

MTKD-FE/CUNI EX - Thermoelectric voltage terminal block pair



3100047

<https://www.phoenixcontact.com/us/products/3100047>

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Thermoelectric voltage terminal block pair, TC type J, nom. voltage: 400 V, nominal current: 1 A, number of connections: 4, number of positions: 2, connection method: Screw connection, 1 level, cross section: 0.2 mm² - 4 mm², mounting type: NS 35/7,5, NS 35/15, NS 32, color: gray

The figure shows version
MTKD-CU/CUNI

Your advantages

- These special terminal blocks are used to extend thermocouple equalizing conductors in corresponding measuring circuits
- The equalizing conductors are made from materials which, up to temperatures of 200°C, have the same thermal characteristics as the corresponding thermocouples

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 3100047 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | BE12 |
| Product key | BE1211 |
| GTIN | 4046356678148 |
| Weight per piece (including packing) | 16.41 g |
| Weight per piece (excluding packing) | 16.41 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

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Technical data

Product properties

| | |
|-----------------------|-----------------------------|
| Product type | Feed-through terminal block |
| Product family | MTK |
| Number of positions | 2 |
| Number of connections | 4 |
| Number of rows | 1 |
| Potentials | 1 |

Electrical properties

| | |
|---|--------|
| Maximum power dissipation for nominal condition | 0.77 W |
|---|--------|

Connection data

| | |
|---------------------------------|---------------------|
| Number of connections per level | 4 |
| Nominal cross section | 2.5 mm ² |

1 level

| | |
|---|---|
| Connection method | Screw connection |
| Screw thread | M3 |
| Tightening torque | 0.6 ... 0.8 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) | 0.2 mm ² ... 1.5 mm ² |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 0.2 mm ² ... 1.5 mm ² |
| Nominal current | 1 A |
| Maximum load current | 1 A (with 4 mm ² conductor cross-section) |
| Nominal voltage | 400 V (Voltage to the neighboring feed-through terminal block MTK.) |

Ex data

Rated data (ATEX/IECEx)

| | |
|-----------------------------|---|
| Identification | ⊕ II 2 G Ex eb IIC Gb |
| Operating temperature range | -50 °C ... 110 °C |
| Ex-certified accessories | 3101029 D-MTK 3101223 ATS-MTK 1205066 SZS 1,0X4,0 VDE |

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| | |
|--------------------------|----------------------------------|
| | 1201442 E/UK |
| Ex temperature increase | 5 K (1.1 A / 1 mm ²) |
| Rated insulation voltage | 250 V |
| output | (Permanent) |

Ex level General

| | |
|----------------------|-------|
| Rated voltage | 275 V |
| Maximum load current | 1 A |
| Contact resistance | 11 mΩ |

Ex connection data General

| | |
|------------------------------|---|
| Torque range | 0.6 Nm ... 0.8 Nm |
| Nominal cross section | 1 mm ² |
| Rated cross section AWG | 16 |
| Connection capacity rigid | 0.2 mm ² ... 4 mm ² |
| Connection capacity AWG | 24 ... 12 |
| Connection capacity flexible | 0.2 mm ² ... 2.5 mm ² |
| Connection capacity AWG | 24 ... 14 |

Dimensions

| | |
|--------------------|---------|
| Width | 10.4 mm |
| End cover width | 1 mm |
| Height | 46.2 mm |
| Depth on NS 32 | 44.9 mm |
| Depth on NS 35/7,5 | 39.9 mm |
| Depth on NS 35/15 | 47.4 mm |

Material specifications

| | |
|---|-----------------|
| Color | gray (RAL 7042) |
| Flammability rating according to UL 94 | V0 |
| 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 |

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Mechanical properties

Mechanical data

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

Environmental and real-life conditions

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 |

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Drawings

Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3100047>

|  cULus Recognized Approval ID: E60425 | | | | |
|--|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| B | 250 V | 10 A | 28 - 12 | - |
| D | 300 V | 10 A | 28 - 12 | - |

|  EAC Ex Approval ID: RU C-DE.Ax07.B.03227 | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

|  IEC Ex Approval ID: IECExSEV19.0061U | | | | |
|--|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | 275 V | 1 A | - | 0.2 - 4 |
| Only flexible conductors | 275 V | 1 A | - | 0.2 - 2.5 |

|  ATEX Approval ID: SEV19ATEX0335U | | | | |
|--|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | 275 V | 1 A | - | 0.2 - 4 |
| Only flexible conductors | 275 V | 1 A | - | 0.2 - 2.5 |

|  UKCA-EX Approval ID: CML 22UKEX1229U | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

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

|  CCC Approval ID: 2020322313000629 | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27250115 |
| ECLASS-15.0 | 27250115 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC000904 |
|-----------|----------|

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% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 0.093 kg CO2e |
|---------|---------------|

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