

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 mm² - 4 mm², 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 ²
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 ² conductor cross section)
Nominal current I _N	24 A
Nominal voltage U _N	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 ² / 0.2 kg
	2.5 mm ² / 0.7 kg
	4 mm ² / 0.9 kg
Tensile test result	Test passed
Conductor cross section tensile test	0.2 mm ²
Tractive force setpoint	10 N
Conductor cross section tensile test	2.5 mm ²
Tractive force setpoint	50 N
Conductor cross section tensile test	4 mm ²
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 ₁ ≤ 3,2 mV U ₂ ≤ 1,5 x U ₁ 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

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General

Conductor cross section short circuit testing	2.5 mm ²
Short-time current	0.3 kA
Conductor cross section short circuit testing	4 mm ²
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 ²
Conductor cross section solid max.	4 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
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 ²

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 ²
Conductor cross section flexible, with ferrule with plastic sleeve min.	0.25 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve max.	1.5 mm ²
Cross section with insertion bridge, solid max.	2.5 mm ²
Cross section with insertion bridge, stranded max.	2.5 mm ²
2 conductors with same cross section, solid min.	0.2 mm ²
2 conductors with same cross section, solid max.	1 mm ²
2 conductors with same cross section, stranded min.	0.2 mm ²
2 conductors with same cross section, stranded max.	1.5 mm ²
Two conductors with the same cross section, flexible, with TWIN ferrules, with plastic sleeve, minimum	0.5 mm ²
Two conductors with the same cross section, flexible, with TWIN ferrules, with plastic sleeve, maximum	1 mm ²
Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, minimum	0.25 mm ²
Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, maximum	1.5 mm ²
Connection in acc. with standard	IEC/EN 60079-7
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	4 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Internal cylindrical gage	A3

Standards and Regulations

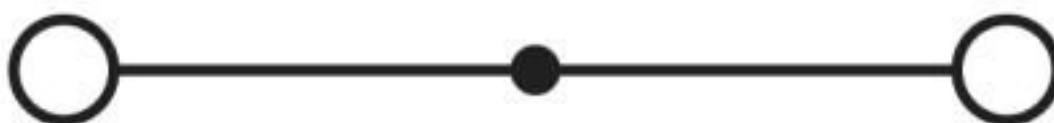
Connection in acc. with standard	IEC 60947-7-1
	IEC/EN 60079-7
Flammability rating according to UL 94	V2

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

Approvals

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

Ex Approvals

IECEX / ATEX / EAC Ex

Approval details

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

Approvals

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	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 ² /AWG/kcmil	28-12	28-12	28-12

cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	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 ² /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

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

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

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

End block

End clamp - E/MBK - 1401637



End clamp, width: 6.2 mm, color: gray

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

Accessories

End clamp - E/MK - 1421633



End clamp, width: 6.2 mm, color: gray

End clamp - E/MK 1 - 1421659



End clamp width: 6 mm, color: gray

End cover

End cover - D-MBK/E - 1415021



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

Insertion bridge

Insertion bridge - EBL 10- 5 - 2303132



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

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

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

Partition plate

Separating plate - TS-KK 3 - 2770215



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

Partition plate - ATP-MBK - 1413227



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

Screw bridge

Fixed bridge - FBRI 10-5 N - 2770642



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

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

Fixed bridge - FBRI 4-5 N - 3000191



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

Fixed bridge - FBRI 5-5 N - 3000188



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

Fixed bridge - FBRI 5-5 N - 3000188



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

Fixed bridge - FBRI 6-5 N - 3000256



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

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

Fixed bridge - FBRI 8-5 N - 3000272



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

Fixed bridge - FBRI 9-5 N - 3000285



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

Fixed bridge - FBRI 12-5 N - 3000434



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

Fixed bridge - FBRI 16-5 N - 3000476



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

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

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

Test plug terminal block

Reducing plug - RPS - 0201647



Reducing plug, color: gray

Test socket

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



Female test connector, color: silver

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



Female test connector, color: silver

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