

# PTTBS 2,5-DIO/U-O CUS - Component terminal block



1026166

<https://www.phoenixcontact.com/us/products/1026166>

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Component terminal block, with integrated 1N4007 diode, circuit symbol visible when installed, nominal current: 0.5 A, number of connections: 4, connection method: Push-in connection, Rated cross section: 2.5 mm<sup>2</sup>, 1st and 2nd level, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: 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<br/>
- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1026166       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Product key                          | BE2272        |
| GTIN                                 | 4055626519135 |
| Weight per piece (including packing) | 12.674 g      |
| Weight per piece (excluding packing) | 12.674 g      |
| Country of origin                    | CN            |

## Technical data

### Notes

|         |                                                                                                                                    |
|---------|------------------------------------------------------------------------------------------------------------------------------------|
| General | The max. current is determined by the diode. Installed: Diode 1N 4007, reverse voltage: 1300 V, maximum continuous current: 0.5 A. |
|---------|------------------------------------------------------------------------------------------------------------------------------------|

### Product properties

|                       |                          |
|-----------------------|--------------------------|
| Product type          | Component terminal block |
| Number of connections | 4                        |
| Number of rows        | 2                        |
| Potentials            | 2                        |

### Insulation characteristics

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

### Electrical properties

|                                                 |        |
|-------------------------------------------------|--------|
| Rated insulation voltage                        | 500 V  |
| Rated surge voltage                             | 8 kV   |
| Maximum power dissipation for nominal condition | 0.77 W |

### Connection data

|                                 |                     |
|---------------------------------|---------------------|
| Number of connections per level | 2                   |
| Nominal cross section           | 2.5 mm <sup>2</sup> |

#### 1st and 2nd level

|                                                                                           |                                              |
|-------------------------------------------------------------------------------------------|----------------------------------------------|
| Stripping length                                                                          | 10 mm                                        |
| Internal cylindrical gage                                                                 | A3                                           |
| Conductor cross section rigid                                                             | 0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Cross section AWG                                                                         | 26 ... 12 (converted acc. to IEC)            |
| Conductor cross section flexible                                                          | 0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross section, flexible [AWG]                                                   | 26 ... 12 (converted acc. to IEC)            |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Flexible conductor cross section (ferrule with plastic sleeve)                            | 0.14 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                                                                           | 0.5 A                                        |
| Maximum load current                                                                      | 0.5 A                                        |
| Nominal cross section                                                                     | 2.5 mm <sup>2</sup>                          |
| Component type                                                                            | Diode 1N4007                                 |
| Reverse voltage                                                                           | 1300 V                                       |

#### 1st and 2nd level Connection cross sections directly pluggable

|                                                                   |                                              |
|-------------------------------------------------------------------|----------------------------------------------|
| Conductor cross section rigid                                     | 0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |

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|                                                                |                      |
|----------------------------------------------------------------|----------------------|
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.34 mm² ... 2.5 mm² |
|----------------------------------------------------------------|----------------------|

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 5.2 mm  |
| End cover width    | 2.2 mm  |
| Height             | 78 mm   |
| Depth on NS 35/7,5 | 55 mm   |
| Depth on NS 35/15  | 62.5 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 | 9.8 kV      |
| 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

### Attachment on the carrier

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

## Environmental and real-life conditions

### Oscillation/broadband noise

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|                        |                                                |
|------------------------|------------------------------------------------|
| Specification          | DIN EN 50155 (VDE 0115-200):2022-06            |
| Spectrum               | Long life test category 2, bogie-mounted       |
| Frequency              | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| ASD level              | $6.12 \text{ (m/s}^2\text{)}^2/\text{Hz}$      |
| 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):2022-06 |
| 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

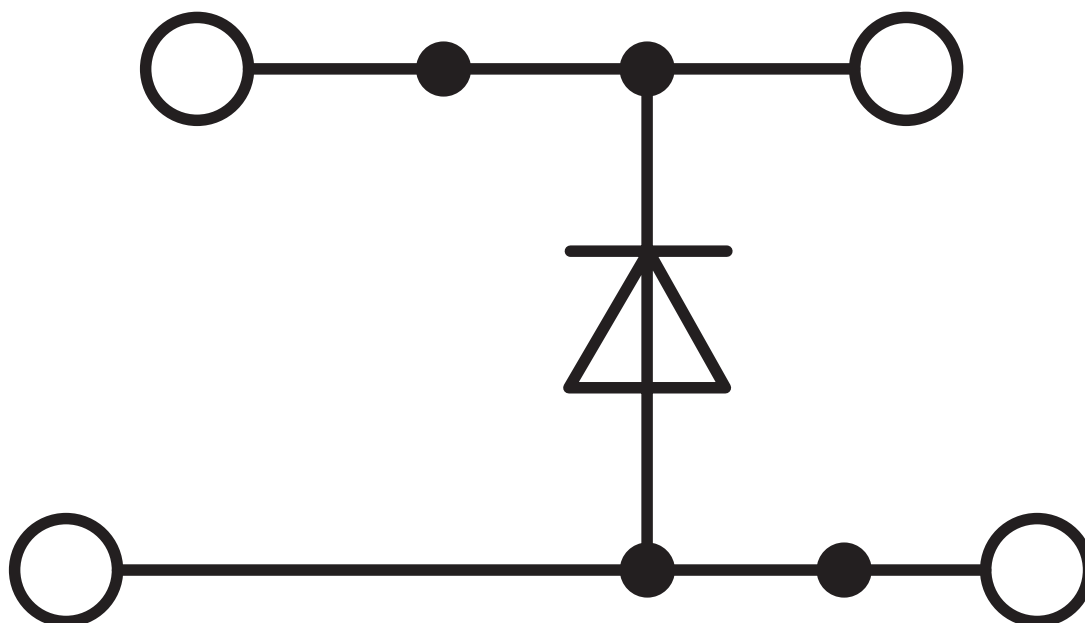
|                                          |                                                                                                                              |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 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)                                                    |
| 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 %                                                                                                                |

## Mounting

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

## Drawings

Circuit diagram



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## Approvals

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**EAC**

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250114 |
|-------------|----------|

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000903 |
|----------|----------|

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|                                         |              |
|-----------------------------------------|--------------|
| Fulfills EU RoHS substance requirements | Yes          |
| Exemption                               | 7(a), 7(c)-I |

### China RoHS

|                                        |                                                                                                                                                                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-50                                                                                                                                                                                                                           |
|                                        | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | d6fd3813-9084-42b6-8167-4d399d4cabd2 |

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