

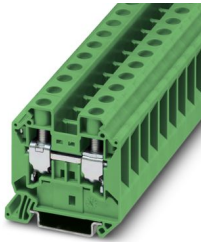
# UT 16 GN - Feed-through terminal block



3044211

<https://www.phoenixcontact.com/us/products/3044211>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 76 A, number of connections: 2, connection method: Screw connection, Rated cross section: 16 mm<sup>2</sup>, cross section: 1.5 mm<sup>2</sup> - 25 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: green

## Your advantages

- The reducing bridges can be used to connect terminal blocks with different connection technologies, e.g., UT 35 screw terminal block with Push-in technology 2,5 Push-in terminal blocks, to form power blocks
- Easy and time-saving potential supply and distribution of large currents and cross sections up to 35 mm<sup>2</sup> with reducing bridges
- The flexible options for reducing bridging in the CLIPLINE complete system can be found in "Accessories for the CLIPLINE complete modular terminal block system"
- Tested for railway applications

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3044211       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE01          |
| Product key                          | BE1111        |
| GTIN                                 | 4046356892155 |
| Weight per piece (including packing) | 30.09 g       |
| Weight per piece (excluding packing) | 30.08 g       |
| Customs tariff number                | 85369010      |
| Country of origin                    | TR            |

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## Technical data

### Product properties

|                       |                             |
|-----------------------|-----------------------------|
| Product type          | Feed-through terminal block |
| Area of application   | Railway industry            |
|                       | Machine building            |
|                       | Plant engineering           |
|                       | Process industry            |
| Number of connections | 2                           |
| Number of rows        | 1                           |
| Potentials            | 1                           |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 06 |
|------------------|----|

### Insulation characteristics

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

### Electrical properties

|   |        |
|---|--------|
| Rated surge voltage                             | 8 kV   |
| Maximum power dissipation for nominal condition | 2.43 W |

### Connection data

|                                 |                    |
|---------------------------------|--------------------|
| Number of connections per level | 2                  |
| Nominal cross section           | 16 mm <sup>2</sup> |

### Level 1 above 1 below 1

|   |   |
|---|---|
| Screw thread  | M5  |
| Tightening torque   | 2.5 ... 3 Nm                                |
| Stripping length  | 14 mm                                       |
| Internal cylindrical gage   | A7  |
| Connection in acc. with standard  | IEC 60947-7-1                               |
| Conductor cross section rigid   | 1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>  |
| Cross section AWG   | 14 ... 4 (converted acc. to IEC)            |
| Conductor cross section flexible  | 1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>  |
| Conductor cross section, flexible [AWG]   | 14 ... 4 (converted acc. to IEC)            |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 1 mm <sup>2</sup> ... 16 mm <sup>2</sup>    |
| Flexible conductor cross section (ferrule with plastic sleeve)                            | 1 mm <sup>2</sup> ... 16 mm <sup>2</sup>    |
| 2 conductors with same cross section, solid   | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup>     |
| 2 conductors with same cross section, flexible  | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup>     |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup>     |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.75 mm <sup>2</sup> ... 10 mm <sup>2</sup> |

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|                       |  |
|-----------------------|--|
| Nominal current       | 76 A   |
| Maximum load current  | 101 A (with 25 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. |
| Nominal cross section | 16 mm <sup>2</sup>   |

## Ex data

### Rated data (ATEX/IECEX)

|                             |  |
|-----------------------------|--|
| Identification              | ⊕ II 2 GD Ex eb IIC Gb   |
| Operating temperature range | -60 °C ... 110 °C  |
| Ex-certified accessories    | 3047206 D-UT 16<br>1205066 SZS 1,0X4,0 VDE<br>3022276 CLIPFIX 35-5<br>3022218 CLIPFIX 35 |
| List of bridges             | Plug-in bridge / FBS 2-12 / 3005950  |
| Bridge data                 | 73.5 A / 16 mm <sup>2</sup>  |
| Ex temperature increase     | 40 K (80.5 A / 16 mm <sup>2</sup> )  |
| Rated voltage               | 690 V  |
| for bridging with bridge    | 690 V  |
| Rated insulation voltage    | 630 V  |
| output                      | (Permanent)  |

### Ex level General

|                      |         |
|----------------------|---------|
| Rated current        | 73.5 A  |
| Maximum load current | 89.5 A  |
| Contact resistance   | 0.16 mΩ |

### Ex connection data General

|   |  |
|---|--|
| Torque range  | 2.5 Nm ... 3 Nm                            |
| Nominal cross section                                 | 16 mm <sup>2</sup>                         |
| Rated cross section AWG                               | 6  |
| Connection capacity rigid                             | 1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup> |
| Connection capacity AWG                               | 16 ... 4                                   |
| Connection capacity flexible                          | 1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Connection capacity AWG                               | 16 ... 6                                   |
| 2 conductors with same cross section, solid           | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup>    |
| 2 conductors with the same cross-section AWG rigid    | 18 ... 10                                  |
| 2 conductors with same cross section, stranded        | 1 mm <sup>2</sup> ... 4 mm <sup>2</sup>    |
| 2 conductors with the same cross-section AWG flexible | 18 ... 12                                  |

## Dimensions

|                 |         |
|-----------------|---------|
| Width           | 12.2 mm |
| End cover width | 2.2 mm  |
| Height          | 55.5 mm |

