

## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

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Feed-through terminal block, Connection method: Spring-cage connection, Cross section: 0.08 mm<sup>2</sup> - 1.5 mm<sup>2</sup>, AWG: 28 - 16, Width: 4.2 mm, Color: gray, Mounting type: NS 35/7,5, NS 35/15

### Why buy this product

- ✓ Cross connection to any number of terminal blocks with the consistent FBS ... plug-in bridge system
- ✓ Tested for railway applications
- ✓ Compact potential distributors, the double connection enables four conductors to be connected on one potential



### Key commercial data

Packing unit	50 pc
Minimum order quantity	50 pc
GTIN	 4 017918 186678
Weight per Piece (excluding packing)	7.18 g
Custom tariff number	85369010
Country of origin	Germany

### Technical data

#### General

Number of levels	1
Number of connections	2
Color	gray
Insulating material	PA
Inflammability class according to UL 94	V0
Area of application	Railway industry
	Mechanical engineering
	Plant engineering
	Process industry

# Feed-through terminal block - ST 1,5-QUATTRO - 3031186

## Technical data

### General

Maximum load current	17.5 A (In case of a 1.5 mm <sup>2</sup> conductor cross section, the maximum load current must not be exceeded by the total current of all connected conductors.)
Rated surge voltage	6 kV
Pollution degree	3
Surge voltage category	III
Insulating material group	I
Connection in acc. with standard	IEC 60947-7-1
Maximum load current	17.5 A (In case of a 1.5 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 (with 1.5 mm <sup>2</sup> conductor cross section)
Nominal voltage U <sub>N</sub>	500 V
Maximum load current	17.5 A (In case of a 1.5 mm <sup>2</sup> conductor cross section, the maximum load current must not be exceeded by the total current of all connected conductors.)
Open side panel	ja
Shock protection test specification	DIN EN 50274 (VDE 0660-514):2002-11
Back of the hand protection	guaranteed
Finger protection	guaranteed
Surge voltage test setpoint	7.3 kV
Result of surge voltage test	Test passed
Power frequency withstand voltage setpoint	1.89 kV
Result of power-frequency withstand voltage test	Test passed
Checking the mechanical stability of terminal points (5 x conductor connection)	Test passed
Bending test rotation speed	10 rpm
Bending test turns	135
Bending test conductor cross section/weight	0.08 mm <sup>2</sup> / 0.1 kg
	1.5 mm <sup>2</sup> / 0.4 kg
Result of bending test	Test passed
Conductor cross section tensile test	0.08 mm <sup>2</sup>
Tractive force setpoint	5 N
Conductor cross section tensile test	1.5 mm <sup>2</sup>
Tractive force setpoint	40 N
Tensile test result	Test passed
Tight fit on carrier	NS 35
Setpoint	1 N
Result of tight fit test	Test passed
Result of voltage drop test	Test passed
Temperature-rise test	Test passed
Conductor cross section short circuit testing	1.5 mm <sup>2</sup>
Short-time current	0.18 kA

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## Technical data

### General

Short circuit stability result	Test passed
Ageing test for screwless modular terminal block temperature cycles	192
Result of aging test	Test passed
Proof of thermal characteristics (needle flame) effective duration	30 s
Result of thermal test	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	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	$6.12 \text{ (m/s}^2\text{)}^2\text{/Hz}$
Acceleration	3.12 g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Oscillation, broadband noise test result	Test passed
Test specification, shock test	DIN EN 50155 (VDE 0115-200):2008-03
Shock form	Semi-sinusoidal
Acceleration	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Shock test result	Test passed
Temperature index, insulating material (DIN EN 60216-1 (VDE 0304-21))	125 °C
Static insulating material application in cold	-60 °C

### Dimensions

Width	4.2 mm
End cover width	2.2 mm
Length	72 mm
Height NS 35/7,5	36.5 mm
Height NS 35/15	44 mm

