

MTK-P/P MIT SPERRE BU - Knife-disconnect terminal block



3104123

<https://www.phoenixcontact.com/sg/products/3104123>

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Knife-disconnect terminal block, With test socket screws for insertion of test plugs, nom. voltage: 400 V, nominal current: 16 A, 1 level, connection method: Screw connection, Rated cross section: 2.5 mm², cross section: 0.2 mm² - 4 mm², mounting: NS 35/7,5, NS 35/15, NS 32, color: blue

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 3104123 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | ***** |
| Product key | BE1231 |
| GTIN | 4017918229160 |
| Weight per piece (including packing) | 10.182 g |
| Weight per piece (excluding packing) | 9.36 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

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Technical data

Product properties

| | |
|-----------------------|---------------------------|
| Product type | Disconnect terminal block |
| Number of connections | 2 |
| 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 | 2 |
| Nominal cross section | 2.5 mm ² |

1 level

| | |
|---|---|
| Screw thread | M3 |
| Tightening torque | 0.5 ... 0.6 Nm |
| Stripping length | 7 mm |
| Internal cylindrical gage | A3 |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross section rigid | 0.2 mm ² ... 4 mm ² |
| Cross section AWG | 24 ... 12 (converted acc. to IEC) |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section, flexible [AWG] | 24 ... 14 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.25 mm ² ... 2.5 mm ² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.25 mm ² ... 1.5 mm ² |
| Cross-section with insertion bridge, rigid | 4 mm ² |
| Cross-section with insertion bridge, flexible | 2.5 mm ² |
| 2 conductors with same cross section, solid | 0.2 mm ² ... 1.5 mm ² |
| 2 conductors with same cross section, flexible | 0.2 mm ² ... 1.5 mm ² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 1.5 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² ... 1.5 mm ² |
| Nominal current | 16 A |
| Maximum load current | 16 A (with 4 mm ² conductor cross section) |
| Nominal voltage | 400 V |
| Nominal cross section | 2.5 mm ² |

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Dimensions

| | |
|--------------------|---------|
| Width | 5.2 mm |
| End cover width | 1 mm |
| Height | 46 mm |
| Depth on NS 32 | 56.5 mm |
| Depth on NS 35/7,5 | 51.5 mm |
| Depth on NS 35/15 | 59 mm |

Material specifications

| | |
|---|-----------------|
| Color | blue (RAL 5015) |
| 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

| | |
|--------|-------------|
| 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 |
|-----------------|-----|

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Mechanical tests

Mechanical strength

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

Attachment on the carrier

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

Test for conductor damage and slackening

| | |
|--------------------------------|------------------------------|
| Rotation speed | 10 (+/- 2) rpm |
| Revolutions | 135 |
| Conductor cross section/weight | 0.2 mm ² / 0.2 kg |
| | 2.5 mm ² / 0.7 kg |
| | 4 mm ² / 0.9 kg |
| 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):2018-05 |
| Spectrum | Service life test category 2, bogie-mounted |
| Frequency | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| ASD level | 6.12 (m/s ²) ² /Hz |
| Acceleration | 3.12g |
| Test duration per axis | 5 h |
| Test directions | X-, Y- and Z-axis |
| Result | Test passed |

Shocks

| | |
|--------------------------------|-----------------------------------|
| Pulse shape | Semi-sinusoidal |
| 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 ... 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 |

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| | |
|--|---------------|
| 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 |
| | NS 32 |

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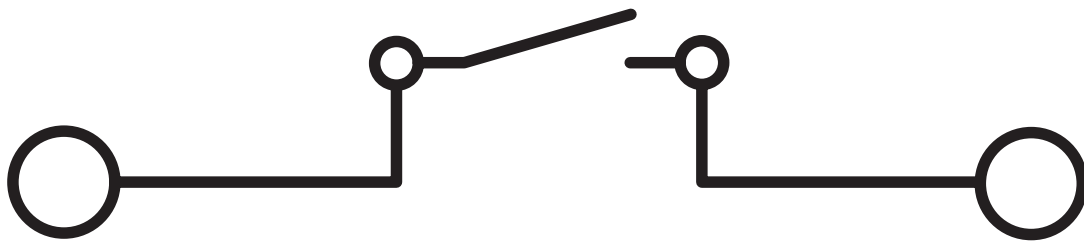


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Drawings

Circuit diagram



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Approvals

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EAC

Approval ID: EACKZ 08593

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27141126 |
| ECLASS-12.0 | 27141126 |
| ECLASS-13.0 | 27250108 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC000902 |
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UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 6(c) |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|---------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | c749ddb-d-53e5-4eba-8f96-ee0dee21a6ae |

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