

# PTTB 2,5-PE - Protective conductor double-level terminal block



3210596

<https://www.phoenixcontact.com/pc/products/3210596>

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Protective conductor double-level terminal block, number of connections: 4, connection method: Push-in connection, 1st and 2nd level, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: green-yellow

## 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                          | 3210596            |
| Packing unit                         | 50 pc              |
| Minimum order quantity               | 50 pc              |
| Product key                          | BE2224             |
| Catalog page                         | Page 72 (C-1-2019) |
| GTIN                                 | 4046356419017      |
| Weight per piece (including packing) | 13.044 g           |
| Weight per piece (excluding packing) | 12.6 g             |
| Customs tariff number                | 85369010           |
| Country of origin                    | CN                 |

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## Technical data

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Product type          | Ground terminal block |
| Area of application   | Railway industry      |
|                       | Machine building      |
|                       | Plant engineering     |
|                       | Process industry      |
| Number of connections | 4                     |
| Number of rows        | 2                     |

### Insulation characteristics

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

### Electrical properties

|                                                 |        |
|-------------------------------------------------|--------|
| Rated surge voltage                             | 6 kV   |
| Maximum power dissipation for nominal condition | 0.77 W |

### Connection data

|                                 |                     |
|---------------------------------|---------------------|
| Grounding foot                  | Yes                 |
| Number of connections per level | 2                   |
| Nominal cross section           | 2.5 mm <sup>2</sup> |
| Rated cross section AWG         | 12                  |

### 1st and 2nd level

|                                                                                                                   |                                                                |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Note                                                                                                              | Please observe the current carrying capacity of the DIN rails. |
| Stripping length                                                                                                  | 8 mm ... 10 mm                                                 |
| Internal cylindrical gage                                                                                         | A4                                                             |
| Connection in acc. with standard                                                                                  | IEC 60947-7-2                                                  |
| 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>                   |
| Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve) | 0.5 mm <sup>2</sup>                                            |
| Nominal cross section                                                                                             | 2.5 mm <sup>2</sup>                                            |
| Cross section AWG                                                                                                 | 26 ... 12 (converted acc. to IEC)                              |
| Stripping length                                                                                                  | 8 mm ... 10 mm                                                 |

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

|                               |                                            |
|-------------------------------|--------------------------------------------|
| Conductor cross section rigid | 0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup> |
|-------------------------------|--------------------------------------------|

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|                                                                   |                      |
|-------------------------------------------------------------------|----------------------|
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.34 mm² ... 2.5 mm² |
| Flexible conductor cross section (ferrule with plastic sleeve)    | 0.34 mm² ... 2.5 mm² |

## Ex data

### Rated data (ATEX/IECEx)

|                             |                        |
|-----------------------------|------------------------|
| Identification              | Ex II 2 G Ex eb IIC Gb |
| Operating temperature range | -60 °C ... 110 °C      |
| Ex-certified accessories    | 3211634 D-PTTB 2,5     |
|                             | 1204517 SZF 1-0,6X3,5  |
|                             | 3022276 CLIPFIX 35-5   |
|                             | 3022218 CLIPFIX 35     |
| output                      | (Permanent)            |

### Ex connection data General

|                              |                      |
|------------------------------|----------------------|
| Nominal cross section        | 2.5 mm²              |
| Rated cross section AWG      | 14                   |
| Connection capacity rigid    | 0.14 mm² ... 4 mm²   |
| Connection capacity AWG      | 26 ... 12            |
| Connection capacity flexible | 0.14 mm² ... 2.5 mm² |
| Connection capacity AWG      | 26 ... 14            |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 5.2 mm  |
| End cover width    | 2.2 mm  |
| Height             | 68 mm   |
| Depth on NS 35/7,5 | 47.5 mm |
| Depth on NS 35/15  | 55 mm   |

## Material specifications

|                                                                         |              |
|-------------------------------------------------------------------------|--------------|
| Color                                                                   | green-yellow |
| 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)) | 130 °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)                        | 28 MJ/kg     |
| Surface flammability NFPA 130 (ASTM E 162)                              | passed       |

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|                                                         |        |
|---------------------------------------------------------|--------|
| Specific optical density of smoke NFPA 130 (ASTM E 662) | passed |
| Smoke gas toxicity NFPA 130 (SMP 800C)                  | passed |

## Mechanical properties

### Mechanical data

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

## Environmental and real-life conditions

### Oscillation/broadband noise

|                        |                                                |
|------------------------|------------------------------------------------|
| Specification          | DIN EN 50155 (VDE 0115-200):2008-03            |
| Spectrum               | Service 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):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 ... 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 %                                                                                                                |