### Connection data

Connection in acc. with standard	IEC 60947-7-1
Connection method	Spring-cage connection
Conductor cross section solid min.	0.08 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Conductor cross section stranded min.	0.08 mm <sup>2</sup>
Conductor cross section stranded max.	1.5 mm <sup>2</sup>
Min. AWG conductor cross section, stranded	28
Max. AWG conductor cross section, stranded	16

# Feed-through terminal block - ST 1,5-QUATTRO - 3031186

## Technical data

### Connection data

Conductor cross section stranded, with ferrule without plastic sleeve min.	0.14 mm <sup>2</sup>
Conductor cross section stranded, with ferrule without plastic sleeve max.	1.5 mm <sup>2</sup>
Conductor cross section stranded, with ferrule with plastic sleeve min.	0.14 mm <sup>2</sup>
Conductor cross section stranded, with ferrule with plastic sleeve max.	1.5 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	10 mm
Internal cylindrical gage	A1

## Classifications

### eCl@ss

eCl@ss 4.0	27141121
eCl@ss 4.1	27141121
eCl@ss 5.0	27141125
eCl@ss 5.1	27141125
eCl@ss 6.0	27141125
eCl@ss 7.0	27141125
eCl@ss 8.0	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

CSA / UL Recognized / VDE Gutachten mit Fertigungsüberwachung / cUL Recognized / LR / GL / BV / DNV / RS / KR / NK / IECCEB Scheme / EAC / cULus Recognized

# Feed-through terminal block - ST 1,5-QUATTRO - 3031186


## Approvals

Ex Approvals


IECEX / ATEX / EAC Ex

Approvals submitted


## Approval details

CSA 


	B	C
mm <sup>2</sup> /AWG/kcmil	26-14	26-14
Nominal current I <sub>N</sub>	15 A	15 A
Nominal voltage U <sub>N</sub>	300 V	300 V

UL Recognized 

	B	C
mm <sup>2</sup> /AWG/kcmil	26-14	26-14
Nominal current I <sub>N</sub>	15 A	15 A
Nominal voltage U <sub>N</sub>	300 V	300 V

VDE Gutachten mit Fertigungsüberwachung 

mm <sup>2</sup> /AWG/kcmil	1.5
Nominal current I <sub>N</sub>	17.5 A
Nominal voltage U <sub>N</sub>	500 V

cUL Recognized 

	B	C
mm <sup>2</sup> /AWG/kcmil	26-14	26-14
Nominal current I <sub>N</sub>	15 A	15 A
Nominal voltage U <sub>N</sub>	300 V	300 V

LR
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# Feed-through terminal block - ST 1,5-QUATTRO - 3031186

## Approvals

GL	
mm <sup>2</sup> /AWG/kcmil	1.5
Nominal current I <sub>N</sub>	17.5 A
Nominal voltage U <sub>N</sub>	500 V


BV
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DNV
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RS
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KR
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NK
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IECEE CB Scheme 	
mm <sup>2</sup> /AWG/kcmil	1.5
Nominal voltage U <sub>N</sub>	500 V

EAC
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cULus Recognized 
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## Accessories

Accessories

Documentation

Mounting material - ST-IL - 3039900

Operating decal for the ST terminal block



## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### 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 clamp - E/UK - 1201442



End clamp, for assembly on NS 32 or NS 35/7.5 DIN rail

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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 cover

## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

End cover - D-ST 2,5-QUATTRO - 3030514



End cover, Length: 72 mm, Width: 2.2 mm, Height: 36.5 mm, Color: gray

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Cover segment - DS-ST 2,5 - 3036602



End cover segments, large segment: 32.25 x 13.83 x 0.9, small segment: 22.65 x 11.65 x 0.9, color: gray

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End cover - D-ST 2,5-QUATTRO-0,8 OG - 3030513



End cover, Length: 72 mm, Width: 0.8 mm, Height: 29 mm, Color: orange

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Spacer plate - DP PS-4 - 3036712



Spacer plate, Color: red

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Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663



Insulating sleeve, Color: white

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## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

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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Insulating sleeve - MPS-IH GY - 0201728



