

# Thermoelectric voltage terminal block pair - MTKD-NICR/CUNI EX - 3100076

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Thermoelectric voltage terminal block pair, USA type E, 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

## Why buy this product

- 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 STK  |
| Minimum order quantity | 50 STK  |
| GTIN                   | <br>4 046356 678155 |
| GTIN                   | 4046356678155   |

## 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                  |

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## Technical data

### General

|   |   |
|---|---|
| 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   |
| 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  |
| Behavior in fire for rail vehicles (DIN 5510-2)                         | Test passed   |
| Flame test method (DIN EN 60695-11-10)                                  | V0  |
| Oxygen index (DIN EN ISO 4589-2)  | >32 %   |
| NF F16-101, NF F10-102 Class I  | 2   |
| NF F16-101, NF F10-102 Class F  | 2   |
| 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  |
| Calorimetric heat release NFPA 130 (ASTM E 1354)                        | 28 MJ/kg  |
| 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    |
| 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> |
| Stripping length   | 7 mm                |
| Internal cylindrical gage  | A3                  |
| Screw thread   | M3                  |
| Tightening torque, min   | 0.6 Nm              |
| Tightening torque max  | 0.8 Nm              |

### Standards and Regulations

|  |   |
|--|---|
| Connection in acc. with standard                       | CUL   |
|  | IEC 60947-7-1                                   |
| Flammability rating according to UL 94                 | V0  |
| Fire protection for rail vehicles (DIN EN 45545-2) R22 | HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 |
| Fire protection for rail vehicles (DIN EN 45545-2) R23 | HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 |
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### Environmental Product Compliance

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

## Drawings

Circuit diagram



## Approvals

### Approvals

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Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

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## Approvals

Ex Approvals

ATEX / EAC Ex

### 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 |
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|     |  |               |
|-----|--|---------------|
| EAC |  | EAC-Zulassung |
|-----|--|---------------|

|                  |  |   |
|------------------|--|---|
| cULus 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> |
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