

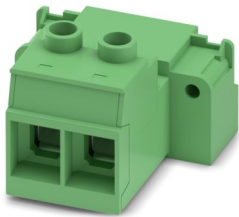
# IPC 35 HC/ 2-STGF-15,00 - PCB connector



1784855

<https://www.phoenixcontact.com/us/products/1784855>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



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: Pin, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: IPC 35 HC/. -STGF, 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, mounting method: Threaded 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                          | 1784855       |
| Packing unit                         | 25 pc         |
| Minimum order quantity               | 25 pc         |
| Sales key                            | AA05          |
| Product key                          | AAEADC        |
| GTIN                                 | 4046356561167 |
| Weight per piece (including packing) | 70.84 g       |
| Weight per piece (excluding packing) | 55.55 g       |
| Customs tariff number                | 85366990      |
| Country of origin                    | PL            |

# IPC 35 HC/ 2-STGF-15,00 - PCB connector



1784855

<https://www.phoenixcontact.com/us/products/1784855>

## Technical data

### Product properties

|                       |                        |
|-----------------------|------------------------|
| Product type          | PCB connector          |
| Product family        | IPC 35 HC/...STGF      |
| Product line          | COMBICON Connectors XL |
| Type                  | Standard               |
| Number of positions   | 2                      |
| Pitch                 | 15 mm                  |
| Number of connections | 2                      |
| Number of rows        | 1                      |
| Number of potentials  | 2                      |
| Mounting type         | Threaded flange        |

### Electrical properties

#### Properties

|                             |         |
|-----------------------------|---------|
| Nominal current $I_N$       | 125 A   |
| Nominal voltage $U_N$       | 1000 V  |
| Contact resistance          | 0.17 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 | Pin                |

#### Interlock

|                   |                 |
|-------------------|-----------------|
| Mounting type     | Threaded 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> ... 35 mm <sup>2</sup> |
| Conductor cross-section flexible   | 0.5 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Conductor cross-section AWG        | 20 ... 2                                   |

# IPC 35 HC/ 2-STGF-15,00 - PCB connector



1784855

<https://www.phoenixcontact.com/us/products/1784855>

|                                                                                           |                                                                                                      |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 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

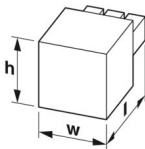
### Material data - contact

|                                          |                                                                                  |
|------------------------------------------|----------------------------------------------------------------------------------|
| Note                                     | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material                         | Cu alloy                                                                         |
| Surface characteristics                  | Electroplated silver                                                             |
| Metal surface terminal point (top layer) | Silver (4 - 8 $\mu\text{m}$ Ag)                                                  |
| 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                                                                                |
| Width [w]           | 31.3 mm                                                                              |
| Height [h]          | 40 mm                                                                                |
| Length [l]          | 58 mm                                                                                |

# IPC 35 HC/ 2-STGF-15,00 - PCB connector



1784855

<https://www.phoenixcontact.com/us/products/1784855>

## Mounting

### Flange

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

### Attachment to feed-through panel

|                   |                      |
|-------------------|----------------------|
| Tightening torque | 1 Nm                 |
| Screw             | 1700368 DFK-PC 35 SS |

### Attachment on the PCB

|                   |                      |
|-------------------|----------------------|
| Tightening torque | 1 Nm                 |
| Screw             | 1700368 DFK-PC 35 SS |

## 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. | 14 N                   |
| Withdraw strength per pos. approx.  | 9 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            |

# IPC 35 HC/ 2-STGF-15,00 - PCB connector



1784855

<https://www.phoenixcontact.com/us/products/1784855>

## 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

### 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           |

### Durability test

|                                              |                       |
|----------------------------------------------|-----------------------|
| Specification                                | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level       | 9.8 kV                |
| Contact resistance R <sub>1</sub>            | 0.17 mΩ               |
| Contact resistance R <sub>2</sub>            | 0.15 mΩ               |
| Insertion/withdrawal cycles                  | 50                    |
| Insulation resistance, neighboring positions | > 5 MΩ                |

### 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 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.) |

### 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                                    |

# IPC 35 HC/ 2-STGF-15,00 - PCB connector



1784855

<https://www.phoenixcontact.com/us/products/1784855>

## Electrical tests

### 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 | > 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)                       | 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 |
|-------------------|---------------------|

