

IPC 35 HC/ 6-STF-15,00 - PCB connector



1784839

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The figure shows a 5-pos. version of the product

PCB connector, nominal cross section: 35 mm², color: green, nominal current: 125 A, rated voltage (III/2): 1000 V, contact surface: Ag, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: IPC 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
- Inverted connector with pin contacts for touch-proof device outputs or free-hanging cable/cable connections
- Screwable flange for superior mechanical stability

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1784839 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | AA05 |
| Product key | AAEADA |
| GTIN | 4046356561143 |
| Weight per piece (including packing) | 195.2 g |
| Weight per piece (excluding packing) | 188.236 g |
| Customs tariff number | 85366990 |
| Country of origin | BG |

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Technical data

Product properties

| | |
|-----------------------|------------------------|
| Product type | PCB connector |
| Product family | IPC 35 HC/..-STF |
| Product line | COMBICON Connectors XL |
| Type | Standard |
| Number of positions | 6 |
| Pitch | 15 mm |
| Number of connections | 6 |
| Number of rows | 1 |
| Number of potentials | 6 |
| Mounting type | Screw flange |

Electrical properties

Properties

| | |
|-----------------------------|---------|
| Nominal current I_N | 125 A |
| Nominal voltage U_N | 1000 V |
| Contact resistance | 0.15 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 ² |
| Contact connection type | Pin |

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 ² ... 35 mm ² (rigid conductors larger than 16 mm ² are tested as rigid/multi-stranded) |
| Conductor cross-section flexible | 0.5 mm ² ... 35 mm ² |

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| | |
|---|--|
| Conductor cross-section AWG | 20 ... 2 (rigid conductors larger than AWG 10 are tested as rigid/multi-stranded in accordance with UL 1059) |
| Conductor cross-section, flexible, with ferrule, without plastic sleeve | 1 mm ² ... 35 mm ² |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve | 1.5 mm ² ... 35 mm ² |
| 2 conductors with same cross section, rigid | 0.5 mm ² ... 6 mm ² |
| 2 conductors with same cross section, flexible | 0.5 mm ² ... 6 mm ² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.5 mm ² ... 4 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² ... 6 mm ² |
| 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

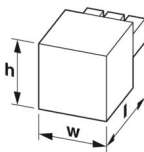
Material data - contact

| | |
|--|--|
| Note | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material | Cu alloy |
| Surface characteristics | Electroplated silver |
| Metal surface terminal point (top layer) | Silver (4 μm - 8 μm Ag) |
| Metal surface contact area (top layer) | Silver (4 μm - 8 μm 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 |
| Width [w] | 91.3 mm |

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| | |
|------------|-------|
| Height [h] | 40 mm |
| Length [l] | 58 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 ² / solid / > 20 N |
| | 0.5 mm ² / flexible / > 20 N |
| | 35 mm ² / stranded / > 190 N |
| | 35 mm ² / 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. | 8 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 60512-13-5:2006-02 |
| Result | Test passed |

Visual inspection

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

Dimension check

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

Environmental and real-life conditions

Durability test

| | |
|--|---------------------|
| Specification | IEC 60512-5:1992-08 |
| Impulse withstand voltage at sea level | 9.8 kV |
| Contact resistance R ₁ | 0.15 mΩ |
| Contact resistance R ₂ | 0.18 mΩ |
| Insertion/withdrawal cycles | 50 |

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 | 100 °C/168 h |
| Power-frequency withstand voltage | 4.26 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 61373:1999-01 |
| Pulse shape | Semi-sinusoidal |
| Acceleration | 30g |
| Shock duration | 18 ms |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

Railway application: Shocks

| | |
|-----------------|-----------------------------------|
| Acceleration | 30g |
| Shock duration | 18 ms |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

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 ... 100 °C (dependent on the derating curve) |

Electrical tests

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Thermal test | Test group C

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

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

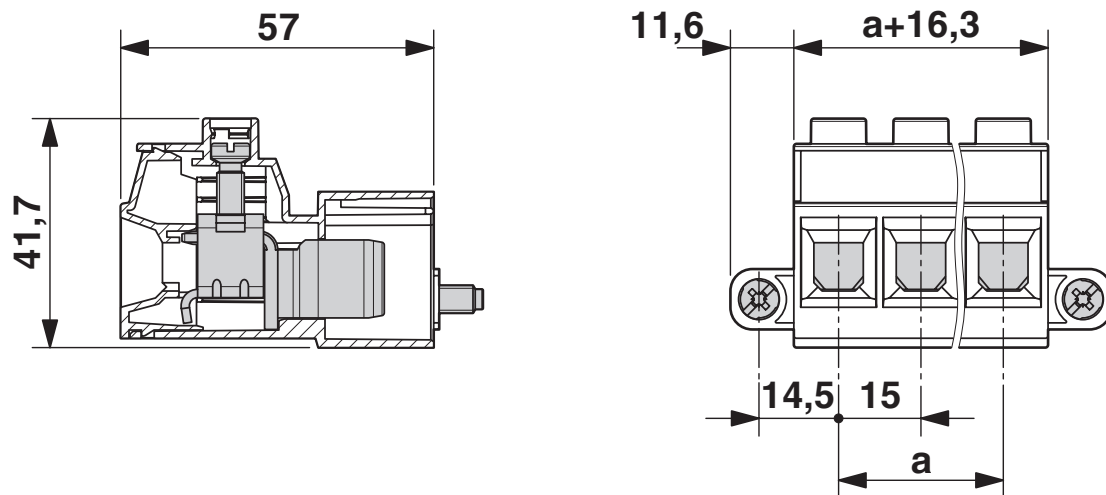
| | |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

