

# PTU 4-TG-P - Disconnect terminal block



3209541

<https://www.phoenixcontact.com/sg/products/3209541>

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Disconnect terminal block, with test socket screws to accommodate 4 mm test plugs, nom. voltage: 400 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>, connection method: Screw 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 compact design and front connection enable wiring in a confined space
- 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
- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off
- The push-in connection is used inside the control cabinet and the universal screw connection is used on the end customer side

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 3209541                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | *****                          |
| Product key                          | BE2231                         |
| Catalog page                         | Page 106 (C-1-2019)            |
| GTIN                                 | 4055626047362                  |
| Weight per piece (including packing) | 15.48 g                        |
| Weight per piece (excluding packing) | 10.92 g                        |
| Customs tariff number                | 85369010                       |
| Country of origin                    | CN                             |

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## Technical data

### Product properties

|                       |                           |
|-----------------------|---------------------------|
| Product type          | Disconnect terminal block |
| Number of connections | 2                         |
| Number of rows        | 1                         |
| Potentials            | 1                         |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 04 |
|------------------|----|

### 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> |

#### Level 1 above 1

|   |  |
|---|--|
| 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> ... 4 mm <sup>2</sup>  |
| Conductor cross section, flexible [AWG]   | 24 ... 12 (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                                       |
| Nominal voltage   | 400 V                                      |
| Nominal cross section   | 4 mm <sup>2</sup>                          |

#### Level 1 below 1

|                                  |   |
|----------------------------------|---|
| Screw thread                     | M3  |
| Tightening torque                | 0.6 ... 0.8 Nm                            |
| Connection in acc. with standard | IEC 60947-7-1                             |
| Conductor cross section rigid    | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup> |

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|   |  |
|---|--|
| 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 ... 12 (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 same cross section, solid   | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible  | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Nominal current   | 20 A   |
| Maximum load current  | 20 A   |
| Nominal voltage   | 400 V  |
| Nominal cross section   | 4 mm <sup>2</sup>                            |

## Level 1 above 1 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

|                 |        |
|-----------------|--------|
| Width           | 6.2 mm |
| End cover width | 2.2 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

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|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 4.8 kV      |
| Result                | Test passed |

## Temperature-rise test

|  |                                     |
|--|-------------------------------------|
| Requirement temperature-rise test                | Increase in temperature $\leq 45$ K |
| Result   | Test passed                         |
| Short-time withstand current 0.5 mm <sup>2</sup> | 0.06 kA                             |
| Result   | Test passed                         |

## Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 1.5 kV      |
| Result                | Test passed |

## Mechanical properties

### Mechanical data

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

## Mechanical tests

### Mechanical strength

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

### 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

### Needle-flame test

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

### Oscillation/broadband noise

|               |   |
|---------------|---|
| Specification | DIN EN 50155 (VDE 0115-200):2008-03         |
| Spectrum      | Service life test category 2, bogie-mounted |
| Frequency     | $f_1 = 5$ Hz to $f_2 = 250$ Hz              |
| ASD level     | 6.12 (m/s <sup>2</sup> ) <sup>2</sup> /Hz   |
| Acceleration  | 3.12g                                       |

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|                        |                   |
|------------------------|-------------------|
| 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                   | 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 ... 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 |
|                                  | IEC 60947-7-1 |

## Mounting

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

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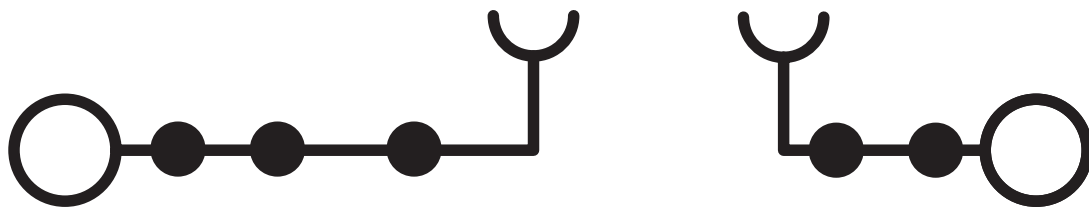


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## Drawings

Circuit diagram



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## Classifications

### ECLASS

ECLASS-11.0

27141126

### ETIM

ETIM 8.0

EC000902

### UNSPSC

UNSPSC 21.0

39121400

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## Environmental product compliance

### EU RoHS

|   |      |
|---|------|
| Fulfills EU RoHS substance requirements | Yes  |
| Exemption                               | 6(c) |

### China RoHS

|  |  |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|  | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                      |
|-------------------------------------|----------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
|-------------------------------------|----------------------|

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