

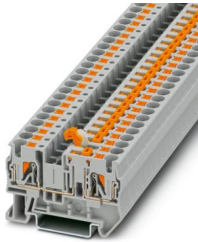
# PT 4-MT - Knife-disconnect terminal block



3211933

<https://www.phoenixcontact.com/au/products/3211933>

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Knife-disconnect terminal block, nom. voltage: 500 V, nominal current: 20 A, connection method: Push-in connection, Rated cross section: 4 mm<sup>2</sup>, cross section: 0.2 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system and by easy and tool-free wiring of conductors with ferrules or solid conductors
- The compact design and front connection enable wiring in a confined space
- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off
- Tested for railway applications

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 3211933             |
| Packing unit                         | 50 pc               |
| Minimum order quantity               | 50 pc               |
| Sales key                            | BE2231              |
| Product key                          | BE2231              |
| Catalog page                         | Page 103 (C-1-2019) |
| GTIN                                 | 4046356482554       |
| Weight per piece (including packing) | 8.97 g              |
| Weight per piece (excluding packing) | 8.402 g             |
| Customs tariff number                | 85369010            |
| Country of origin                    | PL                  |

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## Technical data

### Product properties

|                       |                           |
|-----------------------|---------------------------|
| Product type          | Disconnect terminal block |
| Product family        | PT                        |
| Area of application   | Railway industry          |
|                       | Machine building          |
|                       | Plant engineering         |
| 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 | 1.02 W |

### Connection data

|   |  |
|---|--|
| Number of connections per level   | 2  |
| Nominal cross section   | 4 mm <sup>2</sup>  |
| Stripping length  | 10 mm ... 12 mm  |
| Internal cylindrical gage   | A4   |
| Connection in acc. with standard  | IEC 60947-7-1  |
| Conductor cross section rigid   | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>                    |
| Cross section AWG   | 24 ... 10 (converted acc. to IEC)                            |
| Conductor cross section flexible  | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>                    |
| Conductor cross section, flexible [AWG]   | 24 ... 10 (converted acc. to IEC)                            |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>                   |
| Flexible conductor cross section (ferrule with plastic sleeve)                            | 0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>                   |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>                    |
| Nominal current   | 20 A   |
| Maximum load current  | 20 A (with 6 mm <sup>2</sup> conductor cross section, rigid) |
| Nominal voltage   | 500 V  |
| Nominal cross section   | 4 mm <sup>2</sup>  |

### Connection cross sections directly pluggable

|   |   |
|---|---|
| Conductor cross section rigid                                     | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> |
| Flexible conductor cross section (ferrule with plastic sleeve)    | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> |

## Dimensions

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|                    |         |
|--------------------|---------|
| Width              | 6.2 mm  |
| End cover width    | 2.2 mm  |
| Height             | 56 mm   |
| Depth              | 36.8 mm |
| Depth on NS 35/7,5 | 36.5 mm |
| Depth on NS 35/15  | 44 mm   |

## Material specifications

|  |                 |
|--|-----------------|
| Color  | gray (RAL 7042) |
| 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 | 7.3 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                              |
| Result   | Test passed                         |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 1.89 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 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 |
|                                | 4 mm <sup>2</sup> / 0.9 kg   |
|                                | 6 mm <sup>2</sup> / 1.4 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):2018-05            |
| 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):2018-05 |
| 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.)   |
| 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)  |

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|  |                 |
|--|-----------------|
| 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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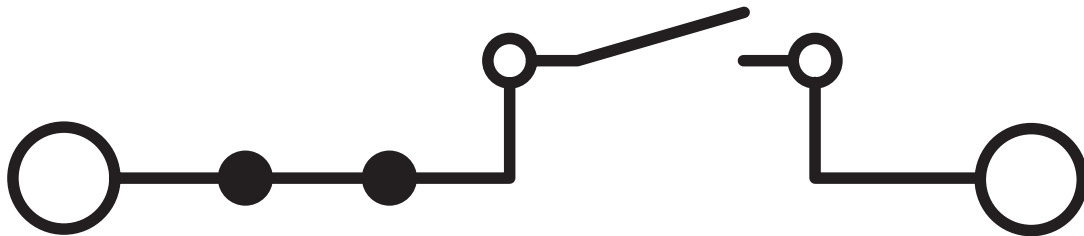


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## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/au/products/3211933>

### DNV

Approval ID: TAE000010T



### CSA

Approval ID: 13631

|             | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Use group B |                       |                       |                   |                             |
|             | 300 V                 | 20 A                  | 24 - 10           | -                           |
| Use group C |                       |                       |                   |                             |
|             | 300 V                 | 20 A                  | 24 - 10           | -                           |



### IECEE CB Scheme

Approval ID: DE1-62944

|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 500 V                 | 20 A                  | -                 | 0.2 - 4                     |



### EAC

Approval ID: RU C-DE.BL08.B.00644



### cULus Recognized

Approval ID: E60425



### LR

Approval ID: LR2371832TA



### NK

Approval ID: 14ME0912



### BV

Approval ID: 39980/B0 BV



### VDE Zeichengenehmigung

Approval ID: 40037094

|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 500 V                 | 20 A                  | -                 | 0.2 - 4                     |

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**PRC**

Approval ID: TE/2107/880590/21



**cULus Recognized**

Approval ID: E60425



**cULus Recognized**

Approval ID: E60425



**EAC**

Approval ID: KZ7500651131219505



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## Classifications

### ECLASS

ECLASS-13.0

27250108

### ETIM

ETIM 9.0

EC000902

### 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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