

# PTMC 1,5-2 /VT - Marshalling patchboard



3270435

<https://www.phoenixcontact.com/us/products/3270435>

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Marshalling patchboard, nom. voltage: 500 V, nominal current: 17.5 A, connection method: Push-in connection, cross section: 0.14 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, mounting: for snapping onto a DIN rail adapter, for snapping onto a cover flange, color: gray, color of connection elements: violet

## Your advantages

- Tool-free wiring in a confined space thanks to compact size
- Individual setup thanks to modular principle
- Suitable for DIN rail mounting and panel cutouts with corresponding accessories
- High contact quality thanks to push-in technology as a replacement for Wire-Wrap®, TERMI-POINT®, etc.
- Individual color assignment of cable and terminal point to ensure error-free, safe operation
- Color configuration possible according to VDE 0812, VDE 0815, DIN 47100 or unlimited.

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3270435       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | BE62          |
| Product key                          | BE6212        |
| GTIN                                 | 4055626114194 |
| Weight per piece (including packing) | 3.13 g        |
| Weight per piece (excluding packing) | 3.13 g        |
| Customs tariff number                | 85369010      |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                       |                      |
|-----------------------|----------------------|
| Product type          | Marshalling terminal |
| Number of positions   | 1                    |
| Number of connections | 4                    |
| Number of rows        | 1                    |

### 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

|                                                                   |                                                                                                                                                                  |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of connections per level                                   | 4                                                                                                                                                                |
| Nominal cross section                                             | 1.5 mm <sup>2</sup>                                                                                                                                              |
| Rated cross section AWG                                           | 14                                                                                                                                                               |
| Connection method                                                 | Push-in connection                                                                                                                                               |
| Stripping length                                                  | 8 mm ... 10 mm                                                                                                                                                   |
| Internal cylindrical gage                                         | A1                                                                                                                                                               |
| Connection in acc. with standard                                  | IEC 60947-7-1                                                                                                                                                    |
| Conductor cross-section rigid                                     | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                                                                                                     |
| Cross section AWG                                                 | 26 ... 14 (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> ... 1.5 mm <sup>2</sup>                                                                                                                     |
| Nominal current                                                   | 17.5 A                                                                                                                                                           |
| Maximum load current                                              | 24 A (in case of a 2.5 mm <sup>2</sup> conductor cross-section, the maximum load current must not be exceeded by the total current of all connected conductors.) |
| Nominal voltage                                                   | 500 V                                                                                                                                                            |

### Connection cross sections directly pluggable

|                                                                   |                                              |
|-------------------------------------------------------------------|----------------------------------------------|
| Conductor cross-section rigid                                     | 0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross-section, rigid [AWG]                              | 20 ... 14 (converted acc. to IEC)            |
| 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> ... 1.5 mm <sup>2</sup> |

### Dimensions

|        |        |
|--------|--------|
| Width  | 11 mm  |
| Height | 8.6 mm |

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|       |       |
|-------|-------|
| Depth | 30 mm |
|-------|-------|

## Material specifications

|                                                                         |                 |
|-------------------------------------------------------------------------|-----------------|
| Color                                                                   | gray (RAL 7042) |
| Color of connection elements                                            | violet          |
| 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)) | 125 °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)                        | 27,5 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                             |
| Short-time withstand current 2.5 mm <sup>2</sup> | 0.3 kA                              |
| Result                                           | Test passed                         |

### Power-frequency withstand voltage

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

## Mechanical properties

### Mechanical data

|                 |    |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

## Mechanical tests

### Mechanical strength

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

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## 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  |
|                                | 2.5 mm <sup>2</sup> / 0.7 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               | Long life test category 1, class B, body mounted |
| Frequency              | $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$   |
| ASD level              | 0.964 (m/s <sup>2</sup> ) <sup>2</sup> /Hz       |
| Acceleration           | 0.58g                                            |
| 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                   | 5g                                  |
| Shock duration                 | 30 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 ... 105 °C (max. short-term operating temperature RTI Elec.)       |
| Ambient temperature (storage/transport) | -25 °C ... 60 °C (for a short time, not exceeding 24 h, -60 °C to +70 °C) |

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|                                          |                 |
|------------------------------------------|-----------------|
| Ambient temperature (assembly)           | -5 °C ... 70 °C |
| Ambient temperature (actuation)          | -5 °C ... 70 °C |
| Permissible humidity (storage/transport) | 30 % ... 70 %   |

## Standards and regulations

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

## Mounting

|               |                                      |
|---------------|--------------------------------------|
| Mounting type | for snapping onto a DIN rail adapter |
|               | for snapping onto a cover flange     |

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## Drawings

### Circuit diagram



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## Approvals

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|  <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                    | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                  | 300 V                 | 10 A                  | 24 - 16           | -                           |
| C                                                                                                                  | 300 V                 | 10 A                  | 24 - 16           | -                           |
| D                                                                                                                  | 300 V                 | 10 A                  | 24 - 16           | -                           |

|  <b>EAC</b><br>Approval ID: RU C-DE.BL08.B.00682 |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|  <b>cULus Recognized</b><br>Approval ID: E60425 |                       |                       |                   |                             |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                    | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                  | 300 V                 | 10 A                  | 24 - 16           | -                           |
| C                                                                                                                                  | 300 V                 | 10 A                  | 24 - 16           | -                           |

|  <b>EAC</b><br>Approval ID: KZ7500651131219505 |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250106 |
| ECLASS-15.0 | 27250106 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000897 |
|----------|----------|

### 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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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)