

## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

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Double-level terminal block, Connection type: Push-in connection, Cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 26 - 12, Nominal current: 20 A, Nominal voltage: 500 V, Length: 68 mm, Width: 5.2 mm, Color: gray, Assembly: 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

### Key Commercial Data

Packing unit	1 STK
Minimum order quantity	50 STK
Custom tariff number	85369010
Country of origin	Poland

### Technical data

#### Environmental Product Compliance

China RoHS	No hazardous substances above threshold values
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#### General

Number of levels	2
Number of connections	4
Nominal cross section	2.5 mm <sup>2</sup>
Color	gray
Insulating material	PA
Flammability rating according to UL 94	V0
Rated surge voltage	6 kV

## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Technical data

#### General

Degree of pollution	3
Overvoltage category	III
Insulating material group	I
Ambient temperature (operation)	-40 °C ... 130 °C
Connection in acc. with standard	IEC 60947-7-1
Nominal current I <sub>N</sub>	20 A
Maximum load current	20 A
Nominal voltage U <sub>N</sub>	500 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	7.3 kV
Result of power-frequency withstand voltage test	Test passed
Power frequency withstand voltage setpoint	1.89 kV
Checking the mechanical stability of terminal points (5 x conductor connection)	Test passed
Result of bending 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
	2.5 mm <sup>2</sup> / 0.7 kg
	4 mm <sup>2</sup> / 0.9 kg
Tensile test result	Test passed
Conductor cross section tensile test	0.14 mm <sup>2</sup>
Tractive force setpoint	10 N
Conductor cross section tensile test	2.5 mm <sup>2</sup>
Tractive force setpoint	50 N
Conductor cross section tensile test	4 mm <sup>2</sup>
Tractive force setpoint	60 N
Result of tight fit on support	Test passed
Tight fit on carrier	NS 35
Setpoint	1 N
Result of voltage-drop test	Test passed
Requirements, voltage drop	≤ 3.2 mV
Short circuit stability result	Test passed

## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Technical data

#### General

Conductor cross section short circuit testing	2.5 mm <sup>2</sup>
Short-time current	0.3 kA
Conductor cross section short circuit testing	4 mm <sup>2</sup>
Short-time current	0.48 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 1, class B, body mounted
Test frequency	f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 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	5 g
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))	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

## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### 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	5.2 mm
Length	68 mm
Height NS 35/7,5	47.5 mm
Height NS 35/15	55 mm

#### Connection data

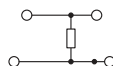
Connection method	Push-in connection
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
Conductor cross section flexible min.	0.14 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	26
Conductor cross section AWG max.	12
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.	2.5 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.	2.5 mm <sup>2</sup>
2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, max.	0.5 mm <sup>2</sup>
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A3
Stripping length	8 mm ... 10 mm

#### Standards and Regulations

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

### Drawings

Circuit diagram



## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Classifications

#### eCl@ss

eCl@ss 4.0	27141121
eCl@ss 4.1	27141121
eCl@ss 5.0	27141120
eCl@ss 5.1	27141120
eCl@ss 6.0	27141120
eCl@ss 7.0	27141120
eCl@ss 8.0	27141127
eCl@ss 9.0	27141120

#### ETIM

ETIM 3.0	EC000897
ETIM 4.0	EC000897
ETIM 5.0	EC000903

#### 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

EAC

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Ex Approvals

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#### Approval details

EAC 7500651.22.01.00246
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### Accessories

#### Accessories

## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### 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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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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## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

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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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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## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

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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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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## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

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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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



## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

#### End block

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-PTTB 2,5 - 3211634



End cover, Length: 68 mm, Width: 2.2 mm, Color: gray

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#### Insulating sleeve

## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

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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## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

Insulating sleeve - MPS-IH GY - 0201728



Insulating sleeve, Color: gray

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Insulating sleeve - MPS-IH BK - 0201731



Insulating sleeve, Color: black

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Insulating sleeve - ISH 2,5/0,2 - 3002843



Insulating sleeve, Color: white

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Insulating sleeve - ISH 2,5/0,5 - 3002856



Insulating sleeve, Color: gray

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Insulating sleeve - ISH 2,5/1,0 - 3002869



Insulating sleeve, Color: black

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### Jumper

## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

Plug-in bridge - FBS 2-5 - 3030161



Plug-in bridge, Pitch: 5.2 mm, Length: 22.7 mm, Width: 9 mm, Number of positions: 2, Color: red

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Plug-in bridge - FBS 3-5 - 3030174



Plug-in bridge, Pitch: 5.2 mm, Length: 22.7 mm, Width: 14.2 mm, Number of positions: 3, Color: red

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Plug-in bridge - FBS 4-5 - 3030187



Plug-in bridge, Pitch: 5.2 mm, Length: 22.7 mm, Width: 19.4 mm, Number of positions: 4, Color: red

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Plug-in bridge - FBS 5-5 - 3030190



Plug-in bridge, Pitch: 5.2 mm, Length: 22.7 mm, Width: 24.6 mm, Number of positions: 5, Color: red

