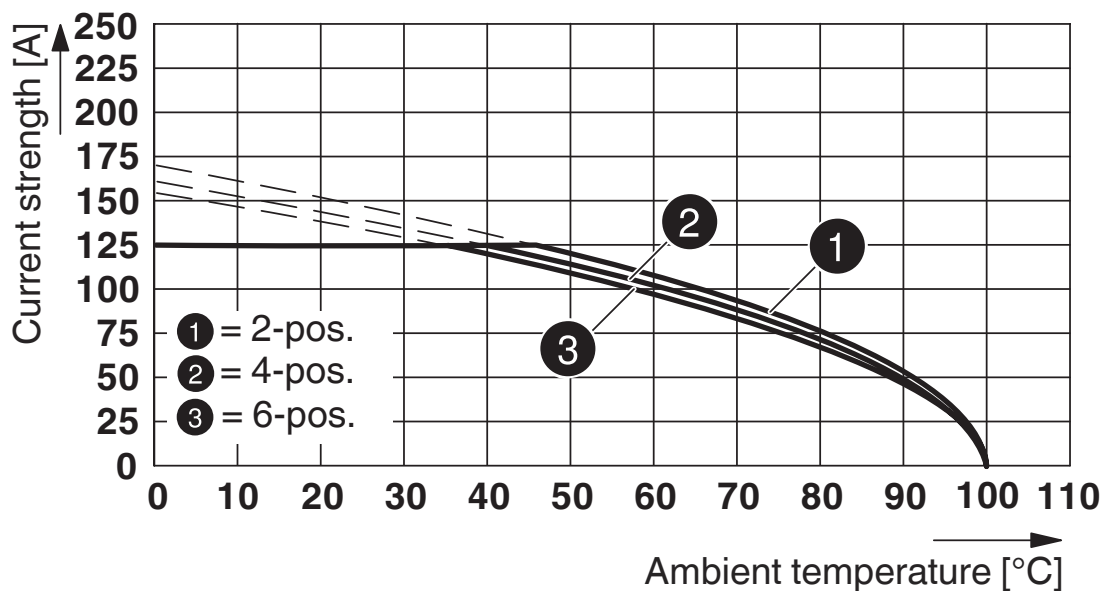
## Drawings

Diagram

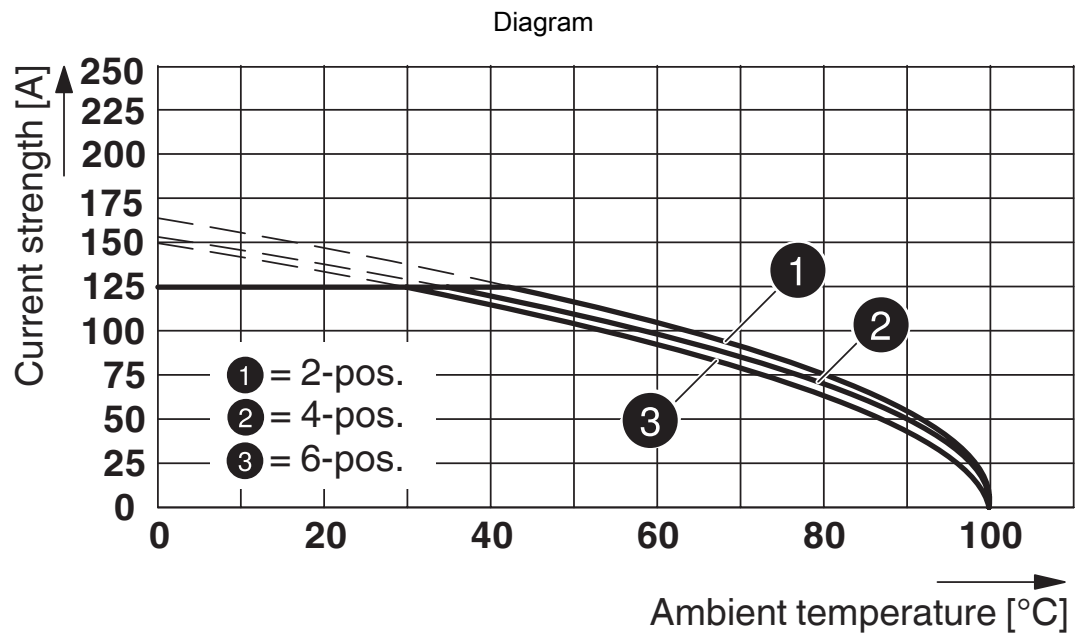


Type: PC 35 HC/...-STF-15,00 with PC 35 HC/...-GF-15,00

Diagram



Type: PC 35 HC/...-STF-15,00 with PCV 35 HC/...-GF-15,00



## PC 35 HC/...-STF-15,0 with IPC 35 HC/...-STGF-15,0

Derating curve, representation based on DIN EN 60512-5-2:2003-01

Connected conductor cross-section = 35 mm<sup>2</sup>

Reduction factor = 0.8

Number of positions: see diagram

# PC 35 HC/ 4-STF-15,00 - PCB connector





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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1762615>

|  <b>cULus Recognized</b><br>Approval ID: E60425-20101007 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B   |                       |                       |                   |                             |
|   | 600 V                 | 115 A                 | 16 - 2            | -                           |
| C   |                       |                       |                   |                             |
|   | 600 V                 | 115 A                 | 16 - 2            | -                           |

|  <b>VDE report with production monitoring</b><br>Approval ID: 40039053 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |                       |                       |                   |                             |
|   | 1000 V                | 125 A                 | -                 | 0.5 - 35                    |

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## Classifications

### ECLASS

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