

## Knife disconnect terminal block - USST 4-MT P/P - 3070302

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Knife disconnect terminal block, With test socket screws for insertion of test plugs, Connection method: Screw connection with spring support, Cross section: 0.2 mm<sup>2</sup> - 6 mm<sup>2</sup>, AWG: 24 - 10, Nominal current: 20 A, Nominal voltage: 500 V, Length: 63.4 mm, Width: 6.2 mm, Color: gray, Assembly: NS 35/7,5, NS 35/15, NS 32

RoHS

### Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 50 STK        |
| GTIN         |               |
| GTIN         | 4046356680349 |

### Technical data

#### General

|   |   |
|---|---|
| Number of levels                                | 1   |
| Number of connections                           | 2   |
| Nominal cross section                           | 4 mm <sup>2</sup>                                     |
| Color   | gray  |
| Insulating material                             | PA  |
| Flammability rating according to UL 94          | V0  |
| Rated surge voltage                             | 6 kV  |
| Degree of pollution                             | 3   |
| Overvoltage category                            | III   |
| Insulating material group                       | I   |
| Maximum power dissipation for nominal condition | 1.02 W  |
| Connection in acc. with standard                | IEC 60947-7-1   |
| Nominal current I <sub>N</sub>                  | 20 A  |
| Maximum load current                            | 20 A (with 6 mm <sup>2</sup> conductor cross section) |
| Nominal voltage U <sub>N</sub>                  | 500 V   |
| Open side panel                                 | Yes   |
| Shock protection test specification             | DIN EN 50274 (VDE 0660-514):2002-11                   |

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### General

|   |   |
|---|---|
| Back of the hand protection   | guaranteed  |
| Finger protection   | guaranteed  |
| Result of surge voltage test  | Test passed   |
| Surge voltage test setpoint   | 7.3 kV  |
| Result of power-frequency withstand voltage test  | Test passed   |
| Power frequency withstand voltage setpoint  | 1.89 kV   |
| Result of the test for mechanical stability of terminal points (5 x conductor connection) | Test passed   |
| Result of bending test  | Test passed   |
| Bending test rotation speed   | 10 rpm  |
| Bending test turns  | 135   |
| Bending test conductor cross section/weight   | 0.2 mm <sup>2</sup> / 0.2 kg                        |
|   | 4 mm <sup>2</sup> / 0.9 kg                          |
|   | 6 mm <sup>2</sup> / 1.4 kg                          |
|   | 1.5 mm <sup>2</sup> / 0.4 kg                        |
| Tensile test result   | Test passed   |
| Conductor cross section tensile test  | 0.2 mm <sup>2</sup>                                 |
| Tractive force setpoint   | 10 N  |
| Conductor cross section tensile test  | 4 mm <sup>2</sup>                                   |
| Tractive force setpoint   | 60 N  |
| Conductor cross section tensile test  | 6 mm <sup>2</sup>                                   |
| Tractive force setpoint   | 80 N  |
| Conductor cross section tensile test  | 1.5 mm <sup>2</sup>                                 |
| Tractive force setpoint   | 40 N  |
| Result of tight fit on support  | Test passed   |
| Setpoint  | 1 N   |
| Result of voltage-drop test   | Test passed   |
| Requirements, voltage drop  | ≤ 1.6 mV  |
| Temperature-rise test   | Test passed   |
| Short circuit stability result  | Test passed   |
| Conductor cross section short circuit testing   | 2.5 mm <sup>2</sup>                                 |
| Short-time current  | 0.3 kA  |
| Result of thermal test  | Test passed   |
| Proof of thermal characteristics (needle flame) effective duration                        | 30 s  |
| Oscillation, broadband noise test result  | Test passed   |
| Test specification, oscillation, broadband noise  | DIN EN 50155 (VDE 0115-200):2008-03                 |
| Test spectrum   | Service life test category 1, class B, body mounted |
| Test frequency  | f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 Hz    |
| ASD level   | 1.857 (m/s <sup>2</sup> )/Hz                        |
| Acceleration  | 0,8 g   |
| Test duration per axis  | 5 h   |

