

QTCS 2,5-TWIN - Feed-through terminal block



3050332

<https://www.phoenixcontact.com/sg/products/3050332>

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Feed-through terminal block, nom. voltage: 800 V, nominal current: 24 A, 1 level, connection method: Quick connection, Rated cross section: 2.5 mm², cross section: 0.5 mm² - 2.5 mm², connection method: Spring-cage connection, Rated cross section: 2.5 mm², cross section: 0.08 mm² - 6 mm², mounting: NS 35/7,5, NS 35/15, color: gray

Your advantages

- The time-saving QUICKON fast connection is used on the control cabinet side
- The hybrid versions combine the advantages of the different connection technologies
- The spring-cage connection is used on the connection side

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 3050332 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Note | Made to order (non-returnable) |
| Sales key | 0170* |
| Product key | BE3112 |
| Catalog page | Page 265 (C-1-2019) |
| GTIN | 4046356056175 |
| Weight per piece (including packing) | 12.997 g |
| Weight per piece (excluding packing) | 12.997 g |
| Customs tariff number | 85369010 |
| Country of origin | CN |

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Technical data

Product properties

| | |
|-----------------------|-----------------------|
| Product type | Hybrid terminal block |
| Number of connections | 3 |
| Number of rows | 1 |
| Potentials | 1 |

Data management status

| | |
|------------------|----|
| Article revision | 04 |
|------------------|----|

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

| | |
|--|---------------------|
| Type of additional hybrid connection | ST 4 |
| Number of connections per level | 3 |
| Frequency of connections with the same cross section | 100 |
| Nominal cross section | 2.5 mm ² |

1 level

| | |
|---|---|
| Stripping length | 10 mm |
| Material wire insulation | PVC / PE |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross section rigid | 0.5 mm ² ... 2.5 mm ² |
| Cross section AWG | 20 ... 14 (converted acc. to IEC) |
| Conductor cross section flexible | 0.5 mm ² ... 2.5 mm ² |
| Conductor cross section, flexible [AWG] | 20 ... 14 (converted acc. to IEC) |
| Nominal current | 24 A |
| Maximum load current | 24 A (with a 2.5 mm ² conductor cross section) |
| Nominal voltage | 800 V |
| Nominal cross section | 2.5 mm ² |

Level 1 below 1

| | |
|---|--|
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross section rigid | 0.08 mm ² ... 6 mm ² |
| Cross section AWG | 28 ... 10 (converted acc. to IEC) |
| Conductor cross section flexible | 0.08 mm ² ... 4 mm ² |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.14 mm ² ... 4 mm ² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.14 mm ² ... 4 mm ² |

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| | |
|---|--|
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² ... 1 mm ² |
| Nominal current | 24 A |
| Maximum load current | 24 A (with 2.5 mm ² conductor connection cross section) |
| Nominal voltage | 800 V |
| Nominal cross section | 2.5 mm ² |

Ex data

Rated data (ATEX/IECEX)

| | |
|--|-------------------------------------|
| Identification | ⊕ II 2 GD Ex eb IIC Gb |
| Operating temperature range | -45 °C ... 90 °C |
| Ex-certified accessories | 3050523 D-QTCS 2,5 TWIN |
| | 3206212 ATP-QTC TWIN |
| | 1204517 SZF 1-0,6X3,5 |
| | 3022276 CLIPFIX 35-5 |
| | 3022218 CLIPFIX 35 |
| List of bridges | Plug-in bridge / FBS 2-6 / 3030336 |
| | Plug-in bridge / FBS 3-6 / 3030242 |
| | Plug-in bridge / FBS 4-6 / 3030255 |
| | Plug-in bridge / FBS 5-6 / 3030349 |
| | Plug-in bridge / FBS 10-6 / 3030271 |
| | Plug-in bridge / FBS 20-6 / 3030365 |
| Bridge data | 22.5 A / 2.5 mm ² |
| Ex temperature increase | 40 K (26 A / 2,5 mm ²) |
| Rated voltage | 550 V |
| 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 current | 23.5 A |
| Maximum load current | 23.5 A |
| Contact resistance | 0.93 mΩ |

Ex connection data Fast connection

| | |
|--|---|
| Nominal cross section | 2.5 mm ² |
| Rated cross section AWG | 14 |
| Connection capacity rigid | 0.5 mm ² ... 2.5 mm ² |
| Connection capacity AWG | 20 ... 14 |
| Connection capacity flexible | 0.5 mm ² ... 2.5 mm ² |
| Connection capacity AWG | 20 ... 14 |
| Frequency of connections with the same cross section | 100 |

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Ex connection data Spring-cage connection

| | |
|------------------------------|--|
| Stripping length | 10 mm |
| Nominal cross section | 2.5 mm ² |
| Rated cross section AWG | 14 |
| Connection capacity rigid | 0.08 mm ² ... 6 mm ² |
| Connection capacity AWG | 28 ... 10 |
| Connection capacity flexible | 0.08 mm ² ... 4 mm ² |
| Connection capacity AWG | 28 ... 12 |

Dimensions

| | |
|-----------------|--------|
| Width | 6.2 mm |
| End cover width | 2.2 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)) | 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 | 3.8 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 ≤ 45 K |
| Result | Test passed |
| Short-time withstand current 2.5 mm ² | 0.3 kA |
| Result | Test passed |

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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 |
| 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 ² / 0.2 kg |
| | 2.5 mm ² / 0.7 kg |
| | 6 mm ² / 1.4 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 ... 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) |
| 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 |
|----------------------------------|---------------|

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| | |
|--|---------------|
| | IEC 60947-7-1 |
|--|---------------|

Mounting

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

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Drawings

Circuit diagram



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Classifications

ECLASS

ECLASS-11.0

27141120

ETIM

ETIM 8.0

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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