

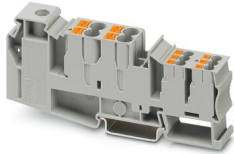
# PTU 35/4X6/6X2,5 - Potential collective terminal



3214080

<https://www.phoenixcontact.com/gb/products/3214080>

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Potential collective terminal, nom. voltage: 1000 V, nominal current: 105 A, number of connections: 11, connection method: Screw connection, 1st level connection left, cross section: 1.5 mm<sup>2</sup> - 50 mm<sup>2</sup>, Push-in connection, First level connection, interior, Rated cross section: 6 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 10 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- The terminal block base is ideal for use in building installation and machine building applications
- The compact design and front connection enable wiring in a confined space
- In addition to the testing facility in the double function shaft, all terminal blocks provide an additional test connection
- 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

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## Technical data

### Notes

|         |   |
|---------|---|
| General | In the end application, the applicable safety regulations for overload and short-circuit protection on the connected conductors must be considered. |
|---------|---|

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Product type          | Potential distributor |
| Number of connections | 11                    |
| Number of rows        | 1                     |
| Potentials            | 1                     |

### Insulation characteristics

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

### Electrical properties

|   |        |
|---|--------|
| Rated surge voltage                             | 8 kV   |
| Maximum power dissipation for nominal condition | 4.06 W |

### Connection data

|                                 |     |
|---------------------------------|-----|
| Service Entrance                | yes |
| Number of connections per level | 11  |

#### 1st level connection left

|   |   |
|---|---|
| Screw thread  | M6  |
| Tightening torque   | 3.2 ... 3.7 Nm  |
| Stripping length  | 18 mm   |
| Internal cylindrical gage   | B9  |
| Connection in acc. with standard  | IEC 60947-7-1   |
| Conductor cross section rigid   | 1.5 mm <sup>2</sup> ... 50 mm <sup>2</sup>  |
| Cross section AWG   | 14 ... 2 (converted acc. to IEC)  |
| Conductor cross section flexible  | 1.5 mm <sup>2</sup> ... 50 mm <sup>2</sup>  |
| Conductor cross section, flexible [AWG]   | 14 ... 2 (converted acc. to IEC)  |
| Conductor cross-section flexible (ferrule without plastic sleeve)                   | 1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>  |
| Flexible conductor cross section (ferrule with plastic sleeve)                      | 1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>  |
| 2 conductors with same cross section, solid   | 1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>  |
| 2 conductors with the same cross-section AWG rigid                                  | 16 ... 6 (converted acc. to IEC)  |
| 2 conductors with same cross section, flexible                                      | 1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>  |
| 2 conductors with the same cross-section AWG flexible                               | 16 ... 8 (converted acc. to IEC)  |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>  |
| Nominal current   | 105 A   |
| Maximum load current  | 105 A (The maximum load current must not be exceeded by the total current of all connected conductors.) |

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|                 |        |
|-----------------|--------|
| Nominal voltage | 1000 V |
|-----------------|--------|

## First level connection, interior

|   |   |
|---|---|
| Stripping length  | 12 mm                                       |
| Connection in acc. with standard  | IEC 60947-7-1                               |
| Conductor cross section rigid   | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>  |
| Cross section AWG   | 20 ... 8 (converted acc. to IEC)            |
| Conductor cross section flexible  | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| Conductor cross section, flexible [AWG]   | 20 ... 10 (converted acc. to IEC)           |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| Flexible conductor cross section (ferrule with plastic sleeve)                            | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Nominal current   | 41 A  |
| Maximum load current  | 41 A  |
| Nominal voltage   | 1000 V                                      |
| Nominal cross section   | 6 mm <sup>2</sup>                           |

## 1st level connection right

|   |  |
|---|--|
| Stripping length  | 8 mm ... 10 mm                               |
| Connection in acc. with standard  | IEC 60947-7-1                                |
| 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> ... 2.5 mm <sup>2</sup> |
| Conductor cross section, flexible [AWG]   | 26 ... 14 (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> |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| Nominal current   | 24 A   |
| Maximum load current  | 24 A   |
| Nominal voltage   | 1000 V                                       |
| Nominal cross section   | 2.5 mm <sup>2</sup>                          |

