

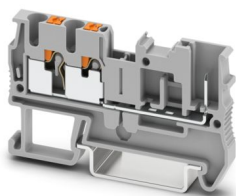
# PT 2,5-TWIN/1P - Feed-through terminal block



3209633

<https://www.phoenixcontact.com/us/products/3209633>

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Feed-through terminal block, nom. voltage: 500 V, nominal current: 24 A, number of connections: 3, number of positions: 1, connection method: Push-in / plug connection, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- 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
- The compact design and front connection enable wiring in a confined space
- 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                          | 3209633       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE22          |
| Product key                          | BE2241        |
| GTIN                                 | 4046356333382 |
| Weight per piece (including packing) | 7.684 g       |
| Weight per piece (excluding packing) | 7.2 g         |
| Customs tariff number                | 85369010      |
| Country of origin                    | DE            |

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## Technical data

### Notes

|         |                                                                                                                                                      |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| General | The max. load current must not be exceeded by the total current of all connected conductors.<br>Current and voltage are determined by the plug used. |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------|

### Product properties

|                       |                        |
|-----------------------|------------------------|
| Product type          | Plug-in terminal block |
| Product family        | PT                     |
| Area of application   | Railway industry       |
|                       | Machine building       |
|                       | Plant engineering      |
| Number of positions   | 1                      |
| Number of connections | 3                      |
| Number of rows        | 1                      |
| Potentials            | 1                      |

### Insulation characteristics

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

### Electrical properties

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

### Connection data

|                                                                                           |                                              |
|-------------------------------------------------------------------------------------------|----------------------------------------------|
| Number of connections per level                                                           | 3                                            |
| Nominal cross section                                                                     | 2.5 mm <sup>2</sup>                          |
| Connection method                                                                         | Push-in / plug connection                    |
| Stripping length                                                                          | 8 mm ... 10 mm                               |
| Internal cylindrical gage                                                                 | A3                                           |
| Connection in acc. with standard                                                          | IEC 61984                                    |
| 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> ... 4 mm <sup>2</sup>   |
| Conductor cross-section, flexible [AWG]                                                   | 26 ... 12 (converted acc. to IEC)            |
| Conductor cross-section flexible ultrasound-compressed                                    | 0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross-section, flexible [AWG] ultrasound-compressed                             | 22 ... 12 (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>                          |
| Nominal cross section                                                                     | 2.5 mm <sup>2</sup>                          |
| Nominal current                                                                           | 24 A (observe derating)                      |

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|                      |                                                  |
|----------------------|--------------------------------------------------|
| Maximum load current | 24 A (with 4 mm² conductor cross-section, rigid) |
| Nominal voltage      | 500 V                                            |

## 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 |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 5.2 mm  |
| End cover width    | 2.2 mm  |
| Height             | 60.5 mm |
| Depth              | 35.3 mm |
| Depth on NS 35/7,5 | 36.8 mm |
| Depth on NS 35/15  | 44.3 mm |

## Material specifications

|                                                                         |                 |
|-------------------------------------------------------------------------|-----------------|
| Color                                                                   | gray (RAL 7042) |
| 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 |
| Short-time withstand current 2.5 mm² | 0.3 kA      |
| Short-time withstand current 4 mm²   | 0.48 kA     |
| Result                               | Test passed |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 3.31 kV     |
| Result                | Test passed |

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## Mechanical properties

### Mechanical data

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

## Mechanical tests

### Attachment on the carrier

|                         |             |
|-------------------------|-------------|
| DIN rail/fixing support | NS 35       |
| Test force setpoint     | 1 N         |
| Result                  | Test passed |

## Environmental and real-life conditions

### 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              | $1.857 \text{ (m/s}^2\text{)}^2\text{/Hz}$       |
| Acceleration           | 0.8g                                             |
| 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 ... 100 °C (max. operating temperature range including self-heating, see derating curve) |
| 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 %                                                                                   |

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## Standards and regulations