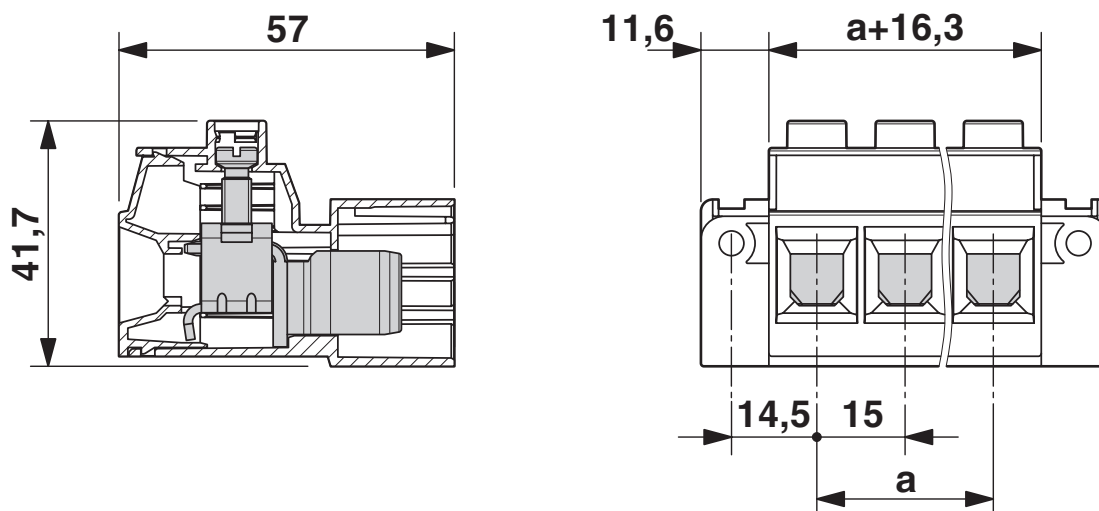
# IPC 35 HC/ 2-STGF-15,00 - PCB connector

1784855

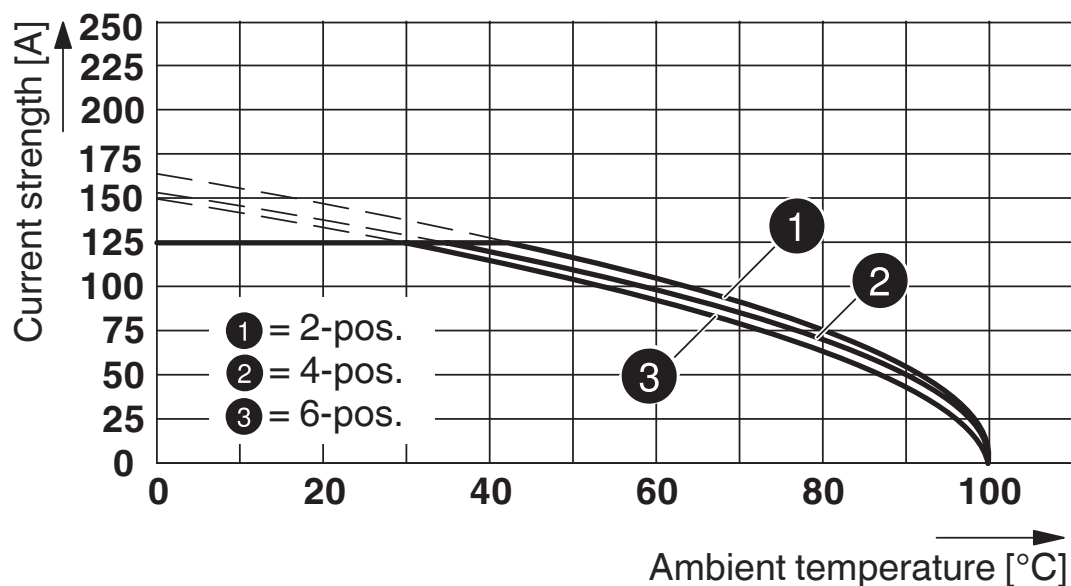
<https://www.phoenixcontact.com/us/products/1784855>

## Drawings

Dimensional drawing



Diagram



## 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

# IPC 35 HC/ 2-STGF-15,00 - PCB connector



1784855

<https://www.phoenixcontact.com/us/products/1784855>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1784855>

|  <b>UL 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                    |



# IPC 35 HC/ 2-STGF-15,00 - PCB connector



1784855

<https://www.phoenixcontact.com/us/products/1784855>

## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002638 |
|----------|----------|

### UNSPSC

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

# IPC 35 HC/ 2-STGF-15,00 - PCB connector



1784855

<https://www.phoenixcontact.com/us/products/1784855>

## 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% |
|-------------------------------------|----------------------------|

Phoenix Contact 2025 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)