

# PTMC 1,5/80-2 /BU - Marshalling patchboard



3270330

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Marshalling patchboard, Labeled from 1 - 80, nom. voltage: 500 V, nominal current: 17.5 A, connection method: Push-in connection, cross section: 0.14 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, mounting: Panel mounting, color: gray, color of connection elements: blue

## Your advantages

- Clear representation of actuation and terminal points through vertical conductor routing
- Tool-free wiring in a confined space thanks to compact size
- High contact quality thanks to push-in technology as a replacement for Wire-Wrap®, TERMI-POINT®, etc.
- Blue version for using in intrinsically safe circuits in potentially explosive areas (type of protection Ex i)
- For mounting in a panel cutout

## Commercial data

Item number	3270330
Packing unit	6 pc
Minimum order quantity	6 pc
Sales key	BE62
Product key	BE6212
GTIN	4055626058467
Weight per piece (including packing)	255 g
Weight per piece (excluding packing)	99.99 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Product properties

Product type	Marshalling terminal
Number of positions	80
Number of connections	320
Number of rows	1

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	6 kV
Maximum power dissipation for nominal condition	0.56 W

### Connection data

Number of connections per level	320
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
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cross section AWG	26 ... 14 (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)	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Nominal current	17.5 A
Maximum load current	24 A (in case of a 2.5 mm <sup>2</sup> conductor cross-section, the maximum load current must not be exceeded by the total current of all connected conductors.) 12 A (in case of a 2.5 mm <sup>2</sup> conductor cross-section, the maximum load current must not be exceeded by the total current of all connected conductors.)
Nominal voltage	500 V

### Connection cross sections directly pluggable

Conductor cross-section rigid	0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section, rigid [AWG]	20 ... 14 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>

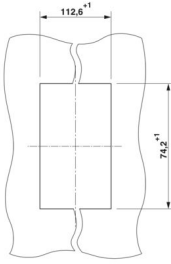
## Dimensions

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Dimensional drawing	
Width	110 mm
Height	73.2 mm
Depth	30 mm

## Material specifications

Color	gray (RAL 7042)
Color of connection elements	blue
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))	125 °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)	27,5 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
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
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Result	Test passed
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## 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 35
Test force setpoint	1 N
Result	Test passed

### Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross-section/weight	0.14 mm <sup>2</sup> / 0.2 kg
	1.5 mm <sup>2</sup> / 0.4 kg
	2.5 mm <sup>2</sup> / 0.7 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 1, class B, body mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	0.964 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	0.58g
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

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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 ... 105 °C (max. short-term operating temperature 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 (storage/transport)	30 % ... 70 %

## Standards and regulations

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

Mounting type	Panel mounting
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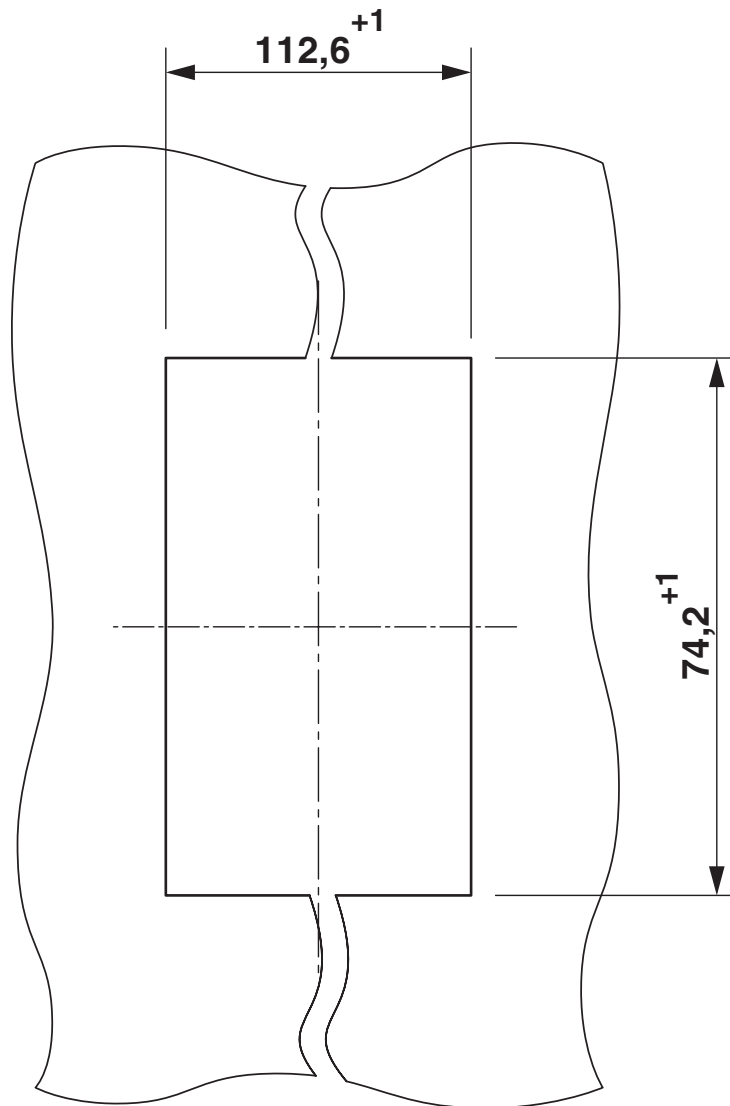


