

# PRC 3-FC-FS6 16-21 - Coupler connector



1410659

<https://www.phoenixcontact.com/us/products/1410659>

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Coupler connector, Range of articles: PRC 35, design: Can only be released with a tool, housing material: PPE, color: black, number of positions: 3, min. conductor cross-section: 1.5 mm<sup>2</sup>, max. conductor cross-section: 6 mm<sup>2</sup>, rated voltage: 690 V AC, rated current: 35 A, Connection method: Screw connection, min. cable diameter: 16 mm, max. cable diameter: 21 mm, Variant for release with a tool

## Your advantages

- Up to 75% smaller in size than industrial connectors with the same rating
- Locking mechanism can be unlocked manually or using a tool
- Suitable for applications in atmospheres containing salt and in direct sunlight
- Ideal for indoor and outdoor use due to weatherproof materials

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1410659                        |
| Packing unit                         | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AB03                           |
| Product key                          | ABLCBA                         |
| GTIN                                 | 4046356904261                  |
| Weight per piece (including packing) | 78 g                           |
| Weight per piece (excluding packing) | 74.9 g                         |
| Customs tariff number                | 85366990                       |
| Country of origin                    | PL                             |

## Technical data

### Notes

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Order information: | Variant for release with a tool                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Safety note        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Safety note        | <ul style="list-style-type: none"> <li>• <b>WARNING:</b> Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li> <li>• <b>WARNING:</b> Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li> <li>• <b>WARNING:</b> The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.</li> <li>• Assembled products may not be manipulated or improperly opened.</li> <li>• Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product accessories online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a>).</li> <li>• When using the product in direct connection with third-party manufacturers, the user is responsible.</li> <li>• For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li> <li>• Ensure that the protective or functional ground has been properly connected.</li> <li>• VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3 are applicable when combining several circuits in a cable and/or connector</li> <li>• Observe the corresponding technical data. You will find information: <ul style="list-style-type: none"> <li>o On the product</li> <li>o On the packing label</li> <li>o In the supplied documentation</li> <li>o Online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> under the product</li> </ul> </li> <li>• Only use tools recommended by Phoenix Contact</li> <li>• The installation notes/Design In documents online on the download page at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> must be observed for this product.</li> <li>• Use a protective cap to protect connectors that are not in use. The suitable accessories are available online in the accessory section of the product at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a></li> <li>• Operate the connector only when it is fully plugged in.</li> <li>• Operate the connector only when it is fully plugged in and interlocked.</li> <li>• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li> </ul> |

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- Observe the minimum bending radius of the cable. Lay the cable without twisting it.
- The connector warms up in normal operation. Depending on the ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12).

## Product properties

|                     |                                  |
|---------------------|----------------------------------|
| Product type        | Installation connector           |
| Product family      | PRC 35                           |
| Type                | Can only be released with a tool |
| Number of positions | 3                                |
| Connection profile  | 2+PE                             |
| Coding              | AD                               |

## Insulation characteristics

|                     |    |
|---------------------|----|
| Protection class    | II |
| Degree of pollution | 2  |

## Electrical properties

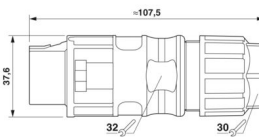
|                             |                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------|
| Rated voltage (III/2)       | 690 V                                                                                           |
| Nominal voltage ATD         | 690 V AC in accordance with IEC 61984                                                           |
|                             | 500 V AC in accordance with IEC 61535/2 PfG 1915                                                |
|                             | 600 V AC In accordance with UL 2238                                                             |
| Rated surge voltage (III/2) | 8 kV                                                                                            |
| Rated current               | 35 A (With 6 mm <sup>2</sup> conductor cross-section in accordance with IEC 61984)              |
|                             | 32 A (With 6 mm <sup>2</sup> conductor cross-section in accordance with IEC 61535)              |
|                             | 21.4 A (With 6 mm <sup>2</sup> conductor cross-section and 85 °C in accordance with 2 PfG 1915) |
|                             | 32 A (with AWG 10, in accordance with UL 2237)                                                  |

