

## Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

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Thermoelectric voltage terminal block pair, TC type J, 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
- ✓ 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                         | 1 pc  |
| GTIN                                 | <br>4 017918 092450 |
| GTIN                                 | 4017918092450   |
| Weight per Piece (excluding packing) | 16.400 g  |
| Custom tariff number                 | 85369010  |
| Country of origin                    | Poland  |

### 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                |

# Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

## Technical data

### General

|   |  |
|---|--|
| 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  |
| Nominal voltage U <sub>N</sub>  | 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             | 1 level          |
| Connection method      | Screw connection |
| Screw thread           | M3               |
| Stripping length       | 7 mm             |
| Tightening torque, min | 0.6 Nm           |

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## Technical data

### Connection data

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

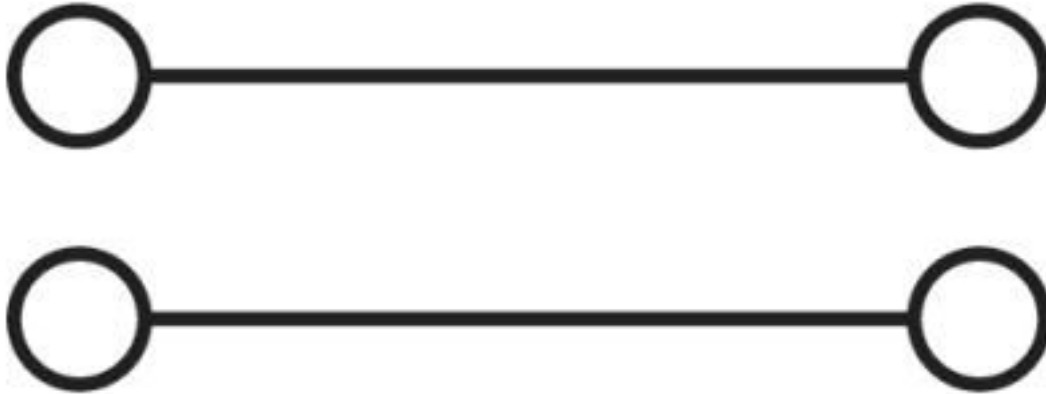
### Environmental Product Compliance

|            |   |
|------------|---|
| 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" |

## Drawings

# Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

Circuit diagram



## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27141142 |
| 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    | 27141126 |
| eCl@ss 8.0    | 27141142 |
| eCl@ss 9.0    | 27141142 |

### ETIM

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

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211811 |
| UNSPSC 7.0901 | 39121410 |
| UNSPSC 11     | 39121410 |
| UNSPSC 12.01  | 39121410 |
| UNSPSC 13.2   | 39121410 |

# Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

## Classifications

### UNSPSC

|             |          |
|-------------|----------|
| 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  |              |
| mm <sup>2</sup> /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  |              |
| mm <sup>2</sup> /AWG/kcmil |   | 28-12   |              |

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

# Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

## Approvals

|     |  |                          |
|-----|--|--------------------------|
| EAC |  | RU C-<br>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

## Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

### Accessories

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

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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

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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

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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

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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

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## Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

### Accessories

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

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



## Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

### Accessories

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

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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

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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

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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

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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

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## Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

### Accessories

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

End cap - NS 35/15 CAP - 1206573



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

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

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

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

## Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

### Accessories

End clamp - E/NS 35 N - 0800886



End clamp, width: 9.5 mm, color: gray

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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

## Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

### Accessories

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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

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#### 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

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#### 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

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#### 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

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#### 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

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## Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

### Accessories

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

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### Partition plate

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

## Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046

### Accessories

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

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