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Plug-in bridge - FBS 10-5 - 3030213



Plug-in bridge, Pitch: 5.2 mm, Length: 22.7 mm, Width: 50.6 mm, Number of positions: 10, Color: red

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## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

Plug-in bridge - FBS 20-5 - 3030226



Plug-in bridge, Pitch: 5.2 mm, Number of positions: 20, Color: red

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Plug-in bridge - FBS 50-5 - 3038930



Plug-in bridge, Pitch: 5.2 mm, Number of positions: 50, Color: red

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Plug-in bridge - FBSR 2-5 - 3033702



Plug-in bridge, Pitch: 5.2 mm, Number of positions: 2, Color: red

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Plug-in bridge - FBSR 3-5 - 3001591



Plug-in bridge, Pitch: 5.2 mm, Number of positions: 3, Color: red

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Plug-in bridge - FBSR 4-5 - 3001592



Plug-in bridge, Pitch: 5.2 mm, Number of positions: 4, Color: red

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## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

Plug-in bridge - FBSR 5-5 - 3001593



Plug-in bridge, Pitch: 5.2 mm, Number of positions: 5, Color: red

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Plug-in bridge - FBSR 10-5 - 3033710



Plug-in bridge, Pitch: 5.2 mm, Number of positions: 10, Color: red

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### Labeled terminal marker

Zack Marker strip, flat - ZBF 5 CUS - 0825025



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: 5 mm, Lettering field: 5.15 x 5.15 mm

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Zack Marker strip, flat - ZBF 5,LGS:FORTL.ZAHLEN - 0808671



Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Consecutive numbers 1 - 10, 11 - 20, etc. up to 491 - 500, Mounting type: Snap into flat marker groove, for terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

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Zack Marker strip, flat - ZBF 5,QR:FORTL.ZAHLEN - 0808697



Zack Marker strip, flat, Strip, white, labeled, Printed vertically: Consecutive numbers 1 - 10, 11 - 20, etc. up to 91 - 100, Mounting type: Snap into flat marker groove, for terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

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## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

Zack Marker strip, flat - ZBF 5,LGS:GERADE ZAHLEN - 0810821



Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Consecutive numbers 2 - 20, 22 - 40, etc. up to 82 - 100, Mounting type: Snap into flat marker groove, for terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

Zack Marker strip, flat - ZBF 5,LGS:UNGERADE ZAHLEN - 0810863



Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, Mounting type: Snap into flat marker groove, for terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

Marker for terminal blocks - UC-TMF 5 CUS - 0824638



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: 5.2 mm, Lettering field: 4.6 x 5.1 mm

Marker for terminal blocks - UCT-TMF 5 CUS - 0829658



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: 5.2 mm, Lettering field: 4.4 x 4.7 mm

### Marker carriers

Marker carriers - STP 5-2 - 0800967



Double marker carrier, snaps onto the double-level spring-cage terminal block STTB 2,5, STTB 4, PTTB 2,5, PTTB 4 can be marked with UC-TM 5, ZB 5 or UC-TMF 5, ZBF 5



## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

Marker carriers - STP 5-2/S - 0800970



Double marker carrier, snaps onto the double-level spring-cage terminal block ZFKK 1,5, with MSTBV or ICV pick-off

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### Partition plate

Partition plate - ATP-STTB 4 - 3030747



Partition plate, Length: 88.7 mm, Width: 2 mm, Height: 53 mm, Color: gray

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Spacer plate - DP PS-5 - 3036725



Spacer plate, Length: 22.4 mm, Width: 5.2 mm, Height: 29 mm, Number of positions: 1, Color: red

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### Planning and marking software

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.

## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

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#### Reducing bridge

Reducing bridge - RB ST (2,5/4)-1,5 - 3038943



Reducing bridge, Pitch: 7.1 mm, Length: 22.7 mm, Width: 10.4 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

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Screwdriver - ST-BW - 1207608



Actuation tool, for all 2.5 mm<sup>2</sup> - 4.0 mm<sup>2</sup> spring-cages

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#### Terminal marking

Zack Marker strip, flat - ZBF 5:UNBEDRUCKT - 0808642



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 5 mm, Lettering field: 5.1 x 5.2 mm

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## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

#### Marker for terminal blocks - UC-TMF 5 - 0818153



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: 5.2 mm, Lettering field: 4.6 x 5.1 mm

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#### Marker for terminal blocks - UCT-TMF 5 - 0828744



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: 5.2 mm, Lettering field: 4.4 x 4.7 mm

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#### Test plug terminal block

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



Test plugs, Color: silver

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##### Test plugs - PS-5 - 3030983



Test plugs, Color: red

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##### Test plugs - PS-5/2,3MM RD - 3038723



Test plugs, Color: red

## Double-level terminal block - PTTB 2,5-R499/O-U - 3210925

### Accessories

Test socket

Test adapter - PAI-4-N GY - 3032871



4 mm test adapter, for terminal blocks with 5.2 mm, 6.2 mm and 8.2 mm pitch