## Connection data

### Conductor connection

|                         |                                           |
|-------------------------|-------------------------------------------|
| Conductor cross section | 1.5 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
|-------------------------|-------------------------------------------|

## Dimensions

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Width               | 37.6 mm                                                                              |
| Height              | 37.6 mm                                                                              |
| Length              | 107.5 mm                                                                             |

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## External dimensions

|                  |                 |
|------------------|-----------------|
| Outside diameter | 16 mm ... 21 mm |
|------------------|-----------------|

## Material specifications

|                                        |                  |
|----------------------------------------|------------------|
| Color (Housing)                        | black (RAL 9005) |
| Color of the housing part              | black            |
| Flammability rating according to UL 94 | V0               |
| Insulating material group              | I / CTI 600      |
| Seal material                          | EPDM             |
| Housing material                       | PPE              |
| Cable seal material                    | EPDM             |
| Contact material                       | Cu alloy         |
| Contact surface material               | silver-plated    |
| Contact carrier material               | PPE              |
| O-ring material                        | EPDM             |
| Material for screw connection          | PPE              |

## Connector

|                |             |
|----------------|-------------|
| Pull-out-force | 150 N ±50 N |
|----------------|-------------|

## Cable/line

|                                         |                                       |
|-----------------------------------------|---------------------------------------|
| External cable diameter                 | 16 mm ... 21 mm                       |
| External cable diameter                 | 16 mm ... 21 mm                       |
| Single wire, cross section              | 1.5 mm <sup>2</sup> 6 mm <sup>2</sup> |
| Stripping length of the individual wire | 12 mm (Lay PE conductor 8 mm leading) |
| Halogen-free                            | yes                                   |

## Mechanical properties

### Mechanical data

|                             |            |
|-----------------------------|------------|
| Insertion/withdrawal cycles | 100        |
| Insertion force             | 30 N ±10 N |

## Environmental and real-life conditions

### Ambient conditions

|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| Degree of protection (when plugged in)  | IP66/IP68 (2 m / 24 h) IP69K                        |
| Degree of protection                    | IP66/IP68 (2 m / 24 h) IP69K                        |
|                                         | IP66/IP68 (2 m / 24 h) IP69K                        |
| Category of shock impact                | IK08 (-25°C)                                        |
| Ambient temperature (operation)         | -40 °C ... 105 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                    |
| Ambient temperature (assembly)          | -5 °C ... 85 °C                                     |

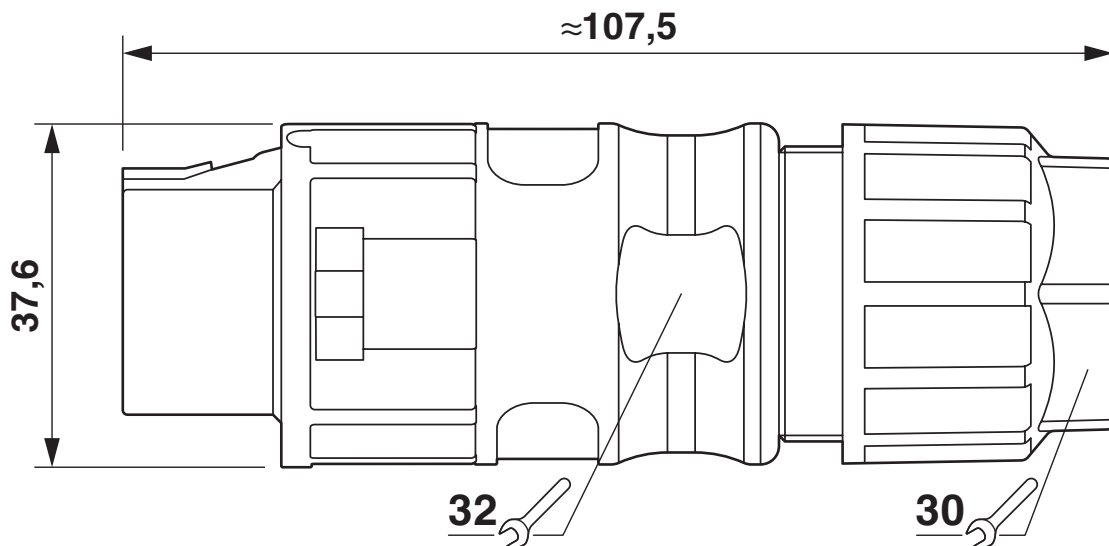
# PRC 3-FC-FS6 16-21 - Coupler connector

