

## Feed-through terminal block - PT 16 N - 3212138

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Feed-through terminal block, Connection method: Push-in connection, Cross section: 0.5 mm<sup>2</sup> - 25 mm<sup>2</sup>, AWG: 20 - 4, Width: 12.2 mm, Color: gray, Mounting type: NS 35/7,5, NS 35/15

### Why buy this product

- ✓ The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system and by easy and tool-free wiring of conductors with ferrules or solid conductors
- ✓ The compact design and front connection enable wiring in a confined space
- ✓ In addition to the testing facility in the double function shaft, all terminal blocks provide an additional test connection
- ✓ Tested for railway applications

RoHS

### Key Commercial Data

Packing unit	1 STK
Minimum order quantity	50 STK
Weight per Piece (excluding packing)	31.200 g
Custom tariff number	85369010
Country of origin	Poland

### Technical data

#### General

Number of levels	1
Number of connections	2
Potentials	1
Nominal cross section	16 mm <sup>2</sup>
Color	gray
Insulating material	PA
Flammability rating according to UL 94	V0
Area of application	Railway industry

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## Technical data

### General

	Machine building
	Plant engineering
Rated surge voltage	8 kV
Degree of pollution	3
Overvoltage category	III
Insulating material group	I
Maximum load current	85 A (with 25 mm <sup>2</sup> conductor cross section)
Nominal current I <sub>N</sub>	76 A
Nominal voltage U <sub>N</sub>	1000 V
Open side panel	Yes
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
Surge voltage test setpoint	9.8 kV
Result of power-frequency withstand voltage test	Test passed
Power frequency withstand voltage setpoint	2.2 kV
Result of the test for mechanical stability of terminal points (5 x conductor connection)	Test passed
Result of bending test	Test passed
Bending test conductor cross section/weight	0.5 mm <sup>2</sup> / 0.3 kg
	16 mm <sup>2</sup> / 2.9 kg
	25 mm <sup>2</sup> / 4.5 kg
Tensile test result	Test passed
Conductor cross section tensile test	0.5 mm <sup>2</sup>
Tractive force setpoint	20 N
Conductor cross section tensile test	16 mm <sup>2</sup>
Tractive force setpoint	100 N
Conductor cross section tensile test	25 mm <sup>2</sup>
Tractive force setpoint	135 N
Result of tight fit on support	Test passed
Tight fit on carrier	NS 35
Setpoint	5 N
Result of voltage-drop test	Test passed
Requirements, voltage drop	≤ 3.2 mV
Result of temperature-rise test	Test passed
Short circuit stability result	Test passed

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## Technical data

### General

Conductor cross section short circuit testing	16 mm <sup>2</sup>
Short-time current	1.92 kA
Conductor cross section short circuit testing	25 mm <sup>2</sup>
Short-time current	3 kA
Result of aging test	Test passed
Ageing test for screwless modular terminal block temperature cycles	192
Result of thermal test	Test passed
Proof of thermal characteristics (needle flame) effective duration	30 s
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 2, bogie mounted
Test frequency	f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 250 Hz
ASD level	6.12 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	3.12 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	30g
Shock duration	18 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))	130 °C
Static insulating material application in cold	-60 °C
Behavior in fire for rail vehicles (DIN 5510-2)	Test passed
Flame test method (DIN EN 60695-11-10)	V0
Oxygen index (DIN EN ISO 4589-2)	>32 %
NF F16-101, NF F10-102 Class I	2
NF F16-101, NF F10-102 Class F	2
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
Calorimetric heat release NFPA 130 (ASTM E 1354)	28 MJ/kg
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

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## Technical data

### General

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	12.2 mm
End cover width	2.2 mm
Length	75.4 mm
Height NS 35/7,5	52.6 mm
Height NS 35/15	60.1 mm

### Connection data

Connection method	Push-in connection
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section solid min.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	25 mm <sup>2</sup>
Conductor cross section AWG min.	20
Conductor cross section AWG max.	4
Conductor cross section flexible min.	0.5 mm <sup>2</sup>
Conductor cross section flexible max.	16 mm <sup>2</sup>
Min. AWG conductor cross section, flexible	20
Max. AWG conductor cross section, flexible	6
Conductor cross section flexible, with ferrule without plastic sleeve min.	0.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve max.	16 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve min.	0.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve max.	16 mm <sup>2</sup>
2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, min.	1.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, max.	4 mm <sup>2</sup>
Stripping length	18 mm
Internal cylindrical gage	A7

### Standards and Regulations

Connection in acc. with standard	IEC 60947-7-1
Flammability rating according to UL 94	V0

## Drawings

# Feed-through terminal block - PT 16 N - 3212138

Circuit diagram



## Classifications

eCl@ss

eCl@ss 4.0	27141120
eCl@ss 4.1	27141120
eCl@ss 5.0	27141120
eCl@ss 5.1	27141120
eCl@ss 6.0	27141120
eCl@ss 7.0	27141120
eCl@ss 8.0	27141120
eCl@ss 9.0	27141120

ETIM

ETIM 2.0	EC000897
ETIM 3.0	EC000897
ETIM 4.0	EC000897
ETIM 5.0	EC000897

UNSPSC

UNSPSC 6.01	30211811
UNSPSC 7.0901	39121410
UNSPSC 11	39121410
UNSPSC 12.01	39121410
UNSPSC 13.2	39121410

## Approvals

Approvals

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Approvals

VDE Zeichengenehmigung / IECCEB Scheme / UL Recognized / cUL Recognized / EAC / CSA / EAC / BV / LR / DNV GL / PRS / cULus Recognized

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Ex Approvals


ATEX / IECEx

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Approval details

# Feed-through terminal block - PT 16 N - 3212138


## Approvals

VDE Zeichengenehmigung  <http://www.vde.de> 40040917


mm <sup>2</sup> /AWG/kcmil	0.5-16
Nominal current IN	76 A
Nominal voltage UN	1000 V

IECEE CB Scheme  <http://www.iecee.org/> DE1-55471

mm <sup>2</sup> /AWG/kcmil	0.5-16
Nominal current IN	76 A
Nominal voltage UN	1000 V

UL Recognized  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 60425

	B	C
mm <sup>2</sup> /AWG/kcmil	20-4	20-4
Nominal current IN	85 A	85 A
Nominal voltage UN	600 V	600 V

cUL Recognized  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 60425

	B	C
mm <sup>2</sup> /AWG/kcmil	20-4	20-4
Nominal current IN	85 A	85 A
Nominal voltage UN	600 V	600 V

EAC EAC-Zulassung

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## Approvals

CSA <http://www.csagroup.org/us/en/services/testing-and-certification/certified-product-listing-13631>

	B	C
mm <sup>2</sup> /AWG/kcmil	20-4	20-4
Nominal current IN	70 A	70 A
Nominal voltage UN	600 V	600 V

EAC 7500651.22.01.00246

BV [http://www.veristar.com/wps/portal/lut/pl\\_s\\_7\\_0\\_A/7\\_0\\_RIM-37796/A2](http://www.veristar.com/wps/portal/lut/pl_s_7_0_A/7_0_RIM-37796/A2) BV

LR <http://www.lr.org/en-12/20038> (E2)

DNV GL <https://www.dnvgl.com/TAE000010T>

PRS <http://www.prs.pl/TE/2107/880590/16>

cULus Recognized <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

## Accessories

### Accessories

#### DIN rail

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 7.5 mm, width 35 mm, length: 2000 mm

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### Accessories

DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, material: Steel, unperforated, height 7.5 mm, width 35 mm, length: 2 m

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DIN rail perforated - NS 35/ 7,5 WH PERF 2000MM - 1204119



DIN rail 35 mm (NS 35)

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DIN rail - NS 35/ 7,5 WH UNPERF 2000MM - 1204122



DIN rail 35 mm (NS 35)

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DIN rail, unperforated - NS 35/ 7,5 AL UNPERF 2000MM - 0801704



DIN rail, unperforated, Width: 35 mm, Height: 7.5 mm, Length: 2000 mm, Color: silver

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DIN rail perforated - NS 35/ 7,5 ZN PERF 2000MM - 1206421



