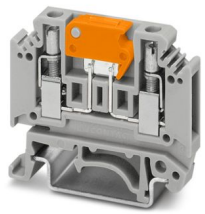
# MTK-P/P - Knife-disconnect terminal block

3104013

https://www.phoenixcontact.com/gb/products/3104013

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Knife-disconnect terminal block, With test socket screws for insertion of test plugs, nom. voltage: 400 V, nominal current: 16 A, connection method: Screw connection, Rated cross section: 2.5 $mm^2$, cross section: 0.2 $mm^2$ - 4 $mm^2$, mounting: NS 35/7,5, NS 35/15, NS 32, color: gray

## Your advantages

- High current carrying capacity of up to 16 A
- Space-saving design

## Commercial data

| | |
|---|---|
| Item number | 3104013 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | BE1231 |
| Product key | BE1231 |
| GTIN | 4017918092689 |
| Weight per piece (including packing) | 9.794 g |
| Weight per piece (excluding packing) | 9.708 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

# 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 mm² |
| 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 mm² ... 4 mm² |
| Cross section AWG | 24 ... 12 (converted acc. to IEC) |
| Conductor cross section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross section, flexible [AWG] | 24 ... 14 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.25 mm² ... 2.5 mm² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.25 mm² ... 1.5 mm² |
| Cross-section with insertion bridge, rigid | 4 mm² |
| Cross-section with insertion bridge, flexible | 2.5 mm² |
| 2 conductors with same cross section, solid | 0.2 mm² ... 1.5 mm² |
| 2 conductors with same cross section, flexible | 0.2 mm² ... 1.5 mm² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.25 mm² ... 1.5 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 1.5 mm² |
| Nominal current | 16 A (with 4 mm² conductor cross section) |
| Maximum load current | 16 A (with 4 mm² conductor cross section) |
| Nominal voltage | 400 V (up to 690 V for pollution degree II) |
| Nominal cross section | 2.5 mm² |

## 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 | 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 | 7.3 kV |
| Result | Test passed |

### Temperature-rise test

| | |
|---|---|
| Requirement temperature-rise test | Increase in temperature ≤ 45 K |
| Result | Test passed |
| Short-time withstand current 1.5 mm² | 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 32/NS 35 |
| Result | Test passed |

Test for conductor damage and slackening

| | |
|---|---|
| Rotation speed | 10 (+/- 2) rpm |
| Revolutions | 135 |
| Conductor cross section/weight | 0.2 mm² / 0.2 kg |
| | 2.5 mm² / 0.7 kg |
| | 4 mm² / 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 | Long life test category 2, bogie-mounted |
| Frequency | $f_1$ = 5 Hz to $f_2$ = 250 Hz |
| ASD level | 6.12 (m/s²)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 |
| Permissible humidity (operation) | 20 % ... 90 % |
| Permissible humidity (storage/transport) | 30 % ... 70 % |

## Standards and regulations

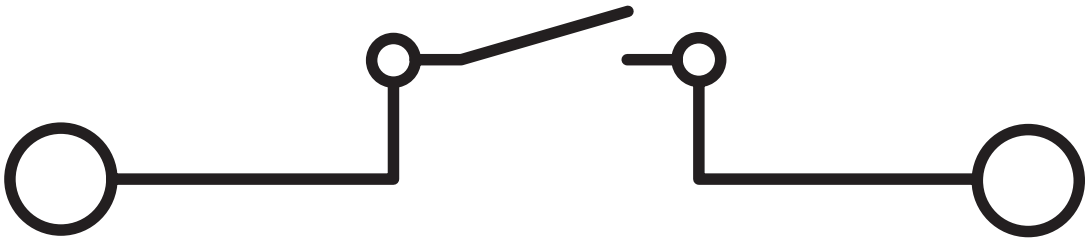
| | |
|---|---|
| Connection in acc. with standard | IEC 60947-7-1 |

## Mounting

| | |
|---|---|
| Mounting type | NS 35/7,5 |
| | NS 35/15 |
| | NS 32 |

## Drawings

Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/3104013

**CSA**
Approval ID: 13631

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| | 300 V | 15 A | 28 - 12 | - |

**EAC**
Approval ID: KZ7500651131219505

**cULus Recognized**
Approval ID: E60425

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| Use group B | | | | |
| | 250 V | 10 A | 28 - 12 | - |
| Use group D | | | | |
| | 300 V | 10 A | 28 - 12 | - |

**DNV**
Approval ID: TAE00001CT

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27250108 |
| ECLASS-15.0 | 27250108 |

### ETIM

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

### UNSPSC

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

## 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 | 02756ddb-a69f-4465-b0f7-cbe2fd4f5388 |



PHOENIX CONTACT Ltd
Halesfield 13, Telford
Shropshire, TF7 4PG
01952 681700
info@phoenixcontact.co.uk