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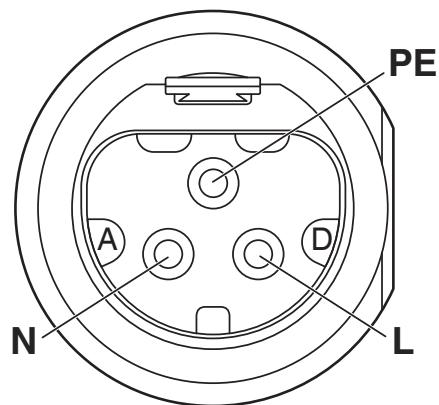
<https://www.phoenixcontact.com/us/products/1410659>

## Drawings

Dimensional drawing



Schematic diagram



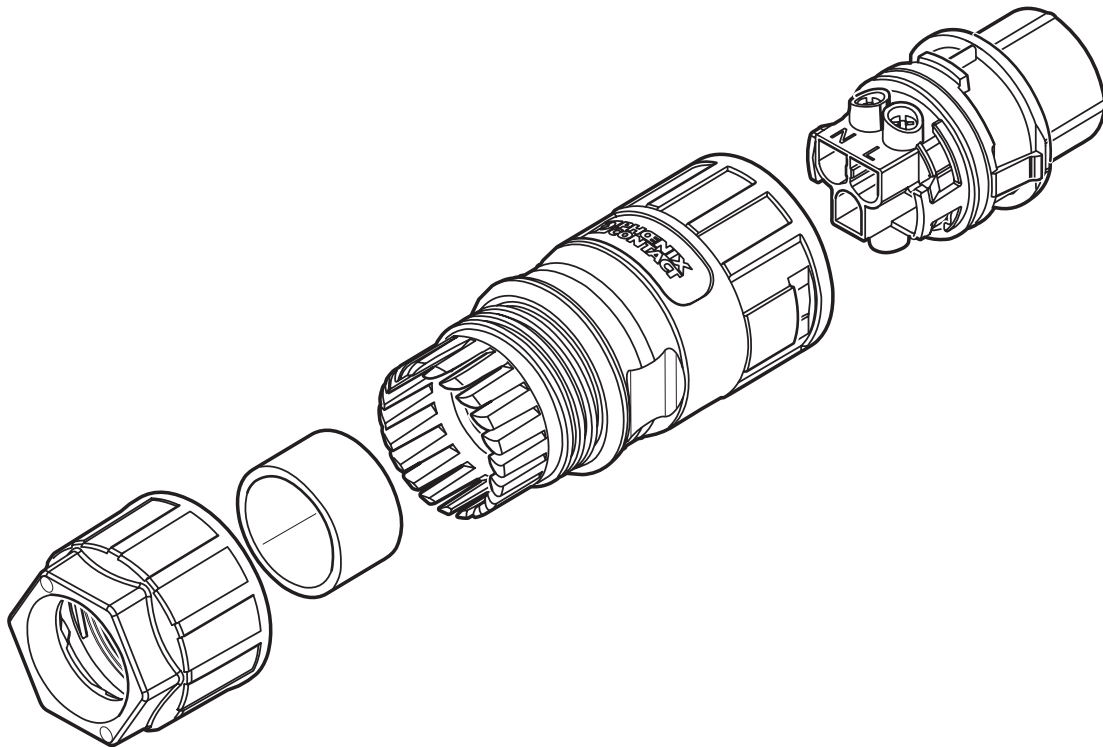
Connector pin assignment

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Schematic diagram



Schematic design

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27440605 |
| ECLASS-15.0 | 27440605 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC002635 |
|----------|----------|

### 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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