

## Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101

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Thermoelectric voltage terminal block pair, TC type B, nom. voltage: 400 V, nominal current: 1 A, connection method: Screw connection, number of connections: 4, number of positions: 2, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

The figure shows version MTKD-CU/CUNI

### Your advantages

- ✓ These special terminal blocks are used to extend thermocouple equalizing conductors in corresponding measuring circuits
- ✓ This ensures that no false thermoelectric voltages result at the junctions of the thermocouple/terminal block/equalizing conductor and that the basic values according to EN 60584/DIN EN 60584 are observed
- ✓ The equalizing conductors are made from materials which, up to temperatures of 200°C, have the same thermal characteristics as the corresponding thermocouples



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 50 pc                                                                                                   |
| GTIN         | <br>4 017918 092511 |
| GTIN         | 4017918092511                                                                                           |

### Technical data

#### General

|                                                 |                                                      |
|-------------------------------------------------|------------------------------------------------------|
| Number of positions                             | 2                                                    |
| Number of levels                                | 1                                                    |
| Number of connections                           | 4                                                    |
| Potentials                                      | 1                                                    |
| Nominal cross section                           | 2.5 mm <sup>2</sup>                                  |
| Color                                           | gray                                                 |
| Insulating material                             | PA                                                   |
| Flammability rating according to UL 94          | V0                                                   |
| Maximum power dissipation for nominal condition | 0.77 W                                               |
| Maximum load current                            | 1 A (with 4 mm <sup>2</sup> conductor cross section) |
| Nominal current I <sub>N</sub>                  | 1 A                                                  |

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## Technical data

### General

|                                                                         |                                                                        |
|-------------------------------------------------------------------------|------------------------------------------------------------------------|
| Nominal voltage $U_N$                                                   | 400 V (Voltage to the neighboring feed-through terminal block MTK.)    |
| Open side panel                                                         | Yes                                                                    |
| Ambient temperature (operation)                                         | -60 °C ... 85 °C                                                       |
| Ambient temperature (storage/transport)                                 | -25 °C ... 55 °C (For a short time, not exceeding 24 h, -60 to +70 °C) |
| Permissible humidity (storage/transport)                                | 30 % ... 70 %                                                          |
| Ambient temperature (assembly)                                          | -5 °C ... 70 °C                                                        |
| Ambient temperature (actuation)                                         | -5 °C ... 70 °C                                                        |
| Relative insulation material temperature index (Elec., UL 746 B)        | 130 °C                                                                 |
| Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21)) | 130 °C                                                                 |
| Static insulating material application in cold                          | -60 °C                                                                 |
| Surface flammability NFPA 130 (ASTM E 162)                              | passed                                                                 |
| Specific optical density of smoke NFPA 130 (ASTM E 662)                 | passed                                                                 |
| Calorimetric heat release NFPA 130 (ASTM E 1354)                        | 28 MJ/kg                                                               |
| Smoke gas toxicity NFPA 130 (SMP 800C)                                  | passed                                                                 |
| 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                                                            |

### Dimensions

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

### Connection data

|                                            |                     |
|--------------------------------------------|---------------------|
| Connection method                          | Screw connection    |
| Screw thread                               | M3                  |
| Stripping length                           | 7 mm                |
| Tightening torque, min                     | 0.6 Nm              |
| Tightening torque max                      | 0.8 Nm              |
| Connection in acc. with standard           | IEC 60947-7-1       |
| Conductor cross section solid min.         | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.         | 4 mm <sup>2</sup>   |
| Conductor cross section AWG min.           | 24                  |
| Conductor cross section AWG max.           | 12                  |
| Conductor cross section flexible min.      | 0.2 mm <sup>2</sup> |
| Conductor cross section flexible max.      | 2.5 mm <sup>2</sup> |
| Min. AWG conductor cross section, flexible | 24                  |

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## Technical data

### Connection data

|                                                                            |                     |
|----------------------------------------------------------------------------|---------------------|
| Max. AWG conductor cross section, flexible                                 | 14                  |
| Conductor cross section flexible, with ferrule without plastic sleeve min. | 0.2 mm <sup>2</sup> |
| Conductor cross section flexible, with ferrule without plastic sleeve max. | 1.5 mm <sup>2</sup> |
| Conductor cross section flexible, with ferrule with plastic sleeve min.    | 0.2 mm <sup>2</sup> |
| Conductor cross section flexible, with ferrule with plastic sleeve max.    | 1.5 mm <sup>2</sup> |
| Internal cylindrical gage                                                  | A3                  |

### Standards and Regulations

|                                        |               |
|----------------------------------------|---------------|
| Connection in acc. with standard       | CUL           |
|                                        | IEC 60947-7-1 |
| Flammability rating according to UL 94 | V0            |

### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27141120 |
| eCl@ss 4.0    | 27141100 |
| eCl@ss 4.1    | 27141100 |
| eCl@ss 5.0    | 27141100 |
| eCl@ss 5.1    | 27141100 |
| eCl@ss 6.0    | 27141100 |
| eCl@ss 7.0    | 27141142 |
| eCl@ss 8.0    | 27141142 |
| eCl@ss 9.0    | 27141120 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000902 |
| ETIM 3.0 | EC000902 |
| ETIM 4.0 | EC000902 |
| ETIM 5.0 | EC000904 |
| ETIM 6.0 | EC000897 |
| ETIM 7.0 | EC000897 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211811 |
| UNSPSC 7.0901 | 39121410 |
| UNSPSC 11     | 39121410 |

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## Classifications

### UNSPSC

|              |          |
|--------------|----------|
| UNSPSC 12.01 | 39121410 |
| UNSPSC 13.2  | 39121410 |
| UNSPSC 18.0  | 39121410 |
| UNSPSC 19.0  | 39121410 |
| UNSPSC 20.0  | 39121410 |
| UNSPSC 21.0  | 39121410 |