Insulating sleeve, Color: gray

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## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

Insulating sleeve - MPS-IH BK - 0201731



Insulating sleeve, Color: black

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Insulating sleeve - ISH 1,5/0,2 - 3206131



Insulating sleeve, Color: white

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Insulating sleeve - ISH 1,5/0,5 - 3031034



Insulating sleeve, Color: gray

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### Jumper

Plug-in bridge - FBS 20-4 - 3030352



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

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Plug-in bridge - FBS 10-4 - 3030158



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

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## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

Plug-in bridge - FBS 4-4 - 3030132



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

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Plug-in bridge - FBS 3-4 - 3030129



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

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Plug-in bridge - FBS 2-4 - 3030116



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

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Plug-in bridge - FBS 5-4 - 3030145



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

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### Labeled terminal marker

Warning cover - WST 1,5 - 3030958



Warning cover, Strip, yellow, labeled, Mounting type: Plug in, Lettering field: 4.25 x 3.55 mm

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## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

Zack marker strip - ZB 4 CUS - 0824951



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, Mounting type: Snap into tall marker groove, for terminal block width: 4.2 mm, Lettering field: 4.2 x 10.5 mm

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Zack marker strip - ZB 4,LGS:FORTL.ZAHLEN - 0805739



Zack marker strip, Strip, white, labeled, Printed horizontally: Consecutive numbers 1 - 10, 11 - 20, etc. up to 91 - 100, Mounting type: Snap into tall marker groove, for terminal block width: 4.2 mm, Lettering field: 4.2 x 10.5 mm

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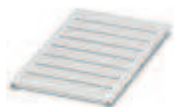
Zack marker strip - ZB 4,QR:FORTL.ZAHLEN - 0805807



Zack marker strip, Strip, white, labeled, Printed vertically: Consecutive numbers 1 - 10, 11 - 20, etc. up to 91 - 100, Mounting type: Snap into tall marker groove, for terminal block width: 4.2 mm, Lettering field: 4.2 x 10.5 mm

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Marker for terminal blocks - UC-TM 4 CUS - 0824573



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: 4.2 mm, Lettering field: 3.6 x 10.5 mm

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Marker for terminal blocks - UCT-TM 4 CUS - 0829588



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: 4.2 mm, Lettering field: 3.6 x 10.5 mm

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## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

Zack Marker strip, flat - ZBF 4 CUS - 0825023



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: 4.2 mm, Lettering field: 4.2 x 5.2 mm

Zack Marker strip, flat - ZBF 4,LGS:FORTL.ZAHLEN - 0808626



Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Consecutive numbers 1 - 10, 11 - 20, etc. up to 91 - 100, Mounting type: Snap into flat marker groove, for terminal block width: 4 mm, Lettering field: 4.2 x 5.2 mm

Zack Marker strip, flat - ZBF 4,QR:FORTL.ZAHLEN - 0808820



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: 4 mm, Lettering field: 4.2 x 5.2 mm

Zack Marker strip, flat - ZBF 4,LGS:GERADE ZAHLEN - 0810818



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: 4 mm, Lettering field: 5.15 x 4.15 mm

Zack Marker strip, flat - ZBF 4,LGS:UNGERADE ZAHLEN - 0810850

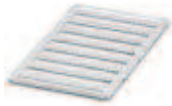


Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, Mounting type: Snap into flat marker groove, for terminal block width: 4 mm, Lettering field: 5.15 x 4.15 mm

## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

Marker for terminal blocks - UC-TMF 4 CUS - 0824630



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: 4.2 mm, Lettering field: 3.6 x 5.1 mm

Marker for terminal blocks - UCT-TMF 4 CUS - 0829651



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: 4.2 mm, Lettering field: 3.4 x 4.7 mm

### Mounting rail

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



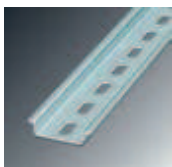
DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 7.5 mm, width 35 mm, length: 2000 mm

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

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



DIