

## Knife disconnect terminal block - UT 4-MT-P/P - 3046171

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Knife disconnect terminal block, With test socket screws for insertion of test plugs, nom. voltage: 500 V, nominal current: 20 A, connection method: Screw connection, cross section: 0.14 mm<sup>2</sup> - 6 mm<sup>2</sup>, AWG: 26 - 10, length: 57.8 mm, width: 6.2 mm, color: gray, mounting: NS 35/7,5, NS 35/15

### Your advantages

- ✓ Tested for railway applications
- ✓ Double bridge shaft enables individual potential distribution and supply

**RoHS**

COMPLETE RoHS

### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 50 pc                                                                                                   |
| GTIN         | <br>4 017918 975593 |
| GTIN         | 4017918975593                                                                                           |

### Technical data

#### General

|                                        |                   |
|----------------------------------------|-------------------|
| Number of levels                       | 1                 |
| Number of connections                  | 2                 |
| Potentials                             | 1                 |
| Nominal cross section                  | 4 mm <sup>2</sup> |
| Color                                  | gray              |
| Insulating material                    | PA                |
| Flammability rating according to UL 94 | V0                |
| Area of application                    | Railway industry  |
|                                        | Machine building  |
|                                        | Plant engineering |
| Rated surge voltage                    | 6 kV              |
| Degree of pollution                    | 3                 |
| Overvoltage category                   | III               |
| Insulating material group              | I                 |

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## Technical data

### General

|                                                                                           |                                                       |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Maximum power dissipation for nominal condition                                           | 1.02 W                                                |
| Designation                                                                               | Level 1 above 1 below 1                               |
| Maximum load current                                                                      | 20 A (with 6 mm <sup>2</sup> conductor cross section) |
| Nominal current I <sub>N</sub>                                                            | 20 A (with 4 mm <sup>2</sup> conductor cross section) |
| Nominal voltage U <sub>N</sub>                                                            | 500 V                                                 |
| Open side panel                                                                           | No                                                    |
| Shock protection test specification                                                       | IEC 60529:2001-02                                     |
| 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                                               | 0.14 mm <sup>2</sup> / 0.2 kg                         |
|                                                                                           | 4 mm <sup>2</sup> / 0.9 kg                            |
|                                                                                           | 6 mm <sup>2</sup> / 1.4 kg                            |
| Tensile test result                                                                       | Test passed                                           |
| Conductor cross section tensile test                                                      | 0.14 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                                                  |
| Result of tight fit on support                                                            | Test passed                                           |
| Tight fit on carrier                                                                      | NS 35                                                 |
| Setpoint                                                                                  | 1 N                                                   |
| Result of voltage-drop test                                                               | Test passed                                           |
| Requirements, voltage drop                                                                | ≤ 6,4 mV                                              |
| Result of 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                   |

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### General

|                                                                         |                                                     |
|-------------------------------------------------------------------------|-----------------------------------------------------|
| Test spectrum                                                           | Service life test category 1, class B, body mounted |
| Test frequency                                                          | $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$      |
| ASD level                                                               | $1.857 \text{ (m/s}^2\text{)}^2/\text{Hz}$          |
| Acceleration                                                            | 0,8 g                                               |
| Test duration per axis                                                  | 5 h                                                 |
| Test directions                                                         | X-, Y- and Z-axis                                   |
| Shock test result                                                       | Test passed                                         |
| Test specification, shock test                                          | DIN EN 50155 (VDE 0115-200):2008-03                 |
| Shock form                                                              | Half-sine                                           |
| Acceleration                                                            | 5g                                                  |
| 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                                         |
| 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            | 6.2 mm  |
| Length           | 57.8 mm |
| Height NS 35/7,5 | 49.1 mm |
| Height NS 35/15  | 56.6 mm |

### Connection data

|                        |                  |
|------------------------|------------------|
| Connection method      | Screw connection |
| Screw thread           | M3               |
| Stripping length       | 9 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.                                                      | 0.14 mm <sup>2</sup> |
| Conductor cross section solid max.                                                      | 6 mm <sup>2</sup>    |
| Conductor cross section AWG min.                                                        | 26                   |
| Conductor cross section AWG max.                                                        | 10                   |
| Conductor cross section flexible min.                                                   | 0.14 mm <sup>2</sup> |
| Conductor cross section flexible max.                                                   | 6 mm <sup>2</sup>    |
| Min. AWG conductor cross section, flexible                                              | 26                   |
| Max. AWG conductor cross section, flexible                                              | 10                   |
| Conductor cross section flexible, with ferrule without plastic sleeve min.              | 0.14 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.                 | 0.14 mm <sup>2</sup> |
| Conductor cross section flexible, with ferrule with plastic sleeve max.                 | 4 mm <sup>2</sup>    |
| 2 conductors with same cross section, solid min.                                        | 0.14 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.                                     | 0.14 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, 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>  |
| 2 conductors with same cross section, stranded, ferrules without plastic sleeve, min.   | 0.14 mm <sup>2</sup> |
| 2 conductors with same cross section, stranded, ferrules without plastic sleeve, max.   | 1.5 mm <sup>2</sup>  |
| Internal cylindrical gage                                                               | A4                   |

### Standards and Regulations

|                                                        |               |
|--------------------------------------------------------|---------------|
| Connection in acc. with standard                       | CSA           |
|                                                        | 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   |
| 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   |

### Environmental Product Compliance

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

# Knife disconnect terminal block - UT 4-MT-P/P - 3046171

## Drawings

Circuit diagram



## Approvals

### Approvals

#### Approvals

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

#### Ex Approvals

### Approval details

|                    |                                                                                     |                                                                                                                                         |       |
|--------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------|
| CSA                |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 13631 |
|                    | B                                                                                   | C                                                                                                                                       |       |
| Nominal voltage UN | 300 V                                                                               | 300 V                                                                                                                                   |       |
| Nominal current IN | 16 A                                                                                | 16 A                                                                                                                                    |       |
| mm²/AWG/kcmil      | 26-10                                                                               | 26-10                                                                                                                                   |       |

|                    |                                                                                     |                                                                                                                                                       |              |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 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 |
|                    | B                                                                                   | C                                                                                                                                                     |              |
| Nominal voltage UN | 300 V                                                                               | 300 V                                                                                                                                                 |              |
| Nominal current IN | 16 A                                                                                | 16 A                                                                                                                                                  |              |
| mm²/AWG/kcmil      | 26-10                                                                               | 26-10                                                                                                                                                 |              |

|                    |                                                                                     |                                                                                                                                                       |              |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 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 |
|                    | B                                                                                   | C                                                                                                                                                     |              |
| Nominal voltage UN | 300 V                                                                               | 300 V                                                                                                                                                 |              |

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### Approvals

|                                | B     | C     |
|--------------------------------|-------|-------|
| Nominal current I <sub>N</sub> | 16 A  | 16 A  |
| mm <sup>2</sup> /AWG/kcmil     | 26-10 | 26-10 |

EAC



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DE.A\*30.B.01742

cULus Recognized



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