

## Feed-through terminal block - USST 6 - 3070341

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Feed-through terminal block, nom. voltage: 500 V, nominal current: 41 A, connection method: Screw connection with spring support, number of connections: 2, cross section: 0.2 mm<sup>2</sup> - 10 mm<sup>2</sup>, AWG: 24 - 8, width: 8.2 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

RoHS

### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 50 STK                                                                                                  |
| GTIN         | <br>4 046356 543071 |
| GTIN         | 4046356543071                                                                                           |

### Technical data

#### General

|                                                 |                                                        |
|-------------------------------------------------|--------------------------------------------------------|
| Number of levels                                | 1                                                      |
| Number of connections                           | 2                                                      |
| Potentials                                      | 1                                                      |
| Nominal cross section                           | 6 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 | 1.31 W                                                 |
| Maximum load current                            | 57 A (with 10 mm <sup>2</sup> conductor cross section) |
| Nominal current I <sub>N</sub>                  | 41 A                                                   |
| Nominal voltage U <sub>N</sub>                  | 500 V (up to 690 V for pollution degree II)            |
| 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                        |
|                                                                                           | 6 mm <sup>2</sup> / 1.4 kg                          |
|                                                                                           | 10 mm <sup>2</sup> / 2 kg                           |
|                                                                                           | 2.5 mm <sup>2</sup> / 0.7 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                                                      | 6 mm <sup>2</sup>                                   |
| Tractive force setpoint                                                                   | 80 N                                                |
| Conductor cross section tensile test                                                      | 10 mm <sup>2</sup>                                  |
| Tractive force setpoint                                                                   | 90 N                                                |
| Result of tight fit on support                                                            | Test passed                                         |
| Tight fit on carrier                                                                      | NS 35/NS 32                                         |
| Setpoint                                                                                  | 5 N                                                 |
| Result of voltage-drop test                                                               | Test passed                                         |
| Requirements, voltage drop                                                                | ≤ 3.2 mV                                            |
| Result of temperature-rise test                                                           | Test passed                                         |
| Short circuit stability result                                                            | Test passed                                         |
| Conductor cross section short circuit testing                                             | 6 mm <sup>2</sup>                                   |
| Short-time current                                                                        | 0.72 A                                              |
| Conductor cross section short circuit testing                                             | 10 mm <sup>2</sup>                                  |
| Short-time current                                                                        | 1.2 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> ) <sup>2</sup> /Hz          |
| Acceleration                                                                              | 0,8 g                                               |

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## Technical data

### General

|                                                                         |                                     |
|-------------------------------------------------------------------------|-------------------------------------|
| 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                                                            | 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)) | 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            | 8.2 mm  |
| End cover width  | 2.2 mm  |
| Length           | 52 mm   |
| Height NS 35/7,5 | 57.3 mm |
| Height NS 35/15  | 64.8 mm |
| Height NS 32     | 62.3 mm |

### Connection data

|                                    |                                      |
|------------------------------------|--------------------------------------|
| Connection method                  | Screw connection with spring support |
| 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. | 10 mm <sup>2</sup>                   |
| Conductor cross section AWG min.   | 24                                   |
| Conductor cross section AWG max.   | 8                                    |

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## Technical data

### Connection data

|                                                                                         |                      |
|-----------------------------------------------------------------------------------------|----------------------|
| Conductor cross section flexible min.                                                   | 0.2 mm <sup>2</sup>  |
| Conductor cross section flexible max.                                                   | 6 mm <sup>2</sup>    |
| Min. AWG conductor cross section, flexible                                              | 24                   |
| Max. AWG conductor cross section, flexible                                              | 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.              | 6 mm <sup>2</sup>    |
| Conductor cross section flexible, with ferrule with plastic sleeve min.                 | 0.25 mm <sup>2</sup> |
| Conductor cross section flexible, with ferrule with plastic sleeve max.                 | 6 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.                                        | 2.5 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.                                     | 2.5 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. | 4 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>  |
| Stripping length                                                                        | 12 mm                |
| Internal cylindrical gage                                                               | A5                   |
| Screw thread                                                                            | M4                   |
| Tightening torque, min                                                                  | 1.5 Nm               |
| Tightening torque max                                                                   | 1.8 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 |
| Fire protection for rail vehicles (DIN EN 45545-2) R24 | 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) R26 | HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 |

### 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

# Feed-through terminal block - USST 6 - 3070341

Circuit diagram



## Approvals

### Approvals

Approvals

UL Recognized / cUL Recognized / CSA / 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 |
|                            | D                                                                                  | B                                                                                                                                                     | C            |
| Nominal voltage UN         | 600 V                                                                              | 300 V                                                                                                                                                 | 300 V        |
| Nominal current IN         | 5 A                                                                                | 30 A                                                                                                                                                  | 30 A         |
| mm <sup>2</sup> /AWG/kcmil | 24-10                                                                              | 24-10                                                                                                                                                 | 24-10        |

|                            |                                                                                     |                                                                                                                                                       |              |
|----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 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 |
|                            | D                                                                                   | B                                                                                                                                                     | C            |
| Nominal voltage UN         | 600 V                                                                               | 300 V                                                                                                                                                 | 300 V        |
| Nominal current IN         | 5 A                                                                                 | 30 A                                                                                                                                                  | 30 A         |
| mm <sup>2</sup> /AWG/kcmil | 24-10                                                                               | 24-10                                                                                                                                                 | 24-10        |

|                            |                                                                                     |                                                                                                                                         |       |
|----------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------|
| CSA                        |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 13631 |
|                            | D                                                                                   | B                                                                                                                                       | C     |
| Nominal voltage UN         | 600 V                                                                               | 300 V                                                                                                                                   | 300 V |
| Nominal current IN         | 5 A                                                                                 | 30 A                                                                                                                                    | 30 A  |
| mm <sup>2</sup> /AWG/kcmil | 24-10                                                                               | 24-10                                                                                                                                   | 24-10 |

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