

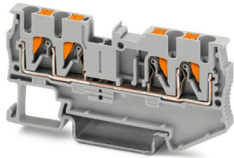
# PT 2,5-QUATTRO - Feed-through terminal block



3209578

<https://www.phoenixcontact.com/gb/products/3209578>

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Feed-through terminal block, nom. voltage: 800 V, nominal current: 24 A, number of connections: 4, connection method: Push-in 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

- Time-saving conductor connection thanks to tool-free direct-connection technology
- Convenient plugging with lower insertion force
- High conductor pull-out forces due to the spring design
- Vibration-resistant and maintenance-free conductor connection
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories
- Compact wiring of three conductors in a single terminal block
- Optimized for manual and automated wiring

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3209578       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE2213        |
| Product key                          | BE2213        |
| GTIN                                 | 4046356329859 |
| Weight per piece (including packing) | 10.539 g      |
| Weight per piece (excluding packing) | 9.942 g       |
| Customs tariff number                | 85369010      |
| Country of origin                    | DE            |

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## Technical data

### Notes

#### General

|      |  |
|------|--|
| Note | The max. load current must not be exceeded by the total current of all connected conductors. |
|------|--|

### Product properties

|                       |                                |
|-----------------------|--------------------------------|
| Product type          | Multi-conductor terminal block |
| Product family        | PT                             |
| Area of application   | Railway industry               |
|                       | Machine building               |
|                       | Plant engineering              |
|                       | Process industry               |
| Number of connections | 4                              |
| 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 | 0.77 W |

### Connection data

|   |  |
|---|--|
| Number of connections per level   | 4  |
| Nominal cross section   | 2.5 mm <sup>2</sup>                          |
| Connection method   | Push-in connection                           |
| Stripping length  | 8 mm ... 10 mm                               |
| Internal cylindrical gage   | A3   |
|   | B2   |
| 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> ... 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>                          |

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|                       |  |
|-----------------------|--|
| Nominal cross section | 2.5 mm <sup>2</sup>  |
| Nominal current       | 24 A   |
| Maximum load current  | 28 A (with 4 mm <sup>2</sup> conductor cross-section, rigid) |
| Nominal voltage       | 800 V  |

## 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) | 0.5 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> |

## Ex data

### Rated data (ATEX/IECEx)

|  |  |
|--|--|
| Identification                                     | ⊕ II 2 G Ex eb IIC Gb  |
| Operating temperature range (1)                    | -60 °C ... 85 °C   |
| Operating temperature range (2)                    | -40 °C ... 110 °C  |
| Ex-certified accessories                           | 3030514 D-ST 2,5-QUATTRO<br>3030815 ATP-ST QUATTRO<br>3036602 DS-ST 2,5<br>1204517 SZF 1-0,6X3,5<br>3022276 CLIPFIX 35-5<br>3022218 CLIPFIX 35   |
| List of bridges                                    | Plug-in bridge / FBS 2-5 / 3030161<br>Plug-in bridge / FBS 3-5 / 3030174<br>Plug-in bridge / FBS 4-5 / 3030187<br>Plug-in bridge / FBS 5-5 / 3030190<br>Plug-in bridge / FBS 10-5 / 3030213<br>Plug-in bridge / FBS 20-5 / 3030226 |
| Bridge data  | 19 A (2.5 mm <sup>2</sup> )  |
| Ex temperature increase                            | 40 K (19 A / 2.5 mm <sup>2</sup> )   |
| for bridging with bridge                           | 550 V  |
| - At bridging between non-adjacent terminal blocks | 352 V  |
| - At cut-to-length bridging                        | 220 V  |
| - At cut-to-length bridging with cover             | 275 V  |
| - At cut-to-length bridging with partition plate   | 550 V  |
| Rated insulation voltage                           | 500 V  |
| output   | (Permanent)  |

### Ex level General

|                      |         |
|----------------------|---------|
| Rated voltage        | 550 V   |
| Rated current        | 19 A    |
| Maximum load current | 23 A    |
| Contact resistance   | 1.14 mΩ |

### Ex connection data General

|                       |                     |
|-----------------------|---------------------|
| Nominal cross section | 2.5 mm <sup>2</sup> |
|-----------------------|---------------------|

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|                              |  |
|------------------------------|--|
| Rated cross section AWG      | 14   |
| Connection capacity rigid    | 0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Connection capacity AWG      | 26 ... 12                                    |
| Connection capacity flexible | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Connection capacity AWG      | 26 ... 14                                    |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 5.2 mm  |
| End cover width    | 2.2 mm  |
| Height             | 72.2 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          |
| 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     |
| 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 |