## First level connection, interior Connection cross sections directly pluggable

|   |  |
|---|--|
| Conductor cross section rigid                                     | 1 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| Conductor cross section, rigid [AWG]                              | 18 ... 8 (converted acc. to IEC)         |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Flexible conductor cross section (ferrule with plastic sleeve)    | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |

## 1st level connection right Connection cross sections directly pluggable

|   |  |
|---|--|
| Conductor cross section rigid                                     | 0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Flexible conductor cross section (ferrule with plastic sleeve)    | 0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |

## Dimensions

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|                    |          |
|--------------------|----------|
| Width              | 16.3 mm  |
| Height             | 110.4 mm |
| Depth on NS 35/7,5 | 48.8 mm  |
| Depth on NS 35/15  | 56.3 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                           | 9.8 kV      |
| Result  | Test passed |
| Short-time withstand current 35 mm <sup>2</sup> | 3 kA        |
| Short-time withstand current 50 mm <sup>2</sup> | 4.8 kA      |
| Result  | Test passed |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 2.2 kV      |
| Result                | Test passed |

## Mechanical properties

### Mechanical data

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

## Mechanical tests

### Mechanical strength

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

### Attachment on the carrier

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|                         |             |
|-------------------------|-------------|
| DIN rail/fixing support | NS 35       |
| Test force setpoint     | 10 N        |
| Result                  | Test passed |

## Test for conductor damage and slackening

|                                |                              |
|--------------------------------|------------------------------|
| Rotation speed                 | 10 rpm                       |
| Revolutions                    | 135                          |
| Conductor cross section/weight | 1.5 mm <sup>2</sup> / 0.4 kg |
|                                | 35 mm <sup>2</sup> / 6.8 kg  |
|                                | 50 mm <sup>2</sup> / 9.5 kg  |
| Result                         | Test passed                  |

## Test for conductor damage and slackening

|                                |                              |
|--------------------------------|------------------------------|
| Rotation speed                 | 10 rpm                       |
| Revolutions                    | 135                          |
| Conductor cross section/weight | 0.5 mm <sup>2</sup> / 0.3 kg |
|                                | 6 mm <sup>2</sup> / 1.4 kg   |
|                                | 10 mm <sup>2</sup> / 2 kg    |
| 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 |
|                                | 2.5 mm <sup>2</sup> / 0.7 kg  |
|                                | 4 mm <sup>2</sup> / 0.9 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              | 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                              |
| Result                 | Test passed                                    |

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## 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 (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 (storage/transport) | 30 % ... 70 %   |

## Standards and regulations

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

## Mounting

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

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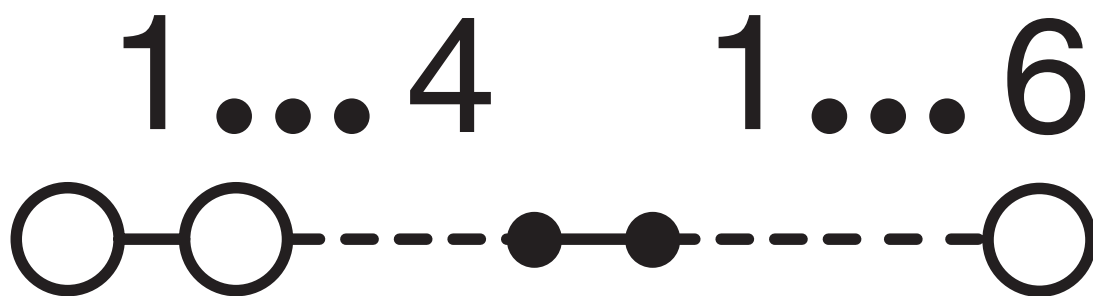


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## Drawings

### Circuit diagram



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