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|   |                                   |
|---|-----------------------------------|
| Test directions   | X-, Y- and Z-axis                 |
| Shock test result   | Test passed                       |
| Shock form  | Half-sine                         |
| Acceleration  | 5 g                               |
| Shock duration  | 30 ms                             |
| Number of shocks per direction  | 3                                 |
| Test directions   | X-, Y- and Z-axis (pos. and neg.) |
| Relative insulation material temperature index (Elec., UL 746 B)        | 130 °C                            |
| Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21)) | 125 °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)                        | 27,5 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                       |
|   | HL 1 - HL 3                       |
| Fire protection for rail vehicles (DIN EN 45545-2) R26                  | HL 1 - HL 3                       |

### Dimensions

|                  |         |
|------------------|---------|
| Length           | 63.4 mm |
| Width            | 6.2 mm  |
| Height NS 35/7,5 | 57.3 mm |
| Height NS 35/15  | 64.8 mm |
| Height NS 32     | 62.3 mm |

### Connection data

|  |                      |
|--|----------------------|
| Conductor cross section solid min.   | 0.2 mm <sup>2</sup>  |
| Conductor cross section solid max.   | 6 mm <sup>2</sup>    |
| Conductor cross section flexible min.                                      | 0.2 mm <sup>2</sup>  |
| Conductor cross section flexible max.                                      | 4 mm <sup>2</sup>    |
| Conductor cross section AWG min.   | 24                   |
| Conductor cross section AWG max.   | 10                   |
| Conductor cross section flexible, with ferrule without plastic sleeve min. | 0.25 mm <sup>2</sup> |
| Conductor cross section flexible, with ferrule without plastic sleeve max. | 4 mm <sup>2</sup>    |
| Conductor cross section flexible, with ferrule with plastic sleeve min.    | 0.25 mm <sup>2</sup> |

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## Technical data

### Connection data

|   |                                      |
|---|--------------------------------------|
| Conductor cross section flexible, with ferrule with plastic sleeve max.                 | 2.5 mm <sup>2</sup>                  |
| 2 conductors with same cross section, solid min.  | 0.2 mm <sup>2</sup>                  |
| 2 conductors with same cross section, solid max.  | 1.5 mm <sup>2</sup>                  |
| 2 conductors with same cross section, stranded min.                                     | 0.2 mm <sup>2</sup>                  |
| 2 conductors with same cross section, stranded max.                                     | 1.5 mm <sup>2</sup>                  |
| 2 conductors with same cross section, stranded, ferrules without plastic sleeve, min.   | 0.25 mm <sup>2</sup>                 |
| 2 conductors with same cross section, stranded, ferrules without plastic sleeve, max.   | 1.5 mm <sup>2</sup>                  |
| 2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, min. | 0.5 mm <sup>2</sup>                  |
| 2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, max. | 2.5 mm <sup>2</sup>                  |
| Connection method   | Screw connection with spring support |
| Stripping length  | 10 mm                                |
| Internal cylindrical gage   | A4                                   |
| Screw thread  | M3                                   |
| Tightening torque, min  | 0.6 Nm                               |
| Tightening torque max   | 0.8 Nm                               |

### Standards and Regulations

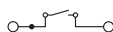
|  |               |
|--|---------------|
| Connection in acc. with standard       | IEC 60947-7-1 |
| Flammability rating according to UL 94 | V0            |

### Environmental Product Compliance

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

Approvals

EAC


Ex Approvals

## Knife disconnect terminal block - USST 4-MT P/P - 3070302

### Approvals

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#### Approval details

|     |   |                     |
|-----|---|---------------------|
| EAC |  | 7500651.22.01.00246 |
|-----|---|---------------------|

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