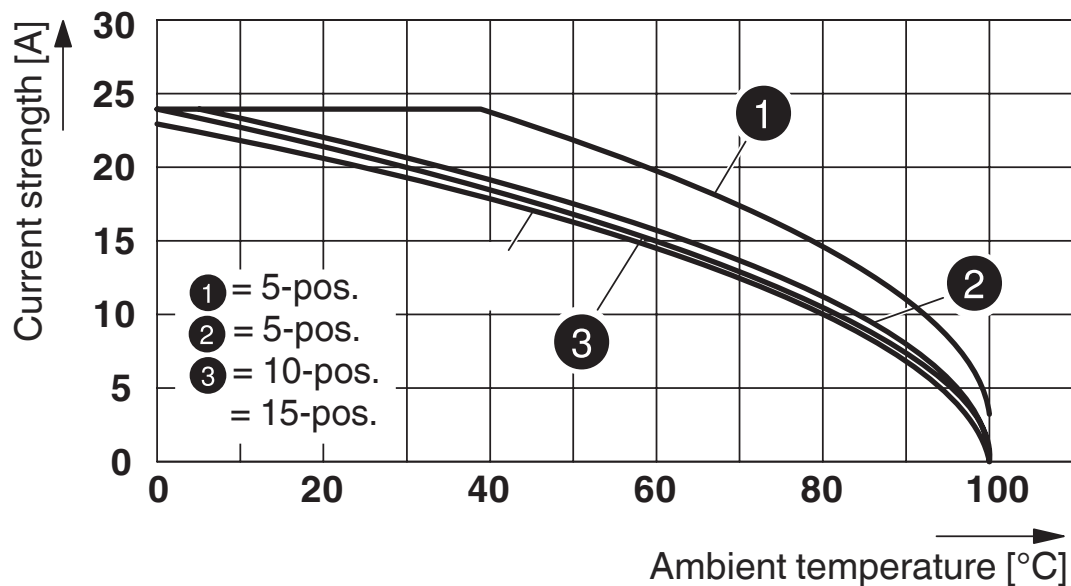
|                                  |           |
|----------------------------------|-----------|
| Connection in acc. with standard | IEC 61984 |
|----------------------------------|-----------|

## Mounting

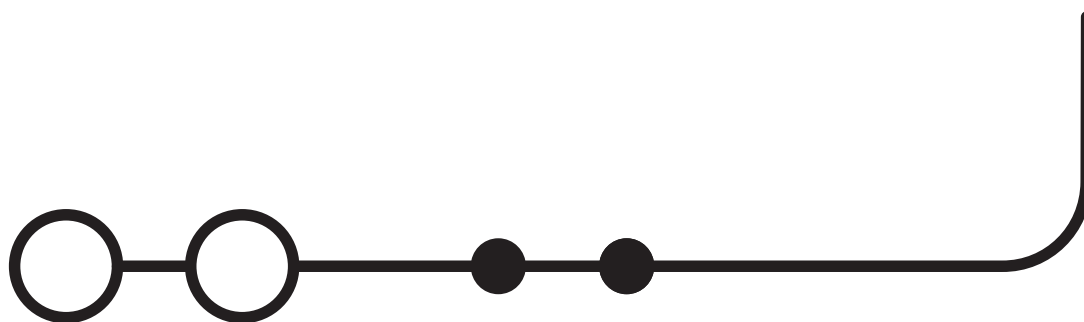
|               |           |
|---------------|-----------|
| Mounting type | NS 35/7,5 |
|               | NS 35/15  |

## Drawings

Diagram



Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3209633>

|  <b>CSA</b><br>Approval ID: 158887 |                       |                       |                   |                             |
|---------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                     | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                   | 300 V                 | 20 A                  | 26 - 12           | -                           |
| C                                                                                                                   |                       |                       |                   |                             |
|                                                                                                                     | 300 V                 | 20 A                  | 26 - 12           | -                           |

|                                                                                                                                   |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <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 $\text{mm}^2$ |
| B                                                                                                                                  | 600 V                 | 20 A                  | 26 - 12           | -                           |
| C                                                                                                                                  |                       |                       |                   |                             |
| F                                                                                                                                  | 600 V                 | 20 A                  | 26 - 12           | -                           |
|                                                                                                                                    | 500 V                 | 20 A                  | 26 - 12           | -                           |
| D                                                                                                                                  | 600 V                 | 5 A                   | 26 - 12           | -                           |
|                                                                                                                                    |                       |                       |                   |                             |

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

|                                                                                                                             |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>ClassNK</b><br>Approval ID: 14ME0912 |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|                                                                                                                           |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>BV</b><br>Approval ID: 25278/C1 BV |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250117 |
| ECLASS-15.0 | 27250117 |

### ETIM

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