## Approvals

### Approvals

#### Approvals

UL Recognized / cUL Recognized / EAC / EAC / cULus Recognized

#### Ex Approvals

### Approval details

|                    |                                                                                     |                                                                                                                                                       |              |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| UL Recognized      |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 60425 |
| Nominal voltage UN | 300 V                                                                               |                                                                                                                                                       |              |
| Nominal current IN | 10 A                                                                                |                                                                                                                                                       |              |
| mm²/AWG/kcmil      | 28-12                                                                               |                                                                                                                                                       |              |

|                    |                                                                                     |                                                                                                                                                       |              |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| cUL Recognized     |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 60425 |
| Nominal voltage UN | 300 V                                                                               |                                                                                                                                                       |              |
| Nominal current IN | 10 A                                                                                |                                                                                                                                                       |              |
| mm²/AWG/kcmil      | 28-12                                                                               |                                                                                                                                                       |              |

|     |                                                                                     |                          |
|-----|-------------------------------------------------------------------------------------|--------------------------|
| EAC |  | RU C-<br>DE.A*30.B.01742 |
|-----|-------------------------------------------------------------------------------------|--------------------------|

## Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101

### Approvals

EAC



RU C-  
DE.BL08.B.00534

cULus Recognized



### Accessories

#### Accessories

##### DIN rail

DIN rail perforated - NS 32 PERF 2000MM - 1201002



DIN rail perforated, G profile, width: 32 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 32 UNPERF 2000MM - 1201015



DIN rail, unperforated, G profile, width: 32 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

## Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101

### Accessories

DIN rail perforated - NS 35/ 7,5 WH PERF 2000MM - 1204119



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/ 7,5 WH UNPERF 2000MM - 1204122



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/ 7,5 AL UNPERF 2000MM - 0801704



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

DIN rail perforated - NS 35/ 7,5 ZN PERF 2000MM - 1206421



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/ 7,5 ZN UNPERF 2000MM - 1206434



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

## Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101

### Accessories

DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

End cap - NS 35/ 7,5 CAP - 1206560



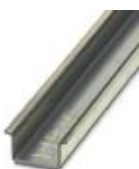
DIN rail end piece, for DIN rail NS 35/7.5

DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail perforated - NS 35/15 WH PERF 2000MM - 0806602



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

## Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101

### Accessories

DIN rail, unperforated - NS 35/15 WH UNPERF 2000MM - 1204135



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

DIN rail perforated - NS 35/15 ZN PERF 2000MM - 1206599



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/15 ZN UNPERF 2000MM - 1206586



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored



# Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101

## Accessories

End cap - NS 35/15 CAP - 1206573



DIN rail end piece, for DIN rail NS 35/15

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DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, unperforated, Standard profile 2.3 mm, width: 35 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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End block

End clamp - CLIPFIX 35 - 3022218



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

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End clamp - CLIPFIX 35-5 - 3022276



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

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End clamp - E/NS 35 N - 0800886



End clamp, width: 9.5 mm, color: gray

# Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101

## Accessories

### End clamp - E/UK - 1201442



End clamp, width: 9.5 mm, height: 35.3 mm, material: PA, length: 50.5 mm, Mounting on a DIN rail NS 32 or NS 35, color: gray

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### End clamp - E/UK 1 - 1201413



End clamps, for supporting the ends of double-level and three-level terminal blocks, width: 10 mm, color: gray

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### End cover

#### End cover - D-MTK - 3101029



End cover, length: 46 mm, width: 1 mm, height: 28.7 mm, color: gray

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### Labeled terminal marker

#### Zack marker strip - ZB 10 CUS - 0824941



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10

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#### Zack marker strip - ZB10,LGS:FORTL.ZAHLEN - 1053014



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10

# Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101

## Accessories

### Zack marker strip - ZB10,QR:FORTL.ZAHLEN - 1053027



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10

### Marker for terminal blocks - ZB10,LGS:L1-N,PE - 1053412



Marker for terminal blocks, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, horizontal: L1, L2, L3, N, PE, L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10

### Marker for terminal blocks - ZB10,LGS:U-N - 1053438



Marker for terminal blocks, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, horizontal: U, V, W, N, GND, U, V, W, N, GND, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10

### Marker for terminal blocks - UC-TM 10 CUS - 0824605



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 9.6 x 10.5 mm, Number of individual labels: 48

### Marker for terminal blocks - UCT-TM 10 CUS - 0829623



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 8.9 x 9.6 mm, Number of individual labels: 36

## Partition plate

# Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101

## Accessories

Partition plate - ATS-MTK - 3101223



Partition plate, width: 1 mm, color: gray

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## Screwdriver tools

Screwdriver - SZS 1,0X4,0 VDE - 1205066



Screwdriver, slot-headed, VDE insulated, size: 1.0 x 4.0 x 100 mm, 2-component grip, with non-slip grip

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## Terminal marking

Marker card - SBS10:UNBEDRUCKT - 1007248



Marker card, Card, white, unlabeled, can be labeled with: Marker pen, perforated, mounting type: snap into tall marker groove, snap into flat marker groove, for terminal block width: 10 mm, lettering field size: 6 x 10.1 mm, Number of individual labels: 250

Zack marker strip - ZB 10:UNBEDRUCKT - 1053001



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.5 x 10.15 mm, Number of individual labels: 10

Marker for terminal blocks - UC-TM 10 - 0818069



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 9.6 x 10.5 mm, Number of individual labels: 48

## Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101

### Accessories

Marker for terminal blocks - UCT-TM 10 - 0829142



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 8.9 x 9.6 mm, Number of individual labels: 36

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