

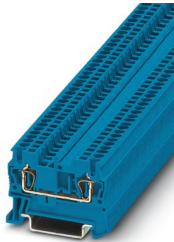
# ST 1,5 BU - Feed-through terminal block



3031089

<https://www.phoenixcontact.com/us/products/3031089>

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Feed-through terminal block, nom. voltage: 500 V, nominal current: 17.5 A, number of connections: 2, connection method: Spring-cage connection, Rated cross section: 1.5 mm<sup>2</sup>, 1 level, cross section: 0.08 mm<sup>2</sup> - 1.5 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: blue

## Your advantages

- Simple wiring of very small, flexible conductors
- Enables one-handed wiring
- No restriction on cross-sections when using conductors with ferrules
- Reliable vibration resistance thanks to spring-loaded contact elements
- Vibration-resistant and maintenance-free conductor connection
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3031089       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE02          |
| Product key                          | BE2111        |
| GTIN                                 | 4017918186630 |
| Weight per piece (including packing) | 4.96 g        |
| Weight per piece (excluding packing) | 4.505 g       |
| Customs tariff number                | 85369010      |
| Country of origin                    | DE            |

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## Technical data

### Product properties

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

### Insulation characteristics

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

### Electrical properties

|   |        |
|---|--------|
| Rated surge voltage                             | 6 kV   |
| Maximum power dissipation for nominal condition | 0.56 W |

### Connection data

|                                 |                     |
|---------------------------------|---------------------|
| Number of connections per level | 2                   |
| Nominal cross section           | 1.5 mm <sup>2</sup> |

#### 1 level

|   |   |
|---|---|
| Connection method   | Spring-cage connection                                    |
| Stripping length  | 8 mm ... 10 mm  |
| Internal cylindrical gage   | A1  |
| Connection in acc. with standard  | IEC 60947-7-1   |
| Conductor cross-section rigid   | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>              |
| Cross section AWG   | 28 ... 16 (converted acc. to IEC)                         |
| Conductor cross-section flexible  | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>              |
| Conductor cross-section, flexible [AWG]   | 28 ... 16 (converted acc. to IEC)                         |
| Conductor cross-section flexible ultrasound-compressed                                    | 0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>              |
| Conductor cross-section, flexible [AWG] ultrasound-compressed                             | 22 ... 16 (converted acc. to IEC)                         |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>              |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>              |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup>                                       |
| Nominal cross section   | 1.5 mm <sup>2</sup>                                       |
| Nominal current   | 17.5 A  |
| Maximum load current  | 17.5 A (with 1.5 mm <sup>2</sup> conductor cross-section) |
| Nominal voltage   | 500 V   |

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## Ex data

### Rated data (ATEX/IECEx)

|  |  |
|--|--|
| Identification   | Ⓜ II 2 GD Ex eb IIC Gb   |
| Operating temperature range  | -60 °C ... 85 °C   |
| Ex-certified accessories   | 3030417 D-ST 2,5<br>3030721 ATP-ST 4<br>1204504 SZF 0-0,4X2,5<br>3022276 CLIPFIX 35-5<br>3022218 CLIPFIX 35  |
| List of bridges  | Plug-in bridge / FBS 2-4 / 3030116<br>Plug-in bridge / FBS 3-4 / 3030129<br>Plug-in bridge / FBS 4-4 / 3030132<br>Plug-in bridge / FBS 5-4 / 3030145<br>Plug-in bridge / FBS 10-4 / 3030158<br>Plug-in bridge / FBS 20-4 / 3030352 |
| Bridge data  | 16.5 A (1.5 mm <sup>2</sup> )  |
| Ex temperature increase  | 40 K (19.4 A / 1.5 mm <sup>2</sup> )   |
| for bridging with bridge   | 440 V  |
| - At bridging between non-adjacent terminal blocks                       | 352 V  |
| - At bridging between non-adjacent terminal blocks via PE terminal block | 352 V  |
| - At cut-to-length bridging with cover                                   | 220 V  |
| - At cut-to-length bridging with partition plate                         | 275 V  |
| Rated insulation voltage   | 400 V  |
| output   | (Permanent)  |

### Ex level General

|                      |         |
|----------------------|---------|
| Rated voltage        | 440 V   |
| Rated current        | 17.5 A  |
| Maximum load current | 17.5 A  |
| Contact resistance   | 1.43 mΩ |

### Ex connection data General

|                              |  |
|------------------------------|--|
| Nominal cross section        | 1.5 mm <sup>2</sup>                          |
| Rated cross section AWG      | 16   |
| Connection capacity rigid    | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Connection capacity AWG      | 28 ... 16                                    |
| Connection capacity flexible | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Connection capacity AWG      | 28 ... 16                                    |

## Dimensions

|                 |         |
|-----------------|---------|
| Width           | 4.2 mm  |
| End cover width | 2.2 mm  |
| Height          | 48.5 mm |

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|                    |         |
|--------------------|---------|
| Depth on NS 35/7,5 | 36.5 mm |
| Depth on NS 35/15  | 44 mm   |

## Material specifications

|   |                 |
|---|-----------------|
| Color   | blue (RAL 5015) |
| 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)) | 125 °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)                        | 27,5 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          |

## Mechanical properties

### Mechanical data

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

## Environmental and real-life conditions

### 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

Circuit diagram



# ST 1,5 BU - Feed-through terminal block





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## Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3031089>


|  <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| B  | 300 V                 | 15 A                  | 26 - 14           | -                    |
| C  | 300 V                 | 15 A                  | 26 - 14           | -                    |

|  <b>IECEE CB Scheme</b><br>Approval ID: DE1-63027_A1 |                       |                       |                   |                      |
|---|-----------------------|-----------------------|-------------------|----------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine   | 500 V                 | 17.5 A                | -                 | 0.2 - 1.5            |

|  <b>KR</b><br>Approval ID: HMB17372-EL002 |  |  |  |  |
|--|--|--|--|--|
|--|--|--|--|--|

|  <b>NK</b><br>Approval ID: 09 ME 140 |  |  |  |  |
|---|--|--|--|--|
|---|--|--|--|--|

|  <b>VDE Zeichengenehmigung</b><br>Approval ID: 40009031 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine  | 500 V                 | 17.5 A                | -                 | 0.2 - 1.5            |

|  <b>cULus Recognized</b><br>Approval ID: E60425 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| B  | 300 V                 | 15 A                  | 26 - 14           | -                    |
| C  | 300 V                 | 15 A                  | 26 - 14           | -                    |
| D  | 600 V                 | 5 A                   | 26 - 14           | -                    |

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## DNV

Approval ID: TAE00001CS



## ATEX

Approval ID: KEMA01ATEX2129U

|                              | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine                        |                       |                       |                   |                             |
| Type examination certificate | 440 V                 | 17.5 A                | -                 | 0.08 - 1.5                  |



## EAC Ex

Approval ID: KZ 7500525010101950



## IECEx

Approval ID: IECEx KEM 06.0043U

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 440 V                 | 17.5 A                | -                 | 0.08 - 1.5                  |



## CCC

Approval ID: 2020322313000621



## UKCA-EX

Approval ID: DEKRA 21UKEX0302U

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## Classifications

### ECLASS

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

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | 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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.029 kg CO2e |
|---------|---------------|

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