DIN rail, material: Galvanized, perforated, height 7.5 mm, width 35 mm, length: 2 m

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## Feed-through terminal block - PT 16 N - 3212138

### Accessories

DIN rail, unperforated - NS 35/ 7,5 ZN UNPERF 2000MM - 1206434



DIN rail, material: Galvanized, unperforated, height 7.5 mm, width 35 mm, length: 2 m

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DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, material: Copper, unperforated, height 7.5 mm, width 35 mm, length: 2 m

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End cap - NS 35/ 7,5 CAP - 1206560



DIN rail end piece, for DIN rail NS 35/7.5

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DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 15 mm, width 35 mm, length: 2000 mm

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DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, material: Steel, unperforated, height 15 mm, width 35 mm, length: 2 m

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## Feed-through terminal block - PT 16 N - 3212138

### Accessories

DIN rail perforated - NS 35/15 WH PERF 2000MM - 0806602



DIN rail 35 mm (NS 35)

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DIN rail - NS 35/15 WH UNPERF 2000MM - 1204135



DIN rail 35 mm (NS 35)

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DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, deep drawn, high profile, unperforated, 1.5 mm thick, material: aluminum, height 15 mm, width 35 mm, length 2000 mm

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DIN rail perforated - NS 35/15 ZN PERF 2000MM - 1206599



DIN rail, material: Galvanized, perforated, height 15 mm, width 35 mm, length: 2 m

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DIN rail, unperforated - NS 35/15 ZN UNPERF 2000MM - 1206586



DIN rail, material: Galvanized, unperforated, height 15 mm, width 35 mm, length: 2 m

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## Feed-through terminal block - PT 16 N - 3212138

### Accessories

DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, material: Copper, unperforated, 1.5 mm thick, height 15 mm, width 35 mm, length: 2 m

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End cap - NS 35/15 CAP - 1206573



DIN rail end piece, for DIN rail NS 35/15

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DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, material: Steel, unperforated, 2.3 mm thick, height 15 mm, width 35 mm, length: 2 m

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### Documentation

Mounting material - PT-IL - 3208090



Operating decal for the push-in Technology

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### End block

End clamp - E/UK - 1201442



End clamp, Width: 9.5 mm, Height: 35.3 mm, Length: 50.5 mm, Color: gray

## Feed-through terminal block - PT 16 N - 3212138

### Accessories

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#### End clamp - E/UK 1 - 1201413



End clamps, for supporting the ends of double-level and three-level terminal blocks, width: 10 mm, color: gray

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#### End clamp - CLIPFIX 35 - 3022218



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

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#### End clamp - CLIPFIX 35-5 - 3022276



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

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#### End clamp - E/NS 35 N - 0800886



End clamp, width: 9.5 mm, color: gray

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#### End cover

#### End cover - D-PT 16 N - 3212060



End cover, Length: 75.4 mm, Width: 2.2 mm, Color: gray

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## Feed-through terminal block - PT 16 N - 3212138

### Accessories

#### Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663



Insulating sleeve, Color: white

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Insulating sleeve - MPS-IH RD - 0201676



Insulating sleeve, Color: red

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Insulating sleeve - MPS-IH BU - 0201689



Insulating sleeve, Color: blue

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Insulating sleeve - MPS-IH YE - 0201692



Insulating sleeve, Color: yellow

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Insulating sleeve - MPS-IH GN - 0201702



Insulating sleeve, Color: green

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## Feed-through terminal block - PT 16 N - 3212138

### Accessories

Insulating sleeve - MPS-IH GY - 0201728



Insulating sleeve, Color: gray

Insulating sleeve - MPS-IH BK - 0201731



Insulating sleeve, Color: black

### Jumper

Plug-in bridge - FBS 2-12 - 3005950



Plug-in bridge, Pitch: 12 mm, Number of positions: 2, Color: red

### Labeled terminal marker

Zack Marker strip, flat - ZBF 12 CUS - 0825018



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: 12 mm, Lettering field: 5.15 x 12.15 mm

Marker for terminal blocks - UC-TMF 12 CUS - 0824670



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: 12 mm, Lettering field: 11.45 x 5.1 mm

