

## Mini feed-through terminal block - MSDB 2,5-M - 3244258

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Mini feed-through terminal block, nom. voltage: 800 V, nominal current: 24 A, connection method: Spring-cage connection, number of connections: 4, cross section: 0.08 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 28 - 12, width: 10.4 mm, height: 22 mm, color: gray, mounting type: Direct mounting with flange




### Your advantages

- ✓ Space saving thanks to compact design and mounting option on a 15 mm DIN rail
- ✓ Clear arrangement thanks to marking of all terminal points
- ✓ Easy potential distribution thanks to standardized plug-in bridges

RoHS



### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| Minimum order quantity               | 50 pc   |
| GTIN                                 | <br>4 046356 145657 |
| GTIN                                 | 4046356145657   |
| Weight per Piece (excluding packing) | 6.800 g   |
| Custom tariff number                 | 85369010  |
| Country of origin                    | China   |

### Technical data

#### General

|  |                     |
|--|---------------------|
| Number of levels                       | 1                   |
| Number of connections                  | 4                   |
| Nominal cross section                  | 2.5 mm <sup>2</sup> |
| Color                                  | gray                |
| Insulating material                    | PA                  |
| Flammability rating according to UL 94 | V0                  |

## Mini feed-through terminal block - MSDB 2,5-M - 3244258

### Technical data

#### General

|   |   |
|---|---|
| Rated surge voltage   | 8 kV  |
| Degree of pollution   | 3   |
| Overvoltage category  | III   |
| Insulating material group   | I   |
| Maximum power dissipation for nominal condition   | 0.77 W  |
| Designation   | Level 1 above 1 below 1                               |
| Maximum load current  | 30 A (with 4 mm <sup>2</sup> conductor cross section) |
| Nominal current I <sub>N</sub>  | 24 A  |
| Nominal voltage U <sub>N</sub>  | 800 V   |
| Open side panel   | Yes   |
| Shock protection test specification   | DIN EN 50274 (VDE 0660-514):2002-11                   |
| Back of the hand protection   | guaranteed  |
| Finger protection   | guaranteed  |
| Result of surge voltage test  | Test passed   |
| Surge voltage test setpoint   | 9.8 kV  |
| Result of power-frequency withstand voltage test  | Test passed   |
| Power frequency withstand voltage setpoint  | 2 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   | 0.08 mm <sup>2</sup> / 0.1 kg                         |
|   | 2.5 mm <sup>2</sup> / 0.7 kg                          |
|   | 4 mm <sup>2</sup> / 0.9 kg                            |
| Tensile test result   | Test passed   |
| Conductor cross section tensile test  | 0.08 mm <sup>2</sup>                                  |
| Tractive force setpoint   | 5 N   |
| Conductor cross section tensile test  | 2.5 mm <sup>2</sup>                                   |
| Tractive force setpoint   | 50 N  |
| Conductor cross section tensile test  | 4 mm <sup>2</sup>                                     |
| Tractive force setpoint   | 60 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   | 2.5 mm <sup>2</sup>                                   |

## Mini feed-through terminal block - MSDB 2,5-M - 3244258

### Technical data

#### General

|   |   |
|---|---|
| Short-time current  | 0.3 kA  |
| Conductor cross section short circuit testing                           | 4 mm <sup>2</sup>                                   |
| Short-time current  | 0.48 kA   |
| Result of thermal test  | Test passed   |
| Ageing test for screwless modular terminal block temperature cycles     | 192   |
| Proof of thermal characteristics (needle flame) effective duration      | 30 s  |
| Result of aging test  | Test passed   |
| 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          |
| 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)) | 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   |

## Mini feed-through terminal block - MSDB 2,5-M - 3244258

### Technical data

#### Dimensions

|                 |         |
|-----------------|---------|
| Width           | 10.4 mm |
| End cover width | 4 mm    |
| Length          | 32 mm   |
| Height          | 22 mm   |

#### Connection data

|   |                        |
|---|------------------------|
| Connection  | 1 level                |
| Connection method   | Spring-cage connection |
| Stripping length  | 8 mm                   |
| Connection in acc. with standard  | IEC 60947-7-1          |
| Conductor cross section solid min.  | 0.08 mm <sup>2</sup>   |
| Conductor cross section solid max.  | 4 mm <sup>2</sup>      |
| Conductor cross section AWG min.  | 28                     |
| Conductor cross section AWG max.  | 12                     |
| Conductor cross section flexible min.   | 0.08 mm <sup>2</sup>   |
| Conductor cross section flexible max.   | 2.5 mm <sup>2</sup>    |
| Min. AWG conductor cross section, flexible  | 28                     |
| Max. AWG conductor cross section, flexible  | 14                     |
| 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.              | 2.5 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.                 | 2.5 mm <sup>2</sup>    |
| 2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, max. | 0.5 mm <sup>2</sup>    |
| Connection in acc. with standard  | IEC/EN 60079-7         |
| Conductor cross section AWG min.  | 28                     |
| Conductor cross section AWG max.  | 12                     |
| Min. AWG conductor cross section, flexible  | 28                     |
| Max. AWG conductor cross section, flexible  | 14                     |
| Internal cylindrical gage   | A3                     |