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|                    |         |
|--------------------|---------|
| Depth              | 54.4 mm |
| Depth on NS 35/7,5 | 55 mm   |
| Depth on NS 35/15  | 62.5 mm |

## Material specifications

|   |                  |
|---|------------------|
| Color   | green (RAL 6021) |
| Flammability rating according to UL 94                                  | V0               |
| Insulating material group   | I                |
| Insulating material   | PA               |
| Static insulating material application in cold                          | -60 °C           |
| Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21)) | 130 °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      |
| Calorimetric heat release NFPA 130 (ASTM E 1354)                        | 28 MJ/kg         |
| 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 16 mm <sup>2</sup> | 1.92 kA                             |
| Result  | Test passed                         |

### Power-frequency withstand voltage

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

## Mechanical properties

### Mechanical data

|                 |     |
|-----------------|-----|
| Open side panel | Yes |
|-----------------|-----|

## Mechanical tests

### Mechanical strength

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

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## Attachment on the carrier

|                         |             |
|-------------------------|-------------|
| DIN rail/fixing support | NS 32/NS 35 |
| Result                  | Test passed |

## Test for conductor damage and slackening

|                                |                              |
|--------------------------------|------------------------------|
| Rotation speed                 | 10 rpm                       |
| Revolutions                    | 135                          |
| Conductor cross section/weight | 1.5 mm <sup>2</sup> / 0.4 kg |
|                                | 16 mm <sup>2</sup> / 2.9 kg  |
|                                | 25 mm <sup>2</sup> / 4.5 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):2018-05            |
| Spectrum               | Service 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                              |

### Shocks

|                                |                                   |
|--------------------------------|-----------------------------------|
| Pulse shape                    | Half-sine                         |
| Acceleration                   | 30g                               |
| Shock duration                 | 18 ms                             |
| Number of shocks per direction | 3                                 |
| Test directions                | X-, Y- and Z-axis (pos. and neg.) |

### 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, no longer than 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 |
|----------------------------------|---------------|

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## Mounting

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

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## Drawings

Circuit diagram



# UT 16 GN - Feed-through terminal block



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3044211>

|                         |  |  |  |  |
|-------------------------|--|--|--|--|
| <b>DNV</b>              |  |  |  |  |
| Approval ID: TAE00001S9 |  |  |  |  |

|                        |                       |                       |                   |                      |
|------------------------|-----------------------|-----------------------|-------------------|----------------------|
| <b>CB Scheme</b>       |                       |                       |                   |                      |
| <b>IECEE CB Scheme</b> |                       |                       |                   |                      |
| Approval ID: DE1-65779 |                       |                       |                   |                      |
|                        | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|                        | 1000 V                | 76 A                  | -                 | - 16                 |

|                            |                       |                       |                   |                      |
|----------------------------|-----------------------|-----------------------|-------------------|----------------------|
| <b>cULus Recognized</b>    |                       |                       |                   |                      |
| Approval ID: E60425        |                       |                       |                   |                      |
|                            | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| Use group B                | 600 V                 | 85 A                  | 16 - 4            | -                    |
| Multi-conductor connection | 600 V                 | 85 A                  | - 14              | -                    |
| Use group C                | 600 V                 | 85 A                  | 16 - 4            | -                    |
| Multi-conductor connection | 600 V                 | 85 A                  | - 14              | -                    |

|                           |  |  |  |  |
|---------------------------|--|--|--|--|
| <b>LR</b>                 |  |  |  |  |
| Approval ID: LR24100022TA |  |  |  |  |

|                               |                       |                       |                   |                      |
|-------------------------------|-----------------------|-----------------------|-------------------|----------------------|
| <b>VDE Zeichengenehmigung</b> |                       |                       |                   |                      |
| Approval ID: 40020166         |                       |                       |                   |                      |
|                               | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|                               | 1000 V                | 76 A                  | -                 | 1.5 - 16             |

|                              |                       |                       |                   |                      |
|------------------------------|-----------------------|-----------------------|-------------------|----------------------|
| <b>ATEX</b>                  |                       |                       |                   |                      |
| Approval ID: KEMA04ATEX2048U |                       |                       |                   |                      |
|                              | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| Only flexible conductors     | 690 V                 | 73.5 A                | -                 | 1.5 - 16             |
| Only rigid conductors        | 690 V                 | 89.5 A                | -                 | 1.5 - 25             |

|                       |  |  |  |  |
|-----------------------|--|--|--|--|
| <b>cUL Recognized</b> |  |  |  |  |
| Approval ID: E192998  |  |  |  |  |

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|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 600 V                 | 85 A                  | 16 - 4            | -                           |



## EAC Ex

Approval ID: RU C-DE.HA91.B.00066



## IEC Ex

Approval ID: IECEx KEM 06.0027U

|                          | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Only flexible conductors | 690 V                 | 73.5 A                | -                 | 1.5 - 16                    |
| Only rigid conductors    | 690 V                 | 89.5 A                | -                 | 1.5 - 25                    |



## UL Recognized

Approval ID: E192998

|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 600 V                 | 85 A                  | 16 - 4            | -                           |



## CCC

Approval ID: 2020322313000622



## UKCA-EX

Approval ID: DEKRA 21UKEX0304U

## cULus Recognized

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27141120 |
| ECLASS-13.0 | 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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