## Standards and regulations

|                                  |               |
|----------------------------------|---------------|
| Connection in acc. with standard | IEC 60947-7-2 |
|----------------------------------|---------------|

## Mounting

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

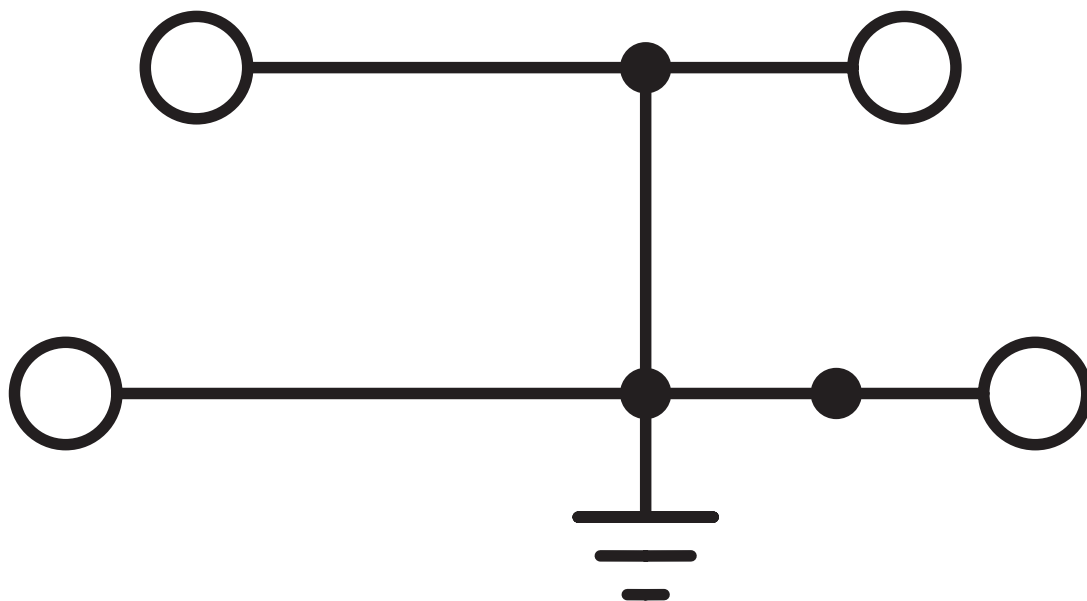
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## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/3210596>

**DNV**

Approval ID: TAE00003JE



**CSA**

Approval ID: 13631



**IECEE CB Scheme**

Approval ID: DE1-62994

|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | -                     | -                     | -                 | 0.2 - 2.5                   |



**cULus Recognized**

Approval ID: E60425

|             | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Use group B |                       |                       |                   |                             |
|             | -                     | -                     | 26 - 12           | -                           |
| Use group C |                       |                       |                   |                             |
|             | -                     | -                     | 26 - 12           | -                           |



**LR**

Approval ID: LR2371832TA



**NK**

Approval ID: 22ME0007



**RS**

Approval ID: 22.44.01.00083.250



**BV**

Approval ID: 25278/C1 BV



**VDE Zeichengenehmigung**

Approval ID: 40036433

|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|--|-----------------------|-----------------------|-------------------|-----------------------------|

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|  |   |   |   |           |
|--|---|---|---|-----------|
|  | - | - | - | 0.2 - 2.5 |
|--|---|---|---|-----------|

## ABS

Approval ID: 21-2192245-PDA



## NK

Approval ID: 14ME0912



## LR

Approval ID: 14/20056



## CSA

Approval ID: 2030668



## EAC Ex

Approval ID: RU C-DE.HA91.B.00066



## IEC Ex

Approval ID: IECExPTB10.0021U

|                          | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Only flexible conductors | -                     | -                     | -                 | 0.14 - 2.5                  |
| Only rigid conductors    | -                     | -                     | -                 | 0.14 - 4                    |



## ATEX

Approval ID: PTB09ATEX1111U

|                          | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Only flexible conductors | -                     | -                     | -                 | 0.14 - 2.5                  |
| Only rigid conductors    | -                     | -                     | -                 | 0.14 - 4                    |



## CCC

Approval ID: 2020322313000631



## UKCA-EX

Approval ID: CSAE 22UKEX1096U

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27141141 |
| ECLASS-13.0 | 27250104 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000901 |
|----------|----------|

### 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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