

# UT 35-FE - Feed-through terminal block



3047676

<https://www.phoenixcontact.com/us/products/3047676>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 125 A, number of connections: 2, connection method: Screw connection, Rated cross section: 35 mm<sup>2</sup>, cross section: 1.5 mm<sup>2</sup> - 50 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: black/yellow

## Your advantages

- Globally recognized: Internationally proven screw connection
- Maintenance-free and vibration-resistant thanks to the patented Reakdyn principle
- Space savings and flexibility with the connection of two identical conductors
- Long-term stable connections with the use of high-quality materials
- Low self-heating due to high contact forces
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories
- Vibration-resistant and maintenance-free conductor connection

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3047676       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE01          |
| Product key                          | BE1111        |
| GTIN                                 | 4046356762649 |
| Weight per piece (including packing) | 58.86 g       |
| Weight per piece (excluding packing) | 58 g          |
| Customs tariff number                | 85369010      |
| Country of origin                    | TR            |

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## Technical data

### Product properties

|                       |                             |
|-----------------------|-----------------------------|
| Product type          | Feed-through terminal block |
| Product family        | UT                          |
| Number of connections | 2                           |
| Number of rows        | 1                           |
| Potentials            | 1                           |

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution  | 3   |

### Electrical properties

|                                                 |        |
|-------------------------------------------------|--------|
| Rated surge voltage                             | 8 kV   |
| Maximum power dissipation for nominal condition | 4.06 W |

### Connection data

|                                 |                    |
|---------------------------------|--------------------|
| Number of connections per level | 2                  |
| Nominal cross section           | 35 mm <sup>2</sup> |

### Level 1 above 1 below 1

|                                                                                           |                                                                                                                              |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Connection method                                                                         | Screw connection                                                                                                             |
| Screw thread                                                                              | M6                                                                                                                           |
| Tightening torque                                                                         | 3.2 ... 3.7 Nm                                                                                                               |
| Stripping length                                                                          | 18 mm                                                                                                                        |
| Internal cylindrical gage                                                                 | B9                                                                                                                           |
| Connection in acc. with standard                                                          | IEC 60947-7-1                                                                                                                |
| Conductor cross-section rigid                                                             | 1.5 mm <sup>2</sup> ... 50 mm <sup>2</sup>                                                                                   |
| Cross section AWG                                                                         | 14 ... 0 (converted acc. to IEC)                                                                                             |
| Conductor cross-section flexible                                                          | 1.5 mm <sup>2</sup> ... 50 mm <sup>2</sup>                                                                                   |
| Conductor cross-section, flexible [AWG]                                                   | 14 ... 0 (converted acc. to IEC)                                                                                             |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>                                                                                   |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>                                                                                   |
| 2 conductors with same cross section, solid                                               | 1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>                                                                                   |
| 2 conductors with same cross section, flexible                                            | 1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>                                                                                   |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>                                                                                   |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>                                                                                   |
| Nominal current                                                                           | 125 A                                                                                                                        |
| Maximum load current                                                                      | 150 A (with 50 mm <sup>2</sup> conductor cross-section)                                                                      |
| Nominal voltage                                                                           | 1000 V                                                                                                                       |
| Note                                                                                      | Note: Product releases, connection cross sections and notes on connecting aluminum cables can be found in the download area. |

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|                       |                    |
|-----------------------|--------------------|
| Nominal cross section | 35 mm <sup>2</sup> |
|-----------------------|--------------------|

## Ex data

### Rated data (ATEX/IECEx)

|                             |                                      |
|-----------------------------|--------------------------------------|
| Identification              | Ex II 2 GD Ex eb IIC Gb              |
| Operating temperature range | -60 °C ... 110 °C                    |
| Ex-certified accessories    | 1205079 SZS 1,0X6,5 VDE              |
|                             | 3022276 CLIPFIX 35-5                 |
|                             | 3022218 CLIPFIX 35                   |
| List of bridges             | Plug-in bridge / FBS 2-16 / 3005963  |
| Bridge data                 | 98.5 A (35 mm <sup>2</sup> )         |
| Ex temperature increase     | 40 K (133.6 A / 35 mm <sup>2</sup> ) |
| for bridging with bridge    | 690 V                                |
| Rated insulation voltage    | 630 V                                |
| output                      | (Permanent)                          |

