

## 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



### Key Commercial Data

Packing unit	50 pc
GTIN	 4 017918 021115
GTIN	4017918021115

### 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
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

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

## Technical data

### General

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
Surge voltage test setpoint	7.2 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
	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
Tight fit on carrier	NS 15
Setpoint	1 N
Result of voltage-drop test	Test passed
Requirements, voltage drop	U <sub>1</sub> ≤ 3,2 mV U <sub>2</sub> ≤ 1,5 x U <sub>1</sub> dT ≤ 45 K
Result of temperature-rise test	Test passed
Requirement temperature-rise test	Increase in temperature ≤ 45 K
Short circuit stability result	Test passed

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

### Technical data

#### General

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
Surface flammability NFPA 130 (ASTM E 162)	passed
Specific optical density of smoke NFPA 130 (ASTM E 662)	passed
Calorimetric heat release NFPA 130 (ASTM E 1354)	28 MJ/kg
Smoke gas toxicity NFPA 130 (SMP 800C)	passed
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	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>
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>

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

## Technical data

### Connection data

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
	IEC/EN 60079-7
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

Circuit diagram



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

## 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

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#### Approvals

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

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#### Ex Approvals

IECEX / ATEX / EAC Ex

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### Approval details

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

## Approvals

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
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EAC		RU C-DE.A*30.B.01742
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cULus Recognized		
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## 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

#### DIN rail

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

### Accessories

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

### Accessories

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

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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

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

### Accessories

#### 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

#### 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

#### 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

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

### Accessories

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

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### Partition plate

Separating plate - TS-KK 3 - 2770215



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

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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

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

### Accessories

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

### Accessories

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

### Accessories

Fixed bridge - FBRI 20-5 N - 3000515



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

Fixed bridge - FBRI 40-5 N - 3006823



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

### Screwdriver tools

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

### Switching jumper

Switching jumper - SBRN 2-7 - 1413230



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

### 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

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

### Accessories

#### 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

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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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