## Feed-through terminal block - PT 16 N - 3212138

### Accessories

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#### Marker for terminal blocks - UCT-TMF 12 CUS - 0829686



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: 12 mm, Lettering field: 11.2 x 4.7 mm

#### Zack marker strip - ZB 12 CUS - 0824942



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, Mounting type: Snap into tall marker groove, for terminal block width: 12.2 mm, Lettering field: 10.5 x 12.15 mm

#### Marker for terminal blocks - ZB 12,LGS:L1-N,PE - 0812146



Marker for terminal blocks, Strip, white, labeled, Printed horizontally: L1, L2, L3, N, PE, Mounting type: Snap into tall marker groove, for terminal block width: 12.2 mm, Lettering field: 10.5 x 12.15 mm

#### Marker for terminal blocks - UC-TM 12 CUS - 0824613



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, Mounting type: Snap into tall marker groove, for terminal block width: 12 mm, Lettering field: 11.45 x 10.5 mm

#### Marker for terminal blocks - UCT-TM 12 CUS - 0829630



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, Mounting type: Snap into tall marker groove, for terminal block width: 12 mm, Lettering field: 10.8 x 9.6 mm

### Planning and marking software

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## Feed-through terminal block - PT 16 N - 3212138

### Accessories

Software - CLIP-PROJECT ADVANCED - 5146040



Multilingual software for convenient configuration of Phoenix Contact products on standard DIN rails.

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Software - CLIP-PROJECT PROFESSIONAL - 5146053



Multilingual software for terminal strip configuration. A marking module enables the professional marking of markers and labels for identifying terminal blocks, conductors and cables, and devices.

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### Reducing bridge

Reducing bridge - RB ST 16-(2,5/4) - 3030886



Reducing bridge, Pitch: 11 mm, Number of positions: 2, Color: red

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Reducing bridge - RB 16-6 - 3047072



Reducing bridge, Pitch: 6 mm, Number of positions: 2, Color: red

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### Screwdriver tools

Screwdriver - SZF 1-0,6X3,5 - 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



## Feed-through terminal block - PT 16 N - 3212138

### Accessories

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Screwdriver - SZF 3-1,0X5,5 - 1206612



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 1.0 x 5.5 x 150 mm, 2-component grip, with non-slip grip

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### Terminal marking

Zack Marker strip, flat - ZBF 12:UNBEDRUCKT - 0809735



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 12 mm, Lettering field: 5.15 x 12.15 mm

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Marker for terminal blocks - UC-TMF 12 - 0819233



Marker for terminal blocks. Sheet, white, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 12 mm, Lettering field: 11.45 x 5.1 mm

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Marker for terminal blocks - UCT-TMF 12 - 0829214



Marker for terminal blocks. Sheet, white, unlabeled, can be labeled with: THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, THERMOMARK PRIME, Mounting type: Snap into flat marker groove, for terminal block width: 12 mm, Lettering field: 11.2 x 4.7 mm

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Zack marker strip - ZB 12:UNPRINTED - 0812120



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 12.2 mm, Lettering field: 12 x 10.5 mm

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## Feed-through terminal block - PT 16 N - 3212138

### Accessories

#### Marker for terminal blocks - UC-TM 12 - 0819194



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 12 mm, Lettering field: 11.45 x 10.5 mm

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#### Marker for terminal blocks - UCT-TM 12 - 0829144



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, THERMOMARK PRIME, Mounting type: Snap into tall marker groove, for terminal block width: 12 mm, Lettering field: 10.8 x 9.6 mm

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#### Marker for terminal blocks - TMT (EX9,5)R - 0828295



Marker for terminal blocks, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK X, Mounting type: Snap into universal marker groove, Snap into tall marker groove, Lettering field: 9.5 x 50000 mm

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#### Marker for terminal blocks - US-TM 100 - 0829255



Marker for terminal blocks, Card, white, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, Mounting type: Snap into universal marker groove, Lettering field: 104 x 9.8 mm

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### Test plug terminal block

#### Test plugs - MPS-MT - 0201744



Test plugs, Color: silver