### Ex level General

|                      |         |
|----------------------|---------|
| Rated voltage        | 690 V   |
| Rated current        | 123 A   |
| Maximum load current | 129 A   |
| Contact resistance   | 0.08 mΩ |

### Ex connection data General

|                                                       |                                            |
|-------------------------------------------------------|--------------------------------------------|
| Torque range                                          | 3.2 Nm ... 3.7 Nm                          |
| Nominal cross section                                 | 35 mm <sup>2</sup>                         |
| Rated cross section AWG                               | 2                                          |
| Connection capacity rigid                             | 1.5 mm <sup>2</sup> ... 50 mm <sup>2</sup> |
| Connection capacity AWG                               | 16 ... 1/0                                 |
| Connection capacity flexible                          | 1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Connection capacity AWG                               | 16 ... 2                                   |
| 2 conductors with same cross section, solid           | 1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| 2 conductors with the same cross-section AWG rigid    | 16 ... 6                                   |
| 2 conductors with same cross section, stranded        | 1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| 2 conductors with the same cross-section AWG flexible | 16 ... 8                                   |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 16 mm   |
| End cover width    | 2.2 mm  |
| Height             | 61.2 mm |
| Depth              | 65.1 mm |
| Depth on NS 35/7,5 | 65.7 mm |
| Depth on NS 35/15  | 73.2 mm |

## Material specifications

multicolored (RAL -)

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|                                                                  |                   |
|------------------------------------------------------------------|-------------------|
| Color                                                            | black (RAL 9005)  |
|                                                                  | yellow (RAL 1018) |
| Flammability rating according to UL 94                           | V0                |
| Insulating material group                                        | I                 |
| Insulating material                                              | PA                |
| Static insulating material application in cold                   | -60 °C            |
| Relative insulation material temperature index (Elec., UL 746 B) | 130 °C            |
| Fire protection for rail vehicles (DIN EN 45545-2) R22           | HL 1 - HL 3       |
| Fire protection for rail vehicles (DIN EN 45545-2) R23           | HL 1 - HL 3       |
| Fire protection for rail vehicles (DIN EN 45545-2) R24           | HL 1 - HL 3       |
| Fire protection for rail vehicles (DIN EN 45545-2) R26           | HL 1 - HL 3       |
| Surface flammability NFPA 130 (ASTM E 162)                       | passed            |
| Specific optical density of smoke NFPA 130 (ASTM E 662)          | passed            |
| Smoke gas toxicity NFPA 130 (SMP 800C)                           | passed            |

## Electrical tests

### Surge voltage test

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 9.8 kV      |
| Result                | Test passed |

### Temperature-rise test

|                                                 |                                     |
|-------------------------------------------------|-------------------------------------|
| Requirement temperature-rise test               | Increase in temperature $\leq$ 45 K |
| Result                                          | Test passed                         |
| Short-time withstand current 35 mm <sup>2</sup> | 4.2 kA                              |
| Result                                          | Test passed                         |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 2.2 kV      |
| Result                | Test passed |

## Mechanical properties

### Mechanical data

|                 |    |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

## Mechanical tests

### Mechanical strength

|        |             |
|--------|-------------|
| Result | Test passed |
|--------|-------------|

### Attachment on the carrier

|                         |             |
|-------------------------|-------------|
| DIN rail/fixing support | NS 35       |
| Test force setpoint     | 10 N        |
| Result                  | Test passed |

### Test for conductor damage and slackening

|                |        |
|----------------|--------|
| Rotation speed | 10 rpm |
|----------------|--------|

