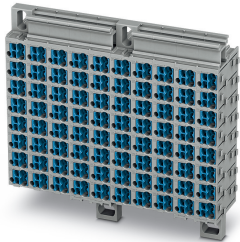


## Marshalling patchboard - FTMC 1,5/80-2 /BU - 3270369

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Marshalling patchboard, without actuation lever, nom. voltage: 500 V, nominal current: 17.5 A, cross section: 0.14 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, AWG: 14 - 26, connection method: Push-in connection, number of positions: 80, number of connections: 320, width: 110 mm, length: 73.2 mm, color: gray, color of connection elements: blue, mounting: Wall mounting

### Your advantages

- ✓ Blue version for using in intrinsically safe circuits in potentially explosive areas (type of protection Ex i)
- ✓ 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.
- ✓ Clear representation of actuation and terminal points through vertical conductor routing
- ✓ For mounting in a panel cutout



### Key Commercial Data

Packing unit	1
GTIN	
GTIN	4055626058733
Custom tariff number	85369010

### Technical data

#### General

Note	Labeled from 1 - 80
Number of positions	80
Number of levels	1
Number of connections	320
Nominal cross section	1.5 mm <sup>2</sup>
Color	gray
Color of connection elements	blue

# Marshalling patchboard - FTMC 1,5/80-2 /BU - 3270369

## Technical data

### General

Insulating material	PA
Flammability rating according to UL 94	V0
Rated surge voltage	6 kV
Degree of pollution	3
Overvoltage category	III
Insulating material group	I
Maximum power dissipation for nominal condition	0.56 W
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 current I <sub>N</sub>	17.5 A
Nominal voltage U <sub>N</sub>	500 V
Open side panel	No
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
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
Note	Sample calculation for the terminal width: For each bayed patchboard 11 mm have to be added. Example: 4 pos. patchboard = n x 11 mm + 1.48 mm (4 x 11 mm + 1.48 mm = 45.48 mm)
Result of flexion and pull-out test	Test passed
Bending test rotation speed	10 rpm
Bending test turns	135
Bending test conductor cross section/weight	0.14 mm <sup>2</sup> / 0.2 kg
	1.5 mm <sup>2</sup> / 0.4 kg
Tensile test result	Test passed
Note	Sample calculation for the terminal height: For each added patchboard 8.60 mm must be added. Example: 4 pos. patchboard = n x 8.60 mm + 0.85 mm (4 x 8.60 mm + 0.85 mm = 35.25 mm)
Result of tight fit on support	Test passed
Tight fit on carrier	NS 35
Setpoint	1 N

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## Technical data

### General

Result of voltage-drop test	Test passed
Result of temperature-rise test	Test passed
Note	The max. load current must not be exceeded by the total current of all connected conductors.
Requirement temperature-rise test	Increase in temperature $\leq 45$ K
Short circuit stability result	Test passed
Conductor cross section short circuit testing	1.5 mm <sup>2</sup>
Short-time current	0.18 kA
Conductor cross section short circuit testing	2.5 mm <sup>2</sup>
Short-time current	0.3 kA
Result of thermal test	Test passed
Proof of thermal characteristics (needle flame) effective duration	30 s
Result of aging test	Test passed
Ageing test for screwless modular terminal block temperature cycles	192
Oscillation, broadband noise test result	Test passed
Test specification, oscillation, broadband noise	DIN EN 50155 (VDE 0115-200):2008-03
Test spectrum	Service life test category 1, class B, body mounted
Test frequency	$f_1 = 5$ Hz to $f_2 = 150$ Hz
ASD level	0.964 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	0.58 g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Shock test result	Test passed
Test specification, shock test	DIN EN 50155 (VDE 0115-200):2008-03
Shock form	Half-sine
Acceleration	5g
Shock duration	30 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Relative insulation material temperature index (Elec., UL 746 B)	130 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	125 °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)	27,5 MJ/kg
Smoke gas toxicity NFPA 130 (SMP 800C)	passed
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 3