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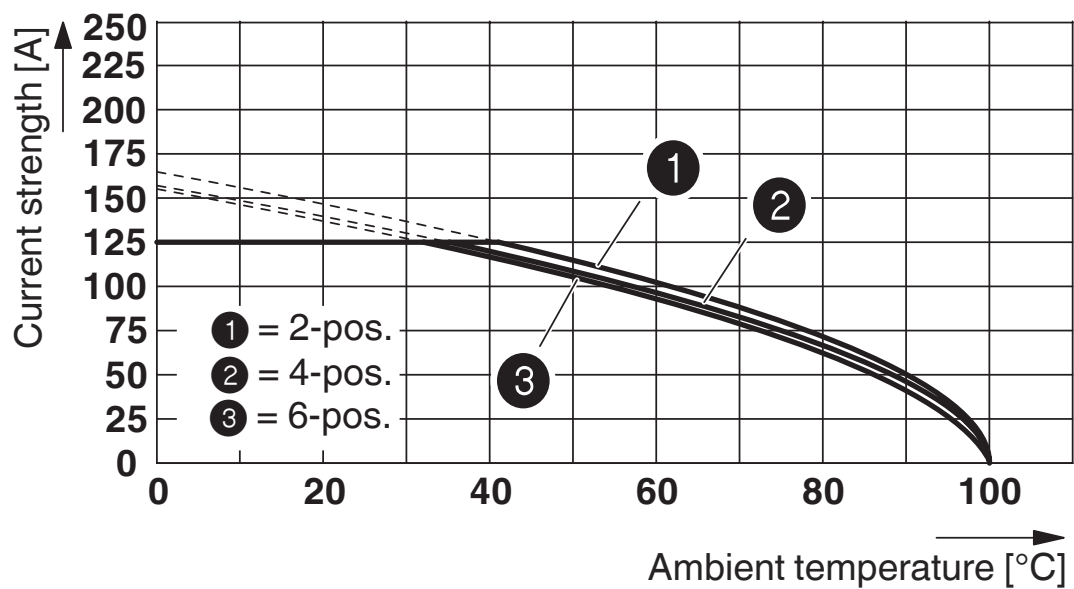
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Drawings

Dimensional drawing

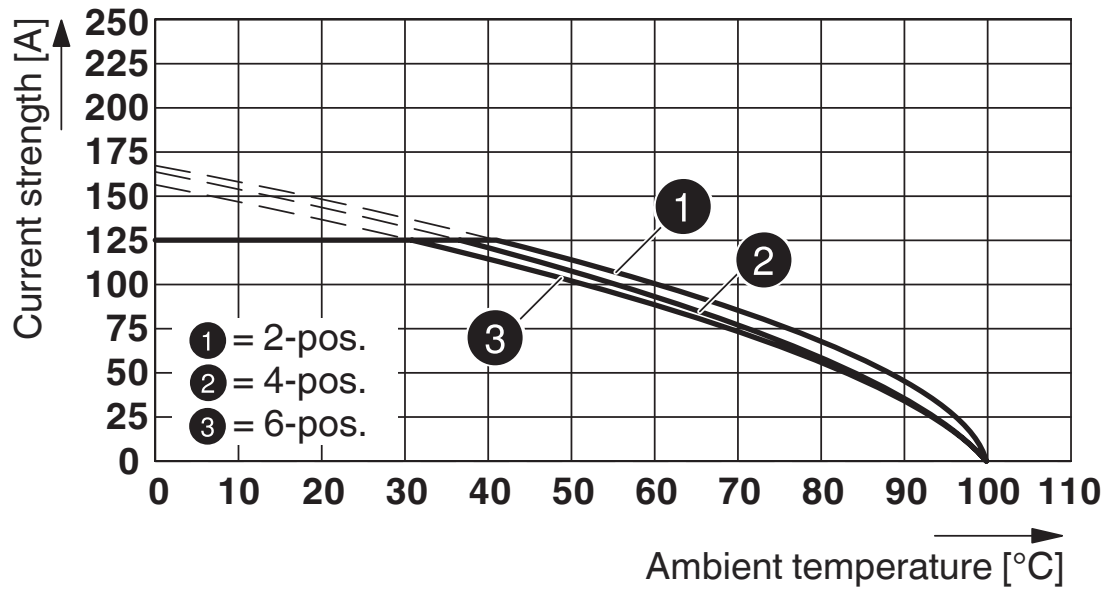


Diagram



Derating curve for: IPC 35 HC/...-STF-15,0 with IPC 35 HC/...-GF-15,0

Diagram



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

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1784839>

|  UL Recognized Approval ID: E60425-20101007 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| B | 600 V | 115 A | 16 - 2 | - |
| C | 600 V | 115 A | 16 - 2 | - |

|  VDE Zeichengenehmigung Approval ID: 40039053 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section 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 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% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 0.657 kg CO2e |
|---------|---------------|

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