

MSDB 2,5 - Mini feed-through terminal block



3244216

<https://www.phoenixcontact.com/us/products/3244216>

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Mini feed-through terminal block, nom. voltage: 800 V, nominal current: 24 A, number of connections: 4, connection method: Spring-cage connection, 1 level, Rated cross section: 2.5 mm², cross section: 0.08 mm² - 4 mm², mounting type: NS 15, color: gray

Your advantages

- Can be used in smaller terminal boxes
- 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

Commercial data

Item number	3244216
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE02
Product key	BE2162
Catalog page	Page 222 (C-1-2019)
GTIN	4046356145671
Weight per piece (including packing)	7.326 g
Weight per piece (excluding packing)	7.326 g
Customs tariff number	85369010
Country of origin	CN

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Technical data

Product properties

Product type	Miniature terminal block
Number of connections	4
Number of rows	1
Potentials	2

Insulation characteristics

Overvoltage category	III
Degree of pollution	3

Electrical properties

Rated surge voltage	8 kV
Maximum power dissipation for nominal condition	0.77 W

Connection data

Number of connections per level	2
Nominal cross section	2.5 mm ²

1 level

Stripping length	8 mm
Internal cylindrical gage	A3
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.08 mm ² ... 4 mm ²
Cross section AWG	28 ... 12 (converted acc. to IEC)
Conductor cross section flexible	0.08 mm ² ... 2.5 mm ²
Conductor cross section, flexible [AWG]	28 ... 14 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm ² ... 2.5 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm ² ... 2.5 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ²
Nominal current	24 A
Maximum load current	30 A (with 4 mm ² conductor cross section)
Nominal voltage	800 V
Nominal cross section	2.5 mm ²
Connection in acc. with standard	IEC/EN 60079-7
Cross section AWG	28 ... 12 (converted acc. to IEC)
Conductor cross section, flexible [AWG]	28 ... 14 (converted acc. to IEC)

Ex data

Rated data (ATEX/IECEx)

Identification	Ex II 2 G Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C

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3244216

<https://www.phoenixcontact.com/us/products/3244216>

Ex-certified accessories	3024177 D-MZB 1,5
	1204517 SZF 1-0,6X3,5
	3022263 CLIPFIX 15
	3022276 CLIPFIX 35-5
List of bridges	Insertion bridge / ESB 2-MZDB / 3029703
Bridge data	21 A / 2.5 mm ²
Ex temperature increase	40 K (21.3 A / 2.5 mm ²)
Rated voltage	690 V
Rated insulation voltage	630 V
output	(Permanent)

Ex level General

Rated current	21 A
Maximum load current	26 A
Contact resistance	0.87 mΩ

Ex connection data General

Nominal cross section	2.5 mm ²
Rated cross section AWG	14
Connection capacity rigid	0.08 mm ² ... 4 mm ²
Connection capacity AWG	28 ... 12
Connection capacity flexible	0.08 mm ² ... 2.5 mm ²
Connection capacity AWG	28 ... 14

Dimensions

Width	10.4 mm
End cover width	4 mm
Height	32 mm
Depth	22 mm
Depth on NS 15	30 mm

Material specifications

Color	gray
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA
Static insulating material application in cold	-60 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	130 °C
Relative insulation material temperature index (Elec., UL 746 B)	130 °C
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
Calorimetric heat release NFPA 130 (ASTM E 1354)	28 MJ/kg

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3244216

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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

Electrical tests

Surge voltage test

Result	Test passed
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Temperature-rise test

Requirement temperature-rise test	Increase in temperature ≤ 45 K
Result	Test passed
Short-time withstand current 2.5 mm ²	0.3 kA
Short-time withstand current 4 mm ²	0.48 kA
Result	Test passed

Power-frequency withstand voltage

Test voltage setpoint	2 kV
Result	Test passed

Mechanical properties

Mechanical data

Open side panel	Yes
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Mechanical tests

Mechanical strength

Result	Test passed
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Attachment on the carrier

DIN rail/fixing support	NS 15
Result	Test passed

Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	0.2 mm ² / 0.2 kg
	2.5 mm ² / 0.7 kg
	4 mm ² / 0.9 kg
Result	Test passed

Environmental and real-life conditions

Needle-flame test

Time of exposure	30 s
Result	Test passed

Oscillation/broadband noise

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Specification	DIN EN 50155 (VDE 0115-200):2018-05
Spectrum	Service life test category 2, bogie-mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	$6.12 \text{ (m/s}^2\text{)}^2\text{/Hz}$
Acceleration	3.12g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis

Shocks

Specification	DIN EN 50155 (VDE 0115-200):2008-03
Pulse shape	Half-sine
Acceleration	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)

Ambient conditions

Ambient temperature (operation)	-60 °C ... 110 °C (Operating temperature range incl. self-heating; for max. short-term operating temperature, see RTI Elec.)
Ambient temperature (storage/transport)	-25 °C ... 60 °C (for a short time, no longer than 24 h, -60°C to +70°C)
Ambient temperature (assembly)	-5 °C ... 70 °C
Ambient temperature (actuation)	-5 °C ... 70 °C
Permissible humidity (operation)	20 % ... 90 %
Permissible humidity (storage/transport)	30 % ... 70 %