### Temperature-rise test

|  |                                |
|--|--------------------------------|
| Requirement temperature-rise test                | Increase in temperature ≤ 45 K |
| Result   | Test passed                    |
| Short-time withstand current 2.5 mm <sup>2</sup> | 0.3 kA                         |
| Result   | Test passed                    |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 2 kV        |
| Result                | Test passed |

## Mechanical properties

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## Mechanical data

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

## 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 (+/- 2) 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):2022-06            |
| 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                              |
| Result                 | Test passed                                    |

### Shocks

|                                |                                     |
|--------------------------------|-------------------------------------|
| Specification                  | DIN EN 50155 (VDE 0115-200):2018-05 |
| Pulse shape                    | Half-sine                           |
| Acceleration                   | 30g                                 |
| Shock duration                 | 18 ms                               |
| Number of shocks per direction | 3                                   |

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|                 |                                   |
|-----------------|-----------------------------------|
| Test directions | X-, Y- and Z-axis (pos. and neg.) |
| Result          | Test passed                       |

## 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 |
|----------------------------------|---------------|

## Mounting

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

# PT 2,5-QUATTRO - Feed-through terminal block



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## Drawings

Circuit diagram



# PT 2,5-QUATTRO - Feed-through terminal block



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/3209578>

|  <b>CSA</b><br>Approval ID: 158887 |                       |                       |                   |                      |
|---|-----------------------|-----------------------|-------------------|----------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| B   | 600 V                 | 20 A                  | 26 - 12           | -                    |
| C   | 600 V                 | 20 A                  | 26 - 12           | -                    |

|  <b>IECEE CB Scheme</b><br>Approval ID: DE1-66980 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine  | 800 V                 | 24 A                  | -                 | 0.2 - 2.5            |

|  <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  | 600 V                 | 20 A                  | 26 - 12           | -                    |
| C  | 600 V                 | 20 A                  | 26 - 12           | -                    |
| F  | 800 V                 | 20 A                  | 26 - 12           | -                    |

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

|  <b>NK</b><br>Approval ID: 22ME0007 |  |  |  |  |
|--|--|--|--|--|
|--|--|--|--|--|

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

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|  <b>VDE Zeichengenehmigung</b><br>Approval ID: 40032222 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine  |                       |                       |                   |                      |
|  | 800 V                 | 24 A                  | -                 | 0.2 - 2.5            |

| <b>ABS</b><br>Approval ID: 21-2192245-PDA |  |  |  |  |
|---|--|--|--|--|
|---|--|--|--|--|

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

| <b>DNV</b><br>Approval ID: TAE000010T |  |  |  |  |
|---------------------------------------|--|--|--|--|
|---------------------------------------|--|--|--|--|

|  <b>cUL Recognized</b><br>Approval ID: E192998 |                       |                       |                   |                      |
|---|-----------------------|-----------------------|-------------------|----------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine   |                       |                       |                   |                      |
|   | 550 V                 | 20 A                  | 26 - 12           | -                    |

|  <b>EAC Ex</b><br>Approval ID: RU C-DE.AB72.B.02351 |  |  |  |  |
|--|--|--|--|--|
|--|--|--|--|--|

|  <b>IEC Ex</b><br>Approval ID: IECExPTB10.0021U |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine  |                       |                       |                   |                      |
| Only flexible conductors   | 550 V                 | 19 A                  | -                 | 0.14 - 2.5           |
| Only rigid conductors  | 550 V                 | 23 A                  | -                 | 0.14 - 4             |


|  <b>UL Recognized</b><br>Approval ID: E192998 |                       |                       |                   |                      |
|--|-----------------------|-----------------------|-------------------|----------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
| keine  |                       |                       |                   |                      |
|  | 550 V                 | 20 A                  | 26 - 12           | -                    |

# PT 2,5-QUATTRO - Feed-through terminal block





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|  <b>ATEX</b><br>Approval ID: PTB09ATEX1111U |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine  |                       |                       |                   |                             |
| Only flexible conductors   | 550 V                 | 19 A                  | -                 | 0.14 - 2.5                  |
| Only rigid conductors  | 550 V                 | 23 A                  | -                 | 0.14 - 4                    |

|  <b>CCC</b><br>Approval ID: 2020322313000631 |  |  |  |  |
|---|--|--|--|--|
|---|--|--|--|--|

|  <b>UKCA-EX</b><br>Approval ID: CSAFE 22UKEX1096U |  |  |  |  |
|--|--|--|--|--|
|--|--|--|--|--|

|  <b>EAC Ex</b><br>Approval ID: KZ 7500525010101950 |  |  |  |  |
|---|--|--|--|--|
|---|--|--|--|--|

# PT 2,5-QUATTRO - Feed-through terminal block



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250101 |
| ECLASS-15.0 | 27250101 |

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

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.062 kg CO2e |
|---------|---------------|

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