# PTTBS 2,5 BN - Double-level terminal block

1037088

https://www.phoenixcontact.com/us/products/1037088

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Double-level terminal block, nom. voltage: 500 V, nominal current: 22 A, connection method: Push-in connection, 1st and 2nd level, Rated cross section: 2.5 mm$^2$, cross section: 0.14 mm$^2$ - 4 mm$^2$, mounting type: NS 35/7,5, NS 35/15, color: brown

## Your advantages

- Time-saving conductor connection thanks to tool-free direct-connection technology
- Convenient plugging with lower insertion force
- High conductor pull-out forces due to the spring design
- Vibration-resistant and maintenance-free conductor connection
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories
- High space savings thanks to the compact integration of two separate circuits in a single terminal block
- Optimized for manual and automated wiring

## Commercial data

| | |
|---|---|
| Item number | 1037088 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | BE22 |
| Product key | BE2214 |
| GTIN | 4055626570112 |
| Weight per piece (including packing) | 12.688 g |
| Weight per piece (excluding packing) | 12.46 g |
| Customs tariff number | 85369010 |
| Country of origin | CN |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Multi-level terminal block |
| Product family | PTS |
| Number of connections | 4 |
| Number of rows | 2 |
| Potentials | 2 |

Insulation characteristics

| | |
|---|---|
| Overvoltage category | III |

## Electrical properties

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

## Connection data

| | |
|---|---|
| Number of connections per level | 2 |
| Nominal cross section | 2.5 mm² |

1st and 2nd level

| | |
|---|---|
| Connection method | Push-in connection |
| Stripping length | 8 mm ... 10 mm |
| Internal cylindrical gage | A3 |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross-section rigid | 0.14 mm² ... 4 mm² |
| Cross section AWG | 26 ... 12 (converted acc. to IEC) |
| Conductor cross-section flexible | 0.14 mm² ... 4 mm² |
| Conductor cross-section, flexible [AWG] | 26 ... 12 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.14 mm² ... 2.5 mm² |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 0.14 mm² ... 2.5 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² |
| Nominal cross section | 2.5 mm² |
| Nominal current | 22 A |
| Maximum load current | 24 A (with 4 mm² conductor cross-section, rigid) |
| Nominal voltage | 500 V |

1st and 2nd level Connection cross sections directly pluggable

| | |
|---|---|
| Conductor cross-section rigid | 0.34 mm² ... 4 mm² |
| 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 | Ⓔx II 2 GD Ex eb IIC Gb |
| Operating temperature range (1) | -60 °C ... 85 °C |
| Operating temperature range (2) | -40 °C ... 110 °C |
| Ex-certified accessories | 3038503 D-STTBS 2,5 |
| | 1204517 SZF 1-0,6X3,5 |
| | 3022276 CLIPFIX 35-5 |
| | 3022218 CLIPFIX 35 |
| List of bridges | Plug-in bridge / FBS 2-5 / 3030161 |
| | Plug-in bridge / FBS 3-5 / 3030174 |
| | Plug-in bridge / FBS 4-5 / 3030187 |
| | Plug-in bridge / FBS 5-5 / 3030190 |
| | Plug-in bridge / FBS 10-5 / 3030213 |
| | Plug-in bridge / FBS 20-5 / 3030226 |
| Bridge data | 16.5 A / 2.5 mm² |
| Ex temperature increase | 40 K (19 A / 2.5 mm²) |
| for bridging with bridge | 440 V |
| - At bridging between non-adjacent terminal blocks | 352 V |
| - At bridging between non-adjacent terminal blocks via PE terminal block | 325 V |
| - At cut-to-length bridging | 137.5 V |
| - At cut-to-length bridging with cover | 352 V |
| Rated insulation voltage | 400 V |
| output | (Permanent) |

Ex level General

| | |
|---|---|
| Rated voltage | 440 V |
| Rated current | 19 A |
| Maximum load current | 21.5 A |

