

# MP 20X1,5 - Micro feed-through terminal block



3248178

<https://www.phoenixcontact.com/us/products/3248178>

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Micro feed-through terminal block, bridged internally, nom. voltage: 500 V, nominal current: 17.5 A, number of connections: 20, connection method: Push-in connection, cross section: 0.14 mm<sup>2</sup> - 1.5 mm<sup>2</sup>, mounting type: NS 15, color: gray

## Commercial data

Item number	3248178
Packing unit	20 pc
Minimum order quantity	20 pc
Product key	BE2269
GTIN	4055626252186
Weight per piece (including packing)	17.35 g
Weight per piece (excluding packing)	17.35 g
Country of origin	PL

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## Technical data

### Product properties

Number of connections	20
Number of rows	1
Potentials	1

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	6 kV
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### Connection data

Number of connections per level	20
Nominal cross section	1.5 mm <sup>2</sup>
Rated cross section AWG	14
Connection method	Push-in connection
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A1 / B1
Connection in acc. with standard	IEC 60947-7-1/IEC 60947-7-2
Conductor cross-section rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Cross section AWG	26 ... 16 (converted acc. to IEC)
Conductor cross-section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	26 ... 16 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Nominal current	17.5 A
Maximum load current	17.5 A
Nominal voltage	500 V

### Connection cross sections directly pluggable

Conductor cross-section rigid	0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, rigid [AWG]	24 ... 16 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>

### Dimensions

Width	42 mm
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### Material specifications

Color	gray
Flammability rating according to UL 94	V0
Insulating material group	I

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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
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	7.3 kV
Result	Test passed

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq$ 45 K
Result	Test passed
Short-time withstand current 1.5 mm <sup>2</sup>	0.18 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

## Mechanical properties

### Mechanical data

Open side panel	No
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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
Test force setpoint	1 N
Result	Test passed

### Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135

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Conductor cross-section/weight	0.14 mm <sup>2</sup> / 0.2 kg
	1.5 mm <sup>2</sup> / 0.4 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

Specification	DIN EN 50155 (VDE 0115-200):2008-03
Spectrum	Long life test category 2, bogie-mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	6.12 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	3.12g
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	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Result	Test passed

## Standards and regulations

Connection in acc. with standard	IEC 60947-7-1/IEC 60947-7-2
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## Mounting

Mounting type	NS 15
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## Drawings

Circuit diagram



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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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