# Marshalling patchboard - FTMC 1,5/80-2 /BU - 3270369

## Technical data

### General

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	110 mm
Length	73.2 mm
Height	30 mm

### Connection data

Connection method	Push-in connection
Stripping length	8 mm ... 10 mm
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	26
Conductor cross section AWG max.	14
Conductor cross section flexible min.	0.14 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Min. AWG conductor cross section, flexible	26
Max. AWG conductor cross section, flexible	14
Conductor cross section flexible, with ferrule without plastic sleeve min.	0.14 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve max.	1.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve min.	0.14 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve max.	1.5 mm <sup>2</sup>
Connection cross sections directly pluggable	0.34 mm <sup>2</sup> 2.5 mm <sup>2</sup> 20 14
Conductor cross section solid min.	0.34 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve min.	0.34 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve max.	1.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve min.	0.34 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve max.	1.5 mm <sup>2</sup>
Internal cylindrical gage	A1

### Ambient conditions

Operating temperature	-60 °C ... 105 °C (max. short-term operating temperature 130 °C)
Ambient temperature (storage/transport)	-25 °C ... 60 °C (for a short time, not exceeding 24 h, -60 °C to +70 °C)
Permissible humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 70 °C

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## Technical data

### Ambient conditions

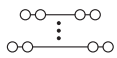
Ambient temperature (actuation)	-5 °C ... 70 °C
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### Environmental Product Compliance

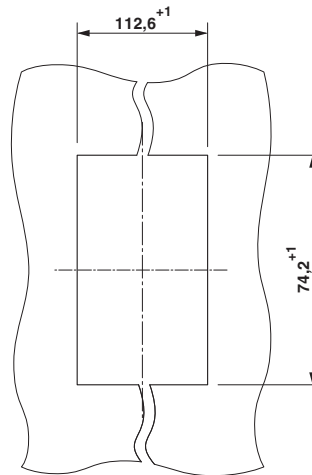
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

Circuit diagram

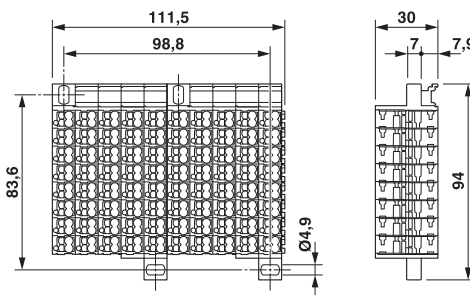


Dimensional drawing



Panel cutout

Dimensional drawing



## Classifications

eCl@ss

eCl@ss 10.0.1	27141120
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## Classifications

### eCl@ss

eCl@ss 11.0	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 9.0	27141120

### ETIM

ETIM 6.0	EC000897
ETIM 7.0	EC000897

### UNSPSC

UNSPSC 13.2	39121410
UNSPSC 18.0	39121410
UNSPSC 19.0	39121410
UNSPSC 20.0	39121410
UNSPSC 21.0	39121410

## Approvals


### Approvals

#### Approvals

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

#### Ex Approvals

### Approval details

CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	13631
	B	C	D
Nominal voltage UN	300 V	300 V	300 V
Nominal current IN	10 A	10 A	10 A

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## Approvals

	B	C	D
mm <sup>2</sup> /AWG/kcmil	24-16	24-16	24-16

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
	B	C	
Nominal voltage UN	300 V	300 V	
Nominal current IN	10 A	10 A	
mm <sup>2</sup> /AWG/kcmil	24-16	24-16	

cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
	B	C	
Nominal voltage UN	300 V	300 V	
Nominal current IN	10 A	10 A	
mm <sup>2</sup> /AWG/kcmil	24-16	24-16	

EAC		RU C- DE.BL08.B.00682
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cULus Recognized	
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