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 |
| output | (Permanent) |

Ex level Level 1

| | |
|---|---|
| Contact resistance | 1.3 mΩ |
| output | (Permanent) |

Ex level Level 2

| | |
|---|---|
| Contact resistance | 1.3 mΩ |

## 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 | brown (RAL 8028) |
| 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 |

## Mechanical properties

### Mechanical data

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

## Environmental and real-life conditions

### 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

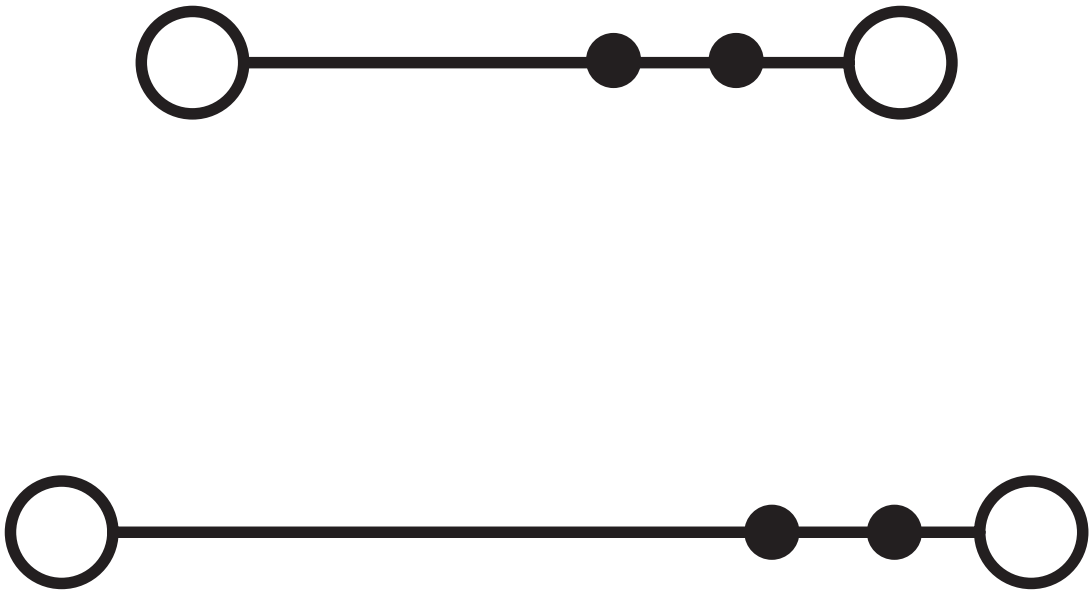
| | |
|---|---|
| Connection in acc. with standard | IEC 60947-7-1 |

## Mounting

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

## Drawings

Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1037088

**CSA**
Approval ID: 158887

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 300 V | 20 A | 26 - 12 | - |
| C | | | | |
| | 300 V | 20 A | 26 - 12 | - |
| D | | | | |
| | 600 V | 5 A | 26 - 12 | - |

**IECEE CB Scheme**
Approval ID: DE1-66980

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 500 V | 22 A | - | 0.2 - 2.5 |

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

**cULus Recognized**
Approval ID: E60425

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 300 V | 20 A | 24 - 12 | - |
| C | | | | |
| | 300 V | 20 A | 24 - 12 | - |

**LR**
Approval ID: LR2371832TA

**NK**
Approval ID: 14ME0912

**VDE Zeichengenehmigung**
Approval ID: 40032222

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| keine | | | | |
| | 500 V | 22 A | - | 0.2 - 2.5 |

**ABS**
Approval ID: 21-2192245-PDA

**DNV**
Approval ID: TAE000010T

**cUL Recognized**
Approval ID: E192998

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 300 V | 20 A | 24 - 12 | - |

**IECEx**
Approval ID: IECEx SEV13.0005U

**UL Recognized**
Approval ID: E192998

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 300 V | 20 A | 24 - 12 | - |

**ATEX**
Approval ID: SEV13ATEX0159U

**CCC**
Approval ID: 2020322313000631

**EAC Ex**
Approval ID: KZ 7500525010101950

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27250102 |
| ECLASS-15.0 | 27250102 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC000897 |

### UNSPSC

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

## 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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