

MSDB 2,5-F - Mini feed-through terminal block



3244232

<https://www.phoenixcontact.com/us/products/3244232>

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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, Rated cross section: 2.5 mm², 1 level, cross section: 0.08 mm² - 4 mm², mounting type: on mounting panel, color: gray

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

Commercial data

Item number	3244232
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE02
Product key	BE2165
GTIN	4046356145619
Weight per piece (including packing)	6.995 g
Weight per piece (excluding packing)	6 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

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

Connection method	Spring-cage connection
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 cross section	2.5 mm ²
Nominal current	24 A
Maximum load current	30 A (with 4 mm ² conductor cross-section)
Nominal voltage	800 V
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	⊕ II 2 G Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C

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Ex-certified accessories	3024180 D-MSB 1,5-F 1204517 SZF 1-0,6X3,5
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 insulation voltage	500 V 500 V
output	(Permanent)

Ex level General

Rated voltage	550 V
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
Hole diameter	3.2 mm

Material specifications

Color	gray (RAL 7042)
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
Surface flammability NFPA 130 (ASTM E 162)	passed

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Specific optical density of smoke NFPA 130 (ASTM E 662)	passed
Smoke gas toxicity NFPA 130 (SMP 800C)	passed

Electrical tests

Surge voltage test

Test voltage setpoint	9.8 kV
Result	Test passed

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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Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross-section/weight	0.08 mm ² / 0.1 kg
	2.5 mm ² / 0.7 kg
	4 mm ² / 0.9 kg
Result	Test passed

Environmental and real-life conditions

Aging

Temperature cycles	192
Result	Test passed

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):2008-03
Spectrum	Long life test category 1, class B, body mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	$1.857 \text{ (m/s}^2\text{)}/\text{Hz}$
Acceleration	0.8g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Result	Test passed

Shocks

Specification	DIN EN 50155 (VDE 0115-200):2008-03
Pulse shape	Half-sine
Acceleration	5g
Shock duration	30 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Result	Test passed

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, not exceeding 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	on mounting panel
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Drawings

Circuit diagram



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Approvals


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

DNV Approval ID: TAE00001CS				
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 VDE approval of drawings Approval ID: 40029769				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine	800 V	24 A	-	0.2 - 2.5

 EAC Ex Approval ID: KZ 7500525010101950				
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 IECEx Approval ID: IECExPTB08.0048U				
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ATEX

Approval ID: PTB08ATEX1075U



CCC

Approval ID: 2020322313000629



UKCA-EX

Approval ID: CSAE 22UKEX1245U

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Classifications

ECLASS

ECLASS-13.0	27250101
ECLASS-15.0	27250101

ETIM

ETIM 10.0	EC000897
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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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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EF3.1 Climate Change

CO2e kg	0.077 kg CO2e
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