

# PT 16 N-PE - Protective conductor terminal block



3212147

<https://www.phoenixcontact.com/gb/products/3212147>

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Protective conductor terminal block, number of connections: 2, connection method: Push-in connection, Rated cross section: 16 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 25 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: green-yellow

## 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
- Tested for railway applications

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3212147       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE2221        |
| Product key                          | BE2221        |
| GTIN                                 | 4046356494847 |
| Weight per piece (including packing) | 42.958 g      |
| Weight per piece (excluding packing) | 42.958 g      |
| Customs tariff number                | 85369010      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Product type          | Ground terminal block |
| Product family        | PT                    |
| Area of application   | Railway industry      |
|                       | Machine building      |
|                       | Plant engineering     |
| Number of connections | 2                     |
| Number of rows        | 1                     |

### Insulation characteristics

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

### Electrical properties

|   |      |
|---|------|
| Rated surge voltage                             | 8 kV |
| Maximum power dissipation for nominal condition | 0 W  |

### Connection data

|   |  |
|---|--|
| Number of connections per level                                   | 2  |
| Nominal cross section   | 16 mm <sup>2</sup>   |
| Connection method   | Push-in connection   |
| Note  | Please observe the current carrying capacity of the DIN rails. |
| Stripping length  | 18 mm ... 20 mm  |
| Internal cylindrical gage   | A7   |
| Connection in acc. with standard                                  | IEC 60947-7-2  |
| Conductor cross section rigid                                     | 0.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>                     |
| Cross section AWG   | 20 ... 4 (converted acc. to IEC)                               |
| Conductor cross section flexible                                  | 0.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>                     |
| Conductor cross section, flexible [AWG]                           | 20 ... 4 (converted acc. to IEC)                               |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>                     |
| Flexible conductor cross section (ferrule with plastic sleeve)    | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>                     |
| Nominal cross section   | 16 mm <sup>2</sup>   |

### Connection cross sections directly pluggable

|   |  |
|---|--|
| Conductor cross section rigid                                     | 2.5 mm <sup>2</sup> ... 25 mm <sup>2</sup> |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 2.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Flexible conductor cross section (ferrule with plastic sleeve)    | 2.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |

### Ex data

#### Rated data (ATEX/IECEX)

|                                 |                        |
|---------------------------------|------------------------|
| Identification                  | ⊕ II 2 GD Ex eb IIC Gb |
| Operating temperature range (1) | -60 °C ... 85 °C       |

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|                                 |                       |
|---------------------------------|-----------------------|
| Operating temperature range (2) | -40 °C ... 110 °C     |
| Ex-certified accessories        | 3212060 D-PT 16 N     |
|                                 | 1206612 SZF 3-1,0X5,5 |
|                                 | 3022276 CLIPFIX 35-5  |
|                                 | 3022218 CLIPFIX 35    |
| output                          | (Permanent)           |

## Ex connection data General

|                              |  |
|------------------------------|--|
| Nominal cross section        | 16 mm <sup>2</sup>                         |
| Rated cross section AWG      | 6  |
| Connection capacity rigid    | 0.5 mm <sup>2</sup> ... 25 mm <sup>2</sup> |
| Connection capacity AWG      | 20 ... 4                                   |
| Connection capacity flexible | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Connection capacity AWG      | 20 ... 6                                   |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 12.2 mm |
| End cover width    | 2.2 mm  |
| Height             | 75.4 mm |
| Depth on NS 35/7,5 | 52.6 mm |
| Depth on NS 35/15  | 60.1 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       |
| 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

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## Oscillation/broadband noise

|                        |  |
|------------------------|--|
| Specification          | DIN EN 50155 (VDE 0115-200):2018-05            |
| Spectrum               | Long 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                              |

## 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.)   |

## 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/gb/products/3212147>


|  <b>CSA</b><br>Approval ID: 2030668 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| B  | -                     | -                     | 20 - 4            | -                    |
| C  | -                     | -                     | 20 - 4            | -                    |

|  <b>IECEE CB Scheme</b><br>Approval ID: DE1-63053 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine  | -                     | -                     | -                 | 0.5 - 16             |

|  <b>EAC</b><br>Approval ID: RU C-DE.BL08.B.00644 |  |  |  |  |
|---|--|--|--|--|
|---|--|--|--|--|

|  <b>cULus Recognized</b><br>Approval ID: E60425 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| B  | -                     | -                     | 20 - 4            | -                    |
| C  | -                     | -                     | 20 - 4            | -                    |

|  <b>LR</b><br>Approval ID: LR2371832TA |  |  |  |  |
|---|--|--|--|--|
|---|--|--|--|--|

|  <b>VDE Zeichengenehmigung</b><br>Approval ID: 40040916 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine  | -                     | -                     | -                 | 0.5 - 16             |

|  <b>PRS</b><br>Approval ID: TE/2107/880590/21 |  |  |  |  |
|--|--|--|--|--|
|--|--|--|--|--|

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## DNV

Approval ID: TAE000010T



## cUL Recognized

Approval ID: E192998

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | -                     | -                     | 20 - 4            | -                           |



## EAC Ex

Approval ID: RU C-DE.AB72.B.02351



## IECEx

Approval ID: IECEx SEV13.0005U



## UL Recognized

Approval ID: E192998

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | -                     | -                     | 20 - 4            | -                           |



## ATEX

Approval ID: SEV13ATEX0159U



## CCC

Approval ID: 2020322313000631



## EAC Ex

Approval ID: KZ 7500525010101950

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250103 |
| ECLASS-15.0 | 27250103 |

### 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% |
|-------------------------------------|----------------------------|

### EF3.0 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.279 kg CO2e |
|---------|---------------|

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