

QTTCB 1,5 - Double-level terminal block



3205116

<https://www.phoenixcontact.com/sg/products/3205116>

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Double-level terminal block, nom. voltage: 500 V, nominal current: 17.5 A, connection method: Quick connection, 1st and 2nd level, Rated cross section: 1.5 mm², cross section: 0.25 mm² - 1.5 mm², mounting type: NS 35/7,5, NS 35/15, color: gray

Your advantages

- Ground terminal blocks of the same shape are available
- Tested for railway applications

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 3205116 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Note | Made to order (non-returnable) |
| Sales key | 0173* |
| Product key | BE3114 |
| Catalog page | Page 258 (C-1-2019) |
| GTIN | 4017918932534 |
| Weight per piece (including packing) | 16.504 g |
| Weight per piece (excluding packing) | 16.1 g |
| Customs tariff number | 85369010 |
| Country of origin | CN |

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Technical data

Product properties

| | |
|-----------------------|----------------------------|
| Product type | Multi-level terminal block |
| Area of application | Railway industry |
| | Machine building |
| | Plant engineering |
| | Process industry |
| Number of connections | 4 |
| Number of rows | 2 |
| Potentials | 2 |

Insulation characteristics

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

Electrical properties

| | |
|---|--------|
| Rated surge voltage | 6 kV |
| Maximum power dissipation for nominal condition | 0.56 W |

Connection data

| | |
|--|---------------------|
| Number of connections per level | 2 |
| Frequency of connections with the same cross section | 100 |
| Nominal cross section | 1.5 mm ² |

1st and 2nd level

| | |
|--|---|
| Material wire insulation | PVC / PE |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross section rigid | 0.25 mm ² ... 1.5 mm ² |
| Cross section AWG | 24 ... 16 (converted acc. to IEC) |
| Conductor cross section flexible | 0.25 mm ² ... 1.5 mm ² |
| Conductor cross section, flexible [AWG] | 24 ... 16 (converted acc. to IEC) |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.25 mm ² ... 1.5 mm ² |
| Nominal current | 17.5 A |
| Maximum load current | 17.5 A (with 1.5 mm ² conductor cross section) |
| Nominal voltage | 500 V |
| Nominal cross section | 1.5 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 | 3205187 D-QTTCB 1,5 |
| | 3206238 ATP-QTTCB |

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| | |
|--|-------------------------------------|
| | 1204517 SZF 1-0,6X3,5 |
| | 3022276 CLIPFIX 35-5 |
| | 3022218 CLIPFIX 35 |
| List of bridges | Plug-in bridge / FBS 2-5 / 3030161 |
| | Plug-in bridge / FBS 3-5 / 3030174 |
| | Plug-in bridge / FBS 4-5 / 3030187 |
| | Plug-in bridge / FBS 5-5 / 3030190 |
| | Plug-in bridge / FBS 10-5 / 3030213 |
| | Plug-in bridge / FBS 20-5 / 3030226 |
| Bridge data | 14.5 A / 1.5 mm ² |
| Ex temperature increase | 40 K (16.7 A/1.5 mm ²) |
| Rated voltage | 440 V |
| for bridging with bridge | 440 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 | 400 V |
| output | (Permanent) |

Ex level General

| | |
|----------------------|------|
| Rated current | 15 A |
| Maximum load current | 15 A |

Ex connection data General

| | |
|--|--|
| Nominal cross section | 1.5 mm ² |
| Rated cross section AWG | 16 |
| Connection capacity rigid | 0.25 mm ² ... 1.5 mm ² |
| Connection capacity AWG | 24 ... 16 |
| Connection capacity flexible | 0.25 mm ² ... 1.5 mm ² |
| Connection capacity AWG | 24 ... 16 |
| Frequency of connections with the same cross section | 100 |
| output | (Permanent) |

Ex level Level 1

| | |
|--------------------|-------------|
| Contact resistance | 1.4 mΩ |
| output | (Permanent) |

Ex level Level 2

| | |
|--------------------|------|
| Contact resistance | 1 mΩ |
|--------------------|------|

Dimensions

| | |
|--------------------|---------|
| Width | 5.2 mm |
| End cover width | 2.2 mm |
| Height | 99.6 mm |
| Depth on NS 35/7,5 | 49.9 mm |
| Depth on NS 35/15 | 57.4 mm |

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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 |

Electrical tests

Surge voltage test

| | |
|-----------------------|-------------|
| Test voltage setpoint | 7.3 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 ² | 0.18 kA |
| Result | Test passed |

Power-frequency withstand voltage

| | |
|-----------------------|-------------|
| Test voltage setpoint | 1.89 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 |

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| | |
|--|--|
| 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 1.5 mm ² / 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 NS 35/15 |
|---------------|-----------------------|

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Drawings

Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/sg/products/3205116>

|  CSA Approval ID: 2030668 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| Use group B | 300 V | 10 A | 24 - 16 | - |
| Use group C | 300 V | 10 A | 24 - 16 | - |
| Use group D | 600 V | 5 A | 24 - 16 | - |


|  cULus Recognized Approval ID: E60425 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| Use group B | 300 V | 10 A | 24 - 16 | - |
| Use group C | 300 V | 10 A | 24 - 16 | - |
| Use group D | 600 V | 5 A | 24 - 16 | - |

|  LR Approval ID: LR2002130TA | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

|  NK Approval ID: 09 ME 139 | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

| ABS Approval ID: 22-2196825-PDA | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

| DNV Approval ID: TAE000014H | | | | |
|---------------------------------------|--|--|--|--|
|---------------------------------------|--|--|--|--|


|  EAC Ex Approval ID: KZ 7500525010101950 | | | | |
|---|--|--|--|--|
|---|--|--|--|--|


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| | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  IECEx Approval ID: IECExKIWA19.0011U | | | | |
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| | 440 V | 15 A | - | 0.25 - 1.5 |

| | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|  ATEX Approval ID: KIWA19ATEX0019U | | | | |
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| Type examination certificate | 440 V | 15 A | - | 0.25 - 1.5 |

| | | | | |
|---|--|--|--|--|
|  CCC Approval ID: 2020322313000625 | | | | |
|---|--|--|--|--|

| | | | | |
|---|--|--|--|--|
|  UKCA-EX Approval ID: CSAE 22UKEX1429U | | | | |
|---|--|--|--|--|

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27141120 |
| ECLASS-13.0 | 27250102 |

ETIM

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|----------|----------|
| ETIM 9.0 | EC000897 |
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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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