

## Mini feed-through terminal block - MBK 3/E-Z - 1413036

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Mini feed-through terminal block, nom. voltage: 500 V, nominal current: 24 A, connection method: Screw connection, number of connections: 2, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 5.2 mm, color: gray, mounting type: NS 15

### Your advantages

- ✔ Separating disks, partition plates, and test sockets complete the range of accessories
- ✔ Clear arrangement thanks to marking of all terminal points
- ✔ Space saving thanks to compact design and mounting option on a 15 mm DIN rail
- ✔ Easy potential distribution thanks to standardized plug-in bridges

RoHS



### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 017918 021115 |
| GTIN                                 | 4017918021115   |
| Weight per Piece (excluding packing) | 4.910 g   |
| Custom tariff number                 | 85369010  |
| Country of origin                    | China   |

### Technical data

#### General

|                       |                     |
|-----------------------|---------------------|
| Number of levels      | 1                   |
| Number of connections | 2                   |
| Potentials            | 1                   |
| Nominal cross section | 2.5 mm <sup>2</sup> |
| Color                 | gray                |
| Insulating material   | PA                  |

## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Technical data

#### General

|   |  |
|---|--|
| Flammability rating according to UL 94  | V2   |
| Rated surge voltage   | 6 kV   |
| Degree of pollution   | 3  |
| Overvoltage category  | III  |
| Insulating material group   | I  |
| Maximum power dissipation for nominal condition   | 0.77 W   |
| Maximum load current  | 32 A (with 4 mm <sup>2</sup> conductor cross section)                  |
| Nominal current I <sub>N</sub>  | 24 A   |
| Nominal voltage U <sub>N</sub>  | 500 V  |
| Open side panel   | Yes  |
| Ambient temperature (operation)   | -60 °C ... 85 °C   |
| Ambient temperature (storage/transport)   | -25 °C ... 55 °C (For a short time, not exceeding 24 h, -60 to +70 °C) |
| Permissible humidity (storage/transport)  | 30 % ... 70 %  |
| Ambient temperature (assembly)  | -5 °C ... 70 °C  |
| Ambient temperature (actuation)   | -5 °C ... 70 °C  |
| 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  |
| 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   |
|   | 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  | 0.2 mm <sup>2</sup>  |
| Tractive force setpoint   | 10 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 tight fit on support  | Test passed  |

# Mini feed-through terminal block - MBK 3/E-Z - 1413036

## Technical data

### General

|   |  |
|---|--|
| Tight fit on carrier  | NS 15  |
| Setpoint  | 1 N  |
| Result of voltage-drop test   | Test passed  |
| Requirements, voltage drop  | $U_1 \leq 3,2 \text{ mV}$<br>$U_2 \leq 1,5 \times U_1$<br>$dT \leq 45 \text{ K}$ |
| Result of temperature-rise test   | Test passed  |
| Requirement temperature-rise test                                       | Increase in temperature $\leq 45 \text{ K}$                                      |
| Short circuit stability result  | Test passed  |
| Conductor cross section short circuit testing                           | 2.5 mm <sup>2</sup>  |
| 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  |
| Proof of thermal characteristics (needle flame) effective duration      | 30 s   |
| 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   |

### Dimensions

|                 |        |
|-----------------|--------|
| Width           | 5.2 mm |
| End cover width | 1 mm   |
| Length          | 28 mm  |
| Height NS 15    | 32 mm  |

### Connection data

|                                       |                     |
|---------------------------------------|---------------------|
| Connection                            | 1 level             |
| Connection method                     | Screw connection    |
| Screw thread                          | M3                  |
| Stripping length                      | 8 mm                |
| Tightening torque, min                | 0.6 Nm              |
| Tightening torque max                 | 0.8 Nm              |
| 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> |

## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Technical data

#### Connection data

|  |                      |
|--|----------------------|
| Min. AWG conductor cross section, flexible   | 24                   |
| Max. AWG conductor cross section, flexible   | 14                   |
| 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.                             | 2.5 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.                                | 1.5 mm <sup>2</sup>  |
| Cross section with insertion bridge, solid max.  | 2.5 mm <sup>2</sup>  |
| Cross section with insertion bridge, stranded 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 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>  |
| Two conductors with the same cross section, flexible, with TWIN ferrules, with plastic sleeve, minimum | 0.5 mm <sup>2</sup>  |
| Two conductors with the same cross section, flexible, with TWIN ferrules, with plastic sleeve, maximum | 1 mm <sup>2</sup>    |
| Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, minimum  | 0.25 mm <sup>2</sup> |
| Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, maximum  | 1.5 mm <sup>2</sup>  |
| Connection in acc. with standard   | IEC/EN 60079-7       |
| 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>  |
| Internal cylindrical gage  | A3                   |

#### Standards and Regulations

|  |               |
|--|---------------|
| Connection in acc. with standard       | IEC 60947-7-1 |
| Flammability rating according to UL 94 | V2            |

#### Environmental Product Compliance

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

### Drawings

# Mini feed-through terminal block - MBK 3/E-Z - 1413036

Circuit diagram



## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27141120 |
| eCl@ss 4.0    | 27141100 |
| eCl@ss 4.1    | 27141100 |
| eCl@ss 5.0    | 27141100 |
| 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 | EC000897 |
| 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 |
| UNSPSC 18.0   | 39121410 |
| UNSPSC 19.0   | 39121410 |
| UNSPSC 20.0   | 39121410 |
| UNSPSC 21.0   | 39121410 |

## Approvals

Approvals

# Mini feed-through terminal block - MBK 3/E-Z - 1413036

## Approvals


### Approvals


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

### Ex Approvals


IECEX / 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 |
|                            | B   | C   | D            |
| Nominal voltage UN         | 300 V   | 300 V   | 600 V        |
| Nominal current IN         | 20 A  | 20 A  | 5 A          |
| mm <sup>2</sup> /AWG/kcmil | 28-12   | 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   | D            |
| Nominal voltage UN         | 300 V   | 300 V   | 600 V        |
| Nominal current IN         | 20 A  | 20 A  | 5 A          |
| mm <sup>2</sup> /AWG/kcmil | 28-12   | 28-12   | 28-12        |

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

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

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

## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Accessories

#### Accessories

#### Bridge

Fixed bridge - FB-150 METER - 0201595



Cross connection rail, for fixed bridging of identical inputs and outputs, made of Cu, nickel-plated, 1 m long

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#### DIN rail

DIN rail, unperforated - NS 15 UNPERF 2000MM - 1401695



DIN rail, unperforated, Standard profile, width: 15 mm, height: 5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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DIN rail perforated - NS 15 PERF 2000MM - 1401682



DIN rail perforated, Standard profile, width: 15 mm, height: 5.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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DIN rail perforated - NS 15 AL PERF 2000MM - 1401763



DIN rail perforated, Standard profile, width: 15 mm, height: 5.5 mm, acc. to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

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## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Accessories

DIN rail perforated - NS 15 WH PERF 2000MM - 1204096



DIN rail perforated, Standard profile, width: 15 mm, height: 5.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

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### End block

End clamp - E/MBK - 1401637



End clamp, width: 6.2 mm, color: gray

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End clamp - E/MK - 1421633



End clamp, width: 6.2 mm, color: gray

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End clamp - E/MK 1 - 1421659



End clamp width: 6 mm, color: gray

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### End cover

End cover - D-MBK/E - 1415021



End cover, length: 28 mm, width: 1 mm, height: 26.2 mm, color: gray



## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Accessories

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#### Insertion bridge

Insertion bridge - EBL 10- 5 - 2303132



Insertion bridge, pitch: 5.2 mm, number of positions: 10, color: gray

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#### Labeled terminal marker

Zack marker strip - ZB 5 CUS - 0824962



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

---

Zack marker strip - ZB 5,LGS:FORTL.ZAHLEN - 1050017



Zack marker strip, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

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Zack marker strip - ZB 5,QR:FORTL.ZAHLEN - 1050020



Zack marker strip, white, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm

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## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Accessories