Standards and regulations

Connection in acc. with standard	IEC 60947-7-1
	IEC/EN 60079-7

Mounting

Mounting type	NS 15
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Drawings

Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3244216>

 CSA Approval ID: 13631				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	600 V	20 A	28 - 12	-
Use group C	600 V	20 A	28 - 12	-

 IECEE CB Scheme Approval ID: DE1-62820				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	800 V	24 A	-	0.2 - 2.5

 VDE Zeichengenehmigung Approval ID: 40029769				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	800 V	24 A	-	0.2 - 2.5

 cULus Recognized Approval ID: E60425				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	600 V	20 A	28 - 12	-
Use group C	600 V	20 A	28 - 12	-

DNV Approval ID: TAE00001CS				
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 EAC Ex Approval ID: RU C-DE.HA91.B.00066				
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 IECEx Approval ID: IECExPTB08.0048U				
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MSDB 2,5 - Mini feed-through terminal block



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ATEX

Approval ID: PTB08ATEX1075U



UKCA-EX

Approval ID: CSAE 22UKEX1245U

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3244216

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Classifications

ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250101

ETIM

ETIM 9.0	EC000897
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UNSPSC

UNSPSC 21.0	39121400
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3244216

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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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Accessories

i Note: Applying some accessories below might limit this product.

ESB 2-MZDB - Insertion bridge

3029703

<https://www.phoenixcontact.com/us/products/3029703>

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



i Max. current carrying capacity: 24 A

D-MZB 1,5 - End cover

3024177

<https://www.phoenixcontact.com/us/products/3024177>

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



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D-MZB 1,5 BU - End cover

3024423

<https://www.phoenixcontact.com/us/products/3024423>



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

NS 15 UNPERF 2000MM VPE 10 - DIN rail, unperforated

1401695

<https://www.phoenixcontact.com/us/products/1401695>



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

MSDB 2,5 - Mini feed-through terminal block

3244216

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NS 15 PERF 2000MM VPE 10 - DIN rail perforated

1401682

<https://www.phoenixcontact.com/us/products/1401682>



DIN rail perforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

NS 15 AL PERF 2000MM VPE 10 - DIN rail perforated

1401763

<https://www.phoenixcontact.com/us/products/1401763>



DIN rail perforated, Pack of 10 (20 m), acc. to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

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NS 15 WH PERF 2000MM-VPE 10 - DIN rail perforated

1204096

<https://www.phoenixcontact.com/us/products/1204096>



DIN rail perforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

ZBF 5:UNBEDRUCKT - Zack Marker strip, flat

0808642

<https://www.phoenixcontact.com/us/products/0808642>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.1 x 5.2 mm, Number of individual labels: 10

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ZBF 5 CUS - Zack Marker strip, flat

0825025

<https://www.phoenixcontact.com/us/products/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, Number of individual labels: 10

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

0808671

<https://www.phoenixcontact.com/us/products/0808671>



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

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

0808697

<https://www.phoenixcontact.com/us/products/0808697>



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

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

0810821

<https://www.phoenixcontact.com/us/products/0810821>



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive even numbers 2 ... 20, 22 ... 40, etc. up to 82 ... 100, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

MSDB 2,5 - Mini feed-through terminal block



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

0810863

<https://www.phoenixcontact.com/us/products/0810863>



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

UC-TMF 5 - Marker for terminal blocks

0818153

<https://www.phoenixcontact.com/us/products/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: snapped, for terminal block width: 5.2 mm, lettering field size: 4.6 x 5.1 mm, Number of individual labels: 96

MSDB 2,5 - Mini feed-through terminal block

3244216

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UC-TMF 5 CUS - Marker for terminal blocks

0824638

<https://www.phoenixcontact.com/us/products/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, Number of individual labels: 96

UCT-TMF 5 - Marker for terminal blocks

0828744

<https://www.phoenixcontact.com/us/products/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: snapped, for terminal block width: 5.2 mm, lettering field size: 4.4 x 4.7 mm, Number of individual labels: 72

MSDB 2,5 - Mini feed-through terminal block

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UCT-TMF 5 CUS - Marker for terminal blocks

0829658

<https://www.phoenixcontact.com/us/products/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, Number of individual labels: 72

CLIPFIX 15 - End bracket

3022263

<https://www.phoenixcontact.com/us/products/3022263>



Snap-on end bracket, to be snapped onto NS 15 DIN rail

MSDB 2,5 - Mini feed-through terminal block



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SZF 1-0,6X3,5 - Screwdriver

1204517

<https://www.phoenixcontact.com/us/products/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

ST-BW - Actuation tool

1207608

<https://www.phoenixcontact.com/us/products/1207608>



Actuation tool, for all 2.5 mm² - 4.0 mm² spring-cages

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