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Feed-through terminal block, nom. voltage: 800 V, nominal current: 17.5 A, number of connections: 3, connection method: Quick connection, Rated cross section: 1.5 mm<sup>2</sup>, 1 level, cross section: 0.25 mm<sup>2</sup> - 1.5 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/7,5, color: gray

Your advantages

- Compact design
- Tested for railway applications

Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3205048       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE03          |
| Product key                          | BE3112        |
| GTIN                                 | 4017918932442 |
| Weight per piece (including packing) | 11.392 g      |
| Weight per piece (excluding packing) | 11.392 g      |
| Customs tariff number                | 85369010      |
| Country of origin                    | CN            |

# QTC 1,5-TWIN - Feed-through terminal block



3205048

<https://www.phoenixcontact.com/us/products/3205048>

## Technical data

### Product properties

|                       |                                |
|-----------------------|--------------------------------|
| Product type          | Multi-conductor terminal block |
| Product family        | QTC                            |
| Area of application   | Railway industry               |
|                       | Machine building               |
|                       | Plant engineering              |
|                       | Process industry               |
| Number of connections | 3                              |
| 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 | 0.56 W |

### Connection data

|                                                      |                     |
|------------------------------------------------------|---------------------|
| Number of connections per level                      | 3                   |
| Frequency of connections with the same cross section | 100                 |
| Nominal cross section                                | 1.5 mm <sup>2</sup> |

#### 1 level

|                                         |                                                                                                                                                                    |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection method                       | Quick connection                                                                                                                                                   |
| Material wire insulation                | PVC / PE                                                                                                                                                           |
| Connection in acc. with standard        | IEC 60947-7-1                                                                                                                                                      |
| Conductor cross-section rigid           | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                                                                                                       |
| Cross section AWG                       | 24 ... 16 (converted acc. to IEC)                                                                                                                                  |
| Conductor cross-section flexible        | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                                                                                                       |
| Conductor cross-section, flexible [AWG] | 24 ... 16 (converted acc. to IEC)                                                                                                                                  |
| Cross section, sensor conductors        | 0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>                                                                                                                      |
| Nominal current                         | 17.5 A (with 1.5 mm <sup>2</sup> conductor cross-section)                                                                                                          |
| Maximum load current                    | 17.5 A (in case of a 1.5 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                         | 800 V                                                                                                                                                              |
| Nominal cross section                   | 1.5 mm <sup>2</sup>                                                                                                                                                |

### Ex data

#### Rated data (ATEX/IECEx)

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|                                                    |                                                                                                                                                                                                                                    |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Identification                                     | Ex II 2 GD Ex eb IIC Gb                                                                                                                                                                                                            |
| Operating temperature range                        | -45 °C ... 90 °C                                                                                                                                                                                                                   |
| Ex-certified accessories                           | 3205190 D-QTC 1,5-TWIN<br>3206212 ATP-QTC TWIN<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                                        | 16.5 A (1.5 mm²)                                                                                                                                                                                                                   |
| Ex temperature increase                            | 40 K (20.4 A / 1.5 mm²)                                                                                                                                                                                                            |
| for bridging with bridge                           | 550 V                                                                                                                                                                                                                              |
| - At bridging between non-adjacent terminal blocks | 352 V                                                                                                                                                                                                                              |
| - At cut-to-length bridging with cover             | 220 V                                                                                                                                                                                                                              |
| - At cut-to-length bridging with partition plate   | 275 V                                                                                                                                                                                                                              |
| Rated insulation voltage                           | 500 V                                                                                                                                                                                                                              |
| output                                             | (Permanent)                                                                                                                                                                                                                        |

## Ex level General

|                      |        |
|----------------------|--------|
| Rated voltage        | 550 V  |
| Rated current        | 18.5 A |
| Maximum load current | 18.5 A |
| Contact resistance   | 1.1 mΩ |

