

# DT 2,5 BU - Direct connection terminal block



3034031

<https://www.phoenixcontact.com/ae/products/3034031>

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Direct connection terminal block, nom. voltage: 800 V, nominal current: 24 A, number of connections: 2, connection method: Leg spring connection, 1 level, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: blue

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 3034031                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BE2                            |
| Product key                          | BE2211                         |
| GTIN                                 | 4017918977450                  |
| Weight per piece (including packing) | 6.048 g                        |
| Weight per piece (excluding packing) | 5.924 g                        |
| Customs tariff number                | 85369010                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                       |                             |
|-----------------------|-----------------------------|
| Product type          | Feed-through terminal block |
| 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 |
|---------------------|------|

### Connection data

|                                 |   |
|---------------------------------|---|
| Number of connections per level | 2 |
|---------------------------------|---|

#### 1 level

|                                                                                           |                                                                                                                    |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Connection method                                                                         | Leg spring connection                                                                                              |
| Stripping length                                                                          | 8 mm ... 10 mm                                                                                                     |
| Internal cylindrical gage                                                                 | A3                                                                                                                 |
| Connection in acc. with standard                                                          | IEC 60947-7-1                                                                                                      |
| Conductor cross-section rigid                                                             | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>                                                                          |
| Cross section AWG                                                                         | 24 ... 12 (converted acc. to IEC)                                                                                  |
| Conductor cross-section flexible                                                          | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                                                        |
| Conductor cross-section, flexible [AWG]                                                   | 24 ... 14 (converted acc. to IEC)                                                                                  |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                                                       |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 0.25 mm <sup>2</sup> ... 2.5 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 current                                                                           | 24 A                                                                                                               |
| Maximum load current                                                                      | 24 A (with 4 mm <sup>2</sup> conductor cross-section)                                                              |
| Nominal voltage                                                                           | 800 V                                                                                                              |
| Connection in acc. with standard                                                          | IEC/EN 60079-7                                                                                                     |
| Test certificate name                                                                     | KEMA 04ATEX2284 U                                                                                                  |
| Conductor cross-section rigid                                                             | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>                                                                          |
| Cross section AWG                                                                         | 24 ... 12 (converted acc. to IEC)                                                                                  |
| Conductor cross-section flexible                                                          | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                                                        |
| Maximum load current                                                                      | 25 A (with 4 mm <sup>2</sup> conductor cross-section)<br>21 A (with a 2.5 mm <sup>2</sup> conductor cross-section) |
| Nominal voltage                                                                           | 550 V                                                                                                              |

### Dimensions

|       |        |
|-------|--------|
| Width | 5.2 mm |
|-------|--------|

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|                 |        |
|-----------------|--------|
| End cover width | 2.2 mm |
|-----------------|--------|

## Material specifications

|                                                                         |             |
|-------------------------------------------------------------------------|-------------|
| Color                                                                   | blue        |
| 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      |

## 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 2.5 mm <sup>2</sup> | 0.3 kA                              |
| Short-time withstand current 4 mm <sup>2</sup>   | 0.48 kA                             |
| Result                                           | Test passed                         |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 2 kV        |
| Result                | Test passed |

## Mechanical properties

### Mechanical data

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

## Mechanical tests

### Mechanical strength

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

### Attachment on the carrier

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|                         |             |
|-------------------------|-------------|
| DIN rail/fixing support | NS 35       |
| Test force setpoint     | 1 N         |
| Result                  | Test passed |

## Test for conductor damage and slackening

|                                |                              |
|--------------------------------|------------------------------|
| Rotation speed                 | 10 rpm                       |
| Revolutions                    | 135                          |
| Conductor cross-section/weight | 0.2 mm <sup>2</sup> / 0.2 kg |
|                                | 2.5 mm <sup>2</sup> / 0.7 kg |
|                                | 4 mm <sup>2</sup> / 0.9 kg   |
| Result                         | Test passed                  |

## Environmental and real-life conditions

### Aging

|                    |             |
|--------------------|-------------|
| Temperature cycles | 192         |
| Result             | Test passed |

### Needle-flame test

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

### Oscillation/broadband noise

|                        |                                                  |
|------------------------|--------------------------------------------------|
| Specification          | DIN EN 50155 (VDE 0115-200):2008-03              |
| Spectrum               | Long life test category 1, class B, body mounted |
| Frequency              | f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 Hz |
| ASD level              | 1.857 (m/s <sup>2</sup> ) <sup>2</sup> /Hz       |
| Acceleration           | 0.8g                                             |
| 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                         |

## Standards and regulations

|                                  |                |
|----------------------------------|----------------|
| Connection in acc. with standard | IEC 60947-7-1  |
|                                  | IEC/EN 60079-7 |

## Mounting

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

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|  |          |
|--|----------|
|  | NS 35/15 |
|--|----------|

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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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