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## Drawings

Dimensional drawing



Panel cutout

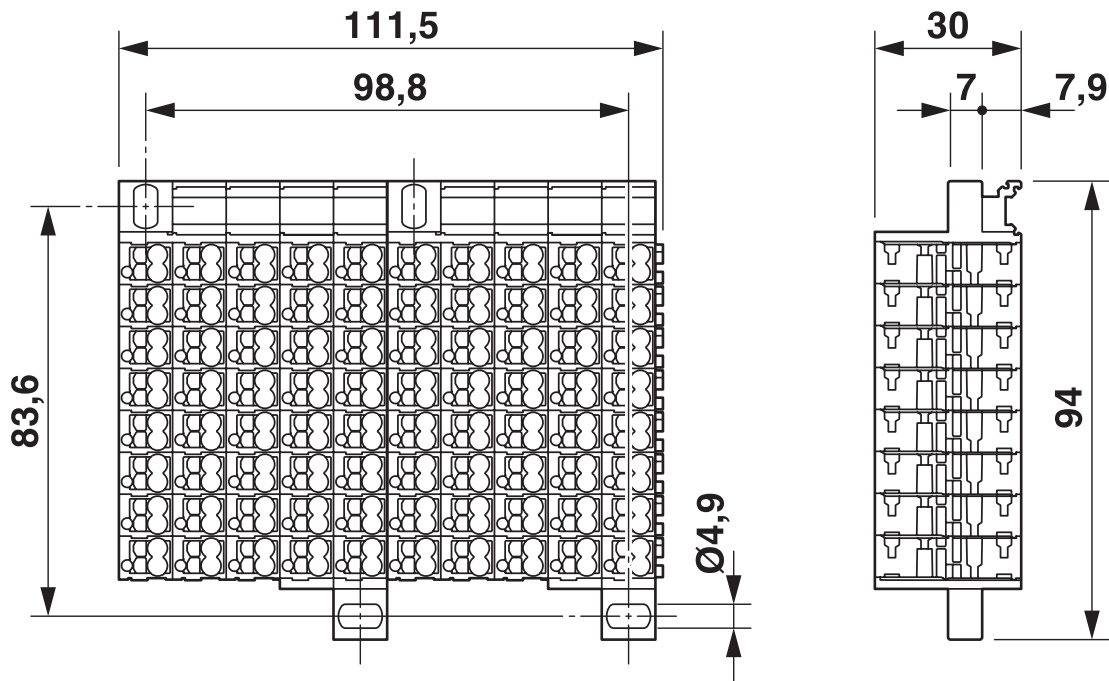
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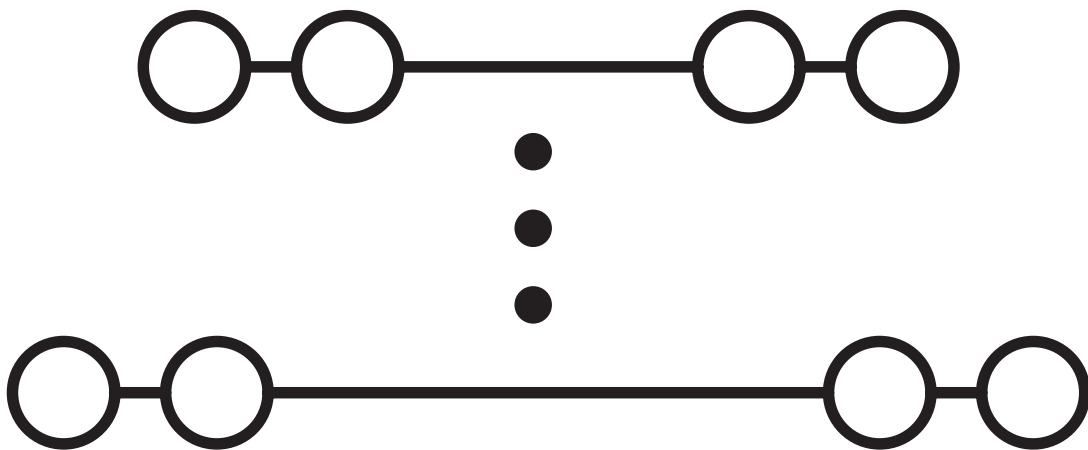
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Dimensional drawing



Circuit diagram



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## Approvals

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 <b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	300 V	10 A	24 - 16	-
C	300 V	10 A	24 - 16	-
D	300 V	10 A	24 - 16	-

 <b>EAC</b> Approval ID: RU C-DE.BL08.B.00682				
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 <b>cULus Recognized</b> Approval ID: E60425				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	300 V	10 A	24 - 16	-
C	300 V	10 A	24 - 16	-

 <b>EAC</b> Approval ID: KZ7500651131219505				
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## Classifications

### ECLASS

ECLASS-13.0	27250106
ECLASS-15.0	27250106

### 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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