#### 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   |

## Mini feed-through terminal block - MSDB 2,5-M - 3244258

### Technical data

#### Environmental Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27141120 |
| eCl@ss 4.1 | 27141120 |
| eCl@ss 5.0 | 27141120 |
| eCl@ss 5.1 | 27141100 |
| eCl@ss 6.0 | 27141100 |
| eCl@ss 7.0 | 27141120 |
| eCl@ss 8.0 | 27141120 |
| eCl@ss 9.0 | 27141120 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000902 |
| ETIM 3.0 | EC000897 |
| ETIM 4.0 | EC000897 |
| ETIM 5.0 | EC000897 |
| ETIM 6.0 | EC000897 |
| ETIM 7.0 | EC000897 |

#### UNSPSC

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

### Approvals

#### Approvals

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#### Approvals

DNV GL / CSA / UL Recognized / cUL Recognized / IEC CB Scheme / VDE Zeichengenehmigung / EAC / EAC / cULus Recognized

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# Mini feed-through terminal block - MSDB 2,5-M - 3244258


## Approvals


Ex Approvals


IECEX / ATEX / EAC Ex


### Approval details

|        |   |   |            |
|--------|---|---|------------|
| DNV GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | TAE00001CS |
|--------|---|---|------------|

|                            |   |   |       |
|----------------------------|---|---|-------|
| 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         | 600 V   | 600 V   |       |
| Nominal current IN         | 20 A  | 20 A  |       |
| mm <sup>2</sup> /AWG/kcmil | 28-12   | 28-12   |       |

|                            |   |   |              |
|----------------------------|---|---|--------------|
| 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         | 600 V   | 600 V   |              |
| Nominal current IN         | 20 A  | 20 A  |              |
| mm <sup>2</sup> /AWG/kcmil | 28-12   | 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 |
|                            | B   | C   |              |
| Nominal voltage UN         | 600 V   | 600 V   |              |
| Nominal current IN         | 20 A  | 20 A  |              |
| mm <sup>2</sup> /AWG/kcmil | 28-12   | 28-12   |              |

|                    |   |   |           |
|--------------------|---|---|-----------|
| IECEE CB Scheme    |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-52239 |
| Nominal voltage UN | 800 V   |   |           |

## Mini feed-through terminal block - MSDB 2,5-M - 3244258


### Approvals

|                                |      |
|--------------------------------|------|
| Nominal current I <sub>N</sub> | 24 A |
| mm <sup>2</sup> /AWG/kcmil     | 2.5  |

|                                |   |   |          |
|--------------------------------|---|---|----------|
| VDE Zeichengenehmigung         |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40037485 |
| Nominal voltage U <sub>N</sub> | 800 V   |   |          |
| Nominal current I <sub>N</sub> | 24 A  |   |          |
| mm <sup>2</sup> /AWG/kcmil     | 0.2-2.5   |   |          |

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

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

|                  |   |
|------------------|---|
| cULus Recognized |  |
|------------------|---|

### Accessories

#### Accessories

#### End cover

End cover - D-MZB 1,5 - 3024177



End cover, length: 32 mm, width: 4 mm, height: 22 mm, color: gray

## Mini feed-through terminal block - MSDB 2,5-M - 3244258

### Accessories

End cover - D-MZB 1,5 BU - 3024423



End cover, length: 32 mm, width: 4 mm, height: 22 mm, color: blue

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End cover - D-MSB 1,5-F - 3024180



End cover, length: 32 mm, width: 9.9 mm, height: 22 mm, color: gray

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End cover - D-MSB 1,5-F BU - 3024449



End cover, length: 32 mm, width: 9.9 mm, height: 22 mm, color: blue

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### Insertion bridge

Insertion bridge - ESB 2-MZDB - 3029703



Insertion bridge, pitch: 6.2 mm, number of positions: 2, color: gray

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### Labeled terminal marker

Zack Marker strip, flat - ZBF 5 CUS - 0825025



Zack Marker strip, flat, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

## Mini feed-through terminal block - MSDB 2,5-M - 3244258

### Accessories

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#### Zack Marker strip, flat - ZBF 5,LGS:FORTL.ZAHLEN - 0808671



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

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#### Zack Marker strip, flat - ZBF 5,QR:FORTL.ZAHLEN - 0808697



Zack Marker strip, flat, Strip, white, labeled, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

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#### Zack Marker strip, flat - ZBF 5,LGS:GERADE ZAHLEN - 0810821



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive numbers 2 ... 20, 22 ... 40, etc. up to 82 ... 100, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

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#### Zack Marker strip, flat - ZBF 5,LGS:UNGERADE ZAHLEN - 0810863



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm

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#### Marker for terminal blocks - UC-TMF 5 CUS - 0824638



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 5.1 mm

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## Mini feed-through terminal block - MSDB 2,5-M - 3244258

### Accessories

Marker for terminal blocks - UCT-TMF 5 CUS - 0829658



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 5.2 mm, lettering field size: 4.4 x 4.7 mm

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### Screwdriver tools

Screwdriver - SZF 1-0,6X3,5 - 1204517



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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Screwdriver - ST-BW - 1207608



Actuation tool, for all 2.5 mm<sup>2</sup> - 4.0 mm<sup>2</sup> spring-cages

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### Terminal marking

Zack Marker strip, flat - ZBF 5:UNBEDRUCKT - 0808642



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.1 x 5.2 mm

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Marker for terminal blocks - UC-TMF 5 - 0818153



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 flat marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 5.1 mm

## Mini feed-through terminal block - MSDB 2,5-M - 3244258

### Accessories

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#### Marker for terminal blocks - UCT-TMF 5 - 0828744



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 flat marker groove, for terminal block width: 5.2 mm, lettering field size: 4.4 x 4.7 mm

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