## Ex connection data General

|                                                      |                      |
|------------------------------------------------------|----------------------|
| Nominal cross section                                | 1.5 mm²              |
| Rated cross section AWG                              | 16                   |
| Connection capacity rigid                            | 0.25 mm² ... 1.5 mm² |
| Connection capacity AWG                              | 24 ... 16            |
| Connection capacity flexible                         | 0.25 mm² ... 1.5 mm² |
| Connection capacity AWG                              | 24 ... 16            |
| Frequency of connections with the same cross section | 100                  |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 5.2 mm  |
| End cover width    | 2.2 mm  |
| Height             | 76.4 mm |
| Depth on NS 35/7,5 | 39.3 mm |
| Depth on NS 35/15  | 46.8 mm |

## Material specifications

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|                                                                         |                 |
|-------------------------------------------------------------------------|-----------------|
| 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)) | 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          |

## Cable/line

|                                |      |
|--------------------------------|------|
| Wire diameter incl. insulation | 3 mm |
|--------------------------------|------|

## Electrical tests

### Surge voltage test

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 9.8 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 | 2 kV        |
| Result                | Test passed |

## Mechanical properties

### Mechanical data

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

## Mechanical tests

### Mechanical strength

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

### Attachment on the carrier

|                         |       |
|-------------------------|-------|
| DIN rail/fixing support | NS 35 |
|-------------------------|-------|

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|                     |             |
|---------------------|-------------|
| Test force setpoint | 1 N         |
| Result              | Test passed |

## Test for conductor damage and slackening

|                                |                                                              |
|--------------------------------|--------------------------------------------------------------|
| Rotation speed                 | 10 rpm                                                       |
| Revolutions                    | 135                                                          |
| Conductor cross-section/weight | 0.2 mm <sup>2</sup> / 0.2 kg<br>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 |

### 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<br>NS 35/7,5 |
|---------------|------------------------|

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## Drawings

Circuit diagram



# QTC 1,5-TWIN - Feed-through terminal block

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3205048>

|  <b>CSA</b><br>Approval ID: 2030668 |                       |                       |                   |                             |
|----------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                      | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                    | 600 V                 | 10 A                  | 24 - 16           | -                           |
| C                                                                                                                    | 600 V                 | 10 A                  | 24 - 16           | -                           |

|                                                                                                                                   |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>EAC</b><br>Approval ID: RU C-DE.BL08.B.00539 |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|  <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                 | 10 A                  | 24 - 16           | -                           |
| C                                                                                                                                  | 600 V                 | 10 A                  | 24 - 16           | -                           |

|                                                                                                                         |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>NK</b><br>Approval ID: 09 ME 139 |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|                                           |  |  |  |  |
|-------------------------------------------|--|--|--|--|
| <b>ABS</b><br>Approval ID: 22-2196825-PDA |  |  |  |  |
|-------------------------------------------|--|--|--|--|

|                                       |  |  |  |  |
|---------------------------------------|--|--|--|--|
| <b>DNV</b><br>Approval ID: TAE000014H |  |  |  |  |
|---------------------------------------|--|--|--|--|

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

|  <b>IECEx</b><br>Approval ID: IECExKIWA19.0011U |                       |                       |                   |                             |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                    | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                              | 550 V                 | 18.5 A                | -                 | 0.25 - 1.5                  |

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|                                                                                                                                           |                                |                                |                   |                               |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
| <div> <b>ATEX</b><br/>Approval ID: KIWA19ATEX0019U</div> |                                |                                |                   |                               |
|                                                                                                                                           | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                                                                                                                                     |                                |                                |                   |                               |
| Type examination certificate                                                                                                              | 550 V                          | 18.5 A                         | -                 | 0.25 - 1.5                    |

|                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <b>CCC</b><br/>Approval ID: 2020322313000625</div> |
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| <div> <b>UKCA-EX</b><br/>Approval ID: CSAE 22UKEX1429U</div> |
|-----------------------------------------------------------------------------------------------------------------------------------------------|



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## Classifications

### ECLASS

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

### 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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