#### Zack marker strip - ZB 5,LGS:GLEICHE ZAHLEN - 1050033



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: Identical numbers 1 or 2, etc. up to 100, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

#### Zack marker strip - ZB 5,LGS:L1-N,PE - 1050415



Zack marker strip, Strip, white, labeled, horizontal: L1, L2, L3, N, PE, L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

#### Marker for terminal blocks - UC-TM 5 CUS - 0824581



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 10.5 x 4.6 mm, Number of individual labels: 96

#### Marker for terminal blocks - UCT-TM 5 CUS - 0829595



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 10.5 mm, Number of individual labels: 72

### Partition plate

#### Separating plate - TS-KK 3 - 2770215



Separating plate, length: 14 mm, width: 0.5 mm, height: 16 mm, color: gray

## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Accessories

Partition plate - ATP-MBK - 1413227



Partition plate, length: 42.5 mm, width: 2.5 mm, height: 30.5 mm, color: gray

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### Screw bridge

Fixed bridge - FBRI 10-5 N - 2770642



Fixed bridge, pitch: 5.2 mm, number of positions: 10, color: silver

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Fixed bridge - FBRI 2-5 N - 3000227



Fixed bridge, pitch: 5 mm, number of positions: 2, color: silver

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Fixed bridge - FBRI 3-5 N - 3000201



Fixed bridge, pitch: 5 mm, number of positions: 3, color: silver

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Fixed bridge - FBRI 4-5 N - 3000191



Fixed bridge, pitch: 5 mm, number of positions: 4, color: silver

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## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Accessories

Fixed bridge - FBRI 5-5 N - 3000188



Fixed bridge, number of positions: 5, color: silver

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Fixed bridge - FBRI 5-5 N - 3000188



Fixed bridge, number of positions: 5, color: silver

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Fixed bridge - FBRI 6-5 N - 3000256



Fixed bridge, number of positions: 6, color: silver

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Fixed bridge - FBRI 7-5 N - 3000269



Fixed bridge, number of positions: 7, color: silver

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Fixed bridge - FBRI 8-5 N - 3000272



Fixed bridge, number of positions: 8, color: silver

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## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Accessories

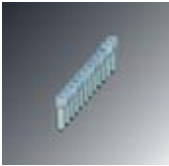
Fixed bridge - FBRI 9-5 N - 3000285



Fixed bridge, number of positions: 9, color: silver

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Fixed bridge - FBRI 12-5 N - 3000434



Fixed bridge, number of positions: 12, color: silver

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Fixed bridge - FBRI 16-5 N - 3000476



Fixed bridge, number of positions: 16, color: silver

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Fixed bridge - FBRI 20-5 N - 3000515



Fixed bridge, pitch: 5 mm, number of positions: 20, color: silver

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Fixed bridge - FBRI 40-5 N - 3006823



Fixed bridge, number of positions: 40, color: silver

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### Screwdriver tools

## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Accessories

Screwdriver - SZS 0,6X3,5 - 1205053



Actuation tool, for ST terminal blocks, insulated, 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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### Switching jumper

Switching jumper - SBRN 2-7 - 1413230



Switching jumper, pitch: 7 mm, number of positions: 2, color: silver

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### Terminal marking

Zack marker strip - ZB 5 :UNBEDRUCKT - 1050004



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.1 x 10.5 mm, Number of individual labels: 10

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Marker for terminal blocks - UC-TM 5 - 0818108



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 tall marker groove, for terminal block width: 5.2 mm, lettering field size: 10.5 x 4.6 mm, Number of individual labels: 96

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Marker for terminal blocks - UCT-TM 5 - 0828734



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 tall marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 10.5 mm, Number of individual labels: 72

## Mini feed-through terminal block - MBK 3/E-Z - 1413036

### Accessories

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#### Test plug terminal block

Reducing plug - RPS - 0201647



Reducing plug, color: gray

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#### Test socket

Female test connector - PSBJ 3/13/4 - 0201304



Female test connector, color: silver

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Female test connector - PSB 3/10/4 - 0601292



Female test connector, color: silver

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