

# PTTB 1,5/S-PE/L - Protective conductor double-level terminal block

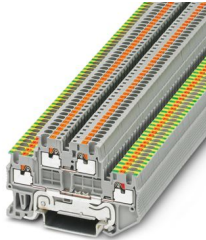


3208553

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Protective conductor double-level terminal block, nom. voltage: 500 V, nominal current: 16 A, connection method: Push-in connection, 1st and 2nd level, Rated cross section: 1.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 1.5 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: gray

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## 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

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## Technical data

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Product type          | Ground terminal block |
| 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 | 0.56 W |

### Connection data

|                                 |                     |
|---------------------------------|---------------------|
| Grounding foot                  | Yes                 |
| Number of connections per level | 2                   |
| Nominal cross section           | 1.5 mm <sup>2</sup> |

### 1st and 2nd level

|                                                                   |                                                                                                            |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Note                                                              | Please observe the current carrying capacity of the DIN rails.                                             |
| Stripping length                                                  | 8 mm ... 10 mm                                                                                             |
| Internal cylindrical gage                                         | A1 / B1                                                                                                    |
| Connection in acc. with standard                                  | IEC 60947-7-1/IEC 60947-7-2                                                                                |
| Conductor cross section rigid                                     | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                                               |
| Cross section AWG                                                 | 26 ... 16 (converted acc. to IEC)                                                                          |
| Conductor cross section flexible                                  | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                                               |
| Conductor cross section, flexible [AWG]                           | 26 ... 16 (converted acc. to IEC)                                                                          |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                                               |
| Flexible conductor cross section (ferrule with plastic sleeve)    | 0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup> Using the AI-S 1-8 TQ ferrule, Item No. 1200293, is recommended |
| Nominal current                                                   | 16 A                                                                                                       |
| Maximum load current                                              | 16 A                                                                                                       |
| Nominal voltage                                                   | 500 V                                                                                                      |
| Nominal cross section                                             | 1.5 mm <sup>2</sup>                                                                                        |

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

|                                                                   |                                              |
|-------------------------------------------------------------------|----------------------------------------------|
| Conductor cross section rigid                                     | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Flexible conductor cross section (ferrule with plastic sleeve)    | 0.34 mm <sup>2</sup> ... 1 mm <sup>2</sup>   |

### Dimensions

|       |        |
|-------|--------|
| Width | 3.5 mm |
|-------|--------|

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|                    |         |
|--------------------|---------|
| End cover width    | 2.2 mm  |
| Height             | 65.4 mm |
| Depth              | 41.1 mm |
| Depth on NS 35/7,5 | 42.6 mm |
| Depth on NS 35/15  | 50.1 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)) | 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      |

## Electrical tests

### Surge voltage test

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 7.3 kV      |
| Result                | Test passed |

### Temperature-rise test

|                                                  |                                     |
|--------------------------------------------------|-------------------------------------|
| Requirement temperature-rise test                | Increase in temperature $\leq 45$ K |
| Result                                           | Test passed                         |
| Short-time withstand current 1.5 mm <sup>2</sup> | 0.18 kA                             |
| Result                                           | Test passed                         |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 1.89 kV     |
| Result                | Test passed |

## Mechanical properties

### Mechanical data

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

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## 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 | 0.14 mm <sup>2</sup> / 0.2 kg |
|                                | 1.5 mm <sup>2</sup> / 0.4 kg  |
| Result                         | Test passed                   |

## Environmental and real-life conditions

### Aging

|                    |             |
|--------------------|-------------|
| Temperature cycles | 192         |
| Result             | Test passed |

### 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              | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| ASD level              | 11.83 (m/s <sup>2</sup> ) <sup>2</sup> /Hz     |
| Acceleration           | 4.25g                                          |
| 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                         |

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## 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/IEC 60947-7-2 |
|----------------------------------|-----------------------------|

## Mounting

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

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