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|                                |                              |
|--------------------------------|------------------------------|
| Revolutions                    | 135                          |
| Conductor cross-section/weight | 1.5 mm <sup>2</sup> / 0.4 kg |
|                                | 35 mm <sup>2</sup> / 6.8 kg  |
|                                | 50 mm <sup>2</sup> / 9.5 kg  |
| Result                         | Test passed                  |

## Environmental and real-life conditions

### Needle-flame test

|                  |             |
|------------------|-------------|
| Time of exposure | 30 s        |
| Result           | Test passed |

### Oscillation/broadband noise

|                        |                                                |
|------------------------|------------------------------------------------|
| Specification          | DIN EN 50155 (VDE 0115-200):2022-06            |
| Spectrum               | Long life test category 2, bogie-mounted       |
| Frequency              | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| ASD level              | 6.12 (m/s <sup>2</sup> ) <sup>2</sup> /Hz      |
| Acceleration           | 3.12g                                          |
| Test duration per axis | 5 h                                            |
| Test directions        | X-, Y- and Z-axis                              |
| Result                 | Test passed                                    |

### Shocks

|                                |                                     |
|--------------------------------|-------------------------------------|
| Specification                  | DIN EN 50155 (VDE 0115-200):2008-03 |
| Pulse shape                    | Half-sine                           |
| Acceleration                   | 5g                                  |
| Shock duration                 | 30 ms                               |
| Number of shocks per direction | 3                                   |
| Test directions                | X-, Y- and Z-axis (pos. and neg.)   |
| Result                         | Test passed                         |

### Ambient conditions

|                                          |                                                                                                                              |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Ambient temperature (operation)          | -60 °C ... 110 °C (Operating temperature range incl. self-heating; for max. short-term operating temperature, see RTI Elec.) |
| Ambient temperature (storage/transport)  | -25 °C ... 60 °C (for a short time, not exceeding 24 h, -60 °C to +70 °C)                                                    |
| Ambient temperature (assembly)           | -5 °C ... 70 °C                                                                                                              |
| Ambient temperature (actuation)          | -5 °C ... 70 °C                                                                                                              |
| Permissible humidity (operation)         | 20 % ... 90 %                                                                                                                |
| Permissible humidity (storage/transport) | 30 % ... 70 %                                                                                                                |

## Standards and regulations

|                                  |               |
|----------------------------------|---------------|
| Connection in acc. with standard | IEC 60947-7-1 |
|----------------------------------|---------------|

## Mounting

|               |           |
|---------------|-----------|
| Mounting type | NS 35/7,5 |
|               | NS 35/15  |

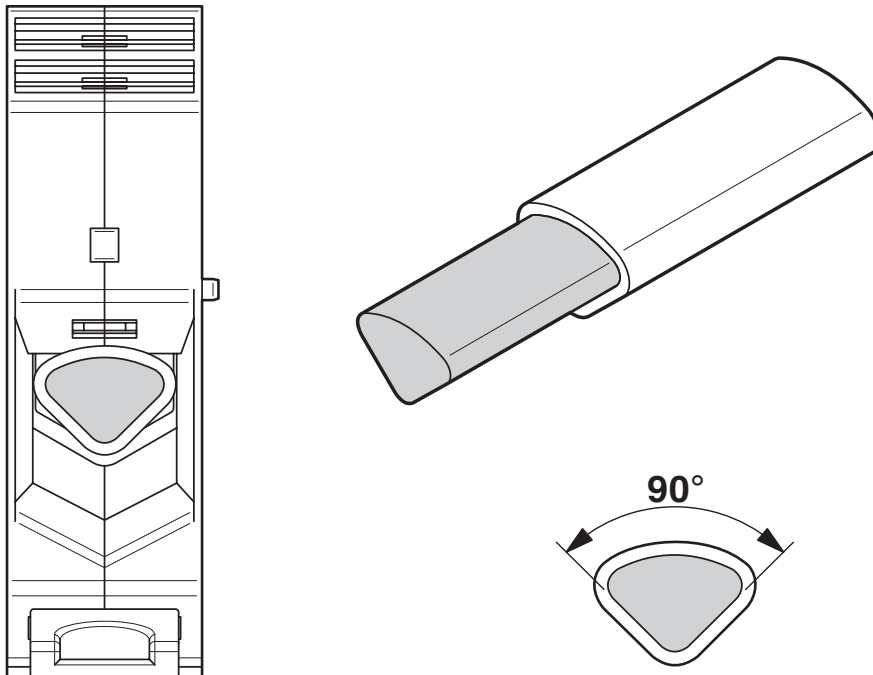
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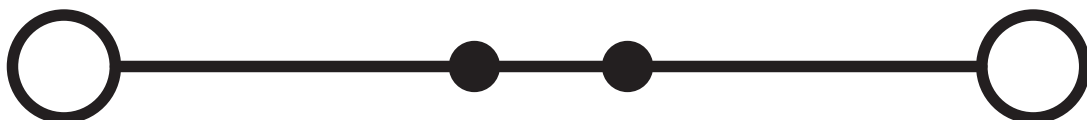
## Drawings

Schematic diagram



Connecting aluminum cables. Further notes can be found in the download area

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3047676>

**DNV**

Approval ID: TAE00001S9



**CSA**

Approval ID: 13631



**IECEE CB Scheme**

Approval ID: DE1-65779

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 1000 V                | 125 A                 | -                 | 1.5 - 35                    |



**cULus Recognized**

Approval ID: E60425

|                            | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|----------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| B                          |                       |                       |                   |                             |
|                            | 600 V                 | 150 A                 | 14 - 1/0          | -                           |
| Multi-conductor connection | 600 V                 | 150 A                 | 14                | -                           |
| C                          |                       |                       |                   |                             |
|                            | 600 V                 | 150 A                 | 14 - 1/0          | -                           |
| Multi-conductor connection | 600 V                 | 150 A                 | 14                | -                           |
| E                          |                       |                       |                   |                             |
|                            | 1000 V                | 150 A                 | 14 - 1/0          | -                           |
| Multi-conductor connection | 1000 V                | 150 A                 | 14                | -                           |



**VDE approval of drawings**

Approval ID: 40020166

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 1000 V                | 125 A                 | -                 | 1.5 - 35                    |



**CSA**

Approval ID: 13631

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|  <b>ATEX</b><br>Approval ID: KEMA04ATEX2048U |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                               | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                         |                       |                       |                   |                             |
| Only flexible conductors                                                                                                      | 690 V                 | 123 A                 | -                 | 1.5 - 35                    |
| Only rigid conductors                                                                                                         | 690 V                 | 129 A                 | -                 | 1.5 - 50                    |

|  <b>cUL Recognized</b><br>Approval ID: E192998 |                       |                       |                   |                             |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                 | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                           |                       |                       |                   |                             |
|                                                                                                                                 | 600 V                 | 150 A                 | 14 - 1/0          | -                           |

|  <b>IECEx</b><br>Approval ID: IECEx KEM 06.0027U |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                     | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                               |                       |                       |                   |                             |
| Only flexible conductors                                                                                                            | 690 V                 | 123 A                 | -                 | 1.5 - 35                    |
| Only rigid conductors                                                                                                               | 690 V                 | 129 A                 | -                 | 1.5 - 50                    |

|  <b>UL Recognized</b><br>Approval ID: E192998 |                       |                       |                   |                             |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                            |                       |                       |                   |                             |
|                                                                                                                                  | 600 V                 | 150 A                 | 14 - 1/0          | -                           |

|  <b>CCC</b><br>Approval ID: 2020322313000622 |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|  <b>UKCA-EX</b><br>Approval ID: DEKRA 21UKEX0304U |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
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|  <b>EAC Ex</b><br>Approval ID: KZ 7500525010101950 |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|---------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250101 |
| ECLASS-15.0 | 27250101 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000897 |
|----------|----------|

### 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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