

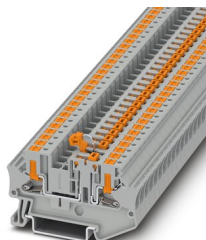
# PTV 4-MT - Knife-disconnect terminal block



1088739

<https://www.phoenixcontact.com/us/products/1088739>

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Knife-disconnect terminal block, nom. voltage: 500 V, nominal current: 20 A, 1 level, 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 secure end position of the lever-type disconnect knife ensures that the switching states of the knife disconnect terminal blocks are permanently secured and are always clearly recognizable.
- The circuits can be opened easily with a standard screwdriver.
- Clear wiring, thanks to lateral conductor entry
- The compact design enables wiring in a confined space
- The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system
- In addition to the testing facility in the double function shaft, all terminal blocks provide an additional test connection

## Commercial Data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1088739       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 50 pc         |
| Sales Key                            | BE23          |
| Product Key                          | BE2331        |
| GTIN                                 | 4055626890364 |
| Weight per Piece (including packing) | 9.54 g        |
| Weight per Piece (excluding packing) | 8.58 g        |
| Customs tariff number                | 85369010      |
| Country of origin                    | CN            |

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## Technical Data

### Product properties

|                       |                           |
|-----------------------|---------------------------|
| Product type          | Disconnect terminal block |
| Product family        | PTV                       |
| 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> |

#### 1 level

|                                                                                                                   |                                                           |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Stripping length                                                                                                  | 9 mm ... 11 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)                                                 | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>                 |
| Flexible conductor cross section (ferrule with plastic sleeve)                                                    | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>                 |
| Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve) | 0.5 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> ... 2.5 mm <sup>2</sup>               |
| Nominal current                                                                                                   | 20 A                                                      |
| Maximum load current                                                                                              | 20 A (with a 2.5 mm <sup>2</sup> conductor cross section) |
| Nominal voltage                                                                                                   | 500 V                                                     |
| Nominal cross section                                                                                             | 4 mm <sup>2</sup>                                         |

#### 1 level Connection cross sections directly pluggable

|                               |                                            |
|-------------------------------|--------------------------------------------|
| Conductor cross section rigid | 0.75 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
|-------------------------------|--------------------------------------------|

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|                                                                   |                                           |
|-------------------------------------------------------------------|-------------------------------------------|
| Conductor cross-section flexible (ferrule without plastic sleeve) | 1.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> |
| Flexible conductor cross section (ferrule with plastic sleeve)    | 1.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> |

## Dimensions

|                  |         |
|------------------|---------|
| Width            | 6.2 mm  |
| End cover width  | 2.2 mm  |
| Height           | 63.3 mm |
| Height NS 35/15  | 44.3 mm |
| Height NS 35/7,5 | 36.8 mm |
| Depth            | 36.9 mm |
| Length           | 63.3 mm |

## Material specifications

|                                                                         |             |
|-------------------------------------------------------------------------|-------------|
| Color                                                                   | gray        |
| 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

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

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## Mechanical tests

### Mechanical strength

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

### Attachment on the carrier

|                         |             |
|-------------------------|-------------|
| DIN rail/fixing support | NS 35       |
| 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         |
|                    | 192         |
| Result             | Test passed |
|                    | 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               | 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                              |
| Result                 | Test passed                                    |

### 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.) |
| Result                         | Test passed                       |

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## Ambient conditions

|                                          |                                                                           |
|------------------------------------------|---------------------------------------------------------------------------|
| Ambient temperature (operation)          | -60 °C ... 105 °C (max. short-term operating temperature 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 (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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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1088739>

|  <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                    | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
| Use group B                                                                                                        | 300 V                 | 16 A                  | 26 - 10           | -                           |
|                                                                                                                    |                       |                       |                   |                             |
| Use group C                                                                                                        | 300 V                 | 16 A                  | 26 - 10           | -                           |
|                                                                                                                    |                       |                       |                   |                             |
| Use group D                                                                                                        | 600 V                 | 5 A                   | 26 - 10           | -                           |

|                                                                                                                                   |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>EAC</b><br>Approval ID: RU C-DE.AI30.B.01102 |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|                                                                                                                                    |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>cULus Recognized</b><br>Approval ID: E60425 |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|  <b>IECEE CB Scheme</b><br>Approval ID: DE1-67139 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                      | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|                                                                                                                                      | 500 V                 | 20 A                  | -                 | 0.2 - 6                     |

|  <b>VDE Zeichengenehmigung</b><br>Approval ID: 40056318 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                            | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|                                                                                                                                            | 500 V                 | 20 A                  | -                 | 0.2 - 6                     |

|                                                                                                                                    |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>cULus Recognized</b><br>Approval ID: E60425 |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27141126 |
| ECLASS-12.0 | 27141126 |
| ECLASS-13.0 | 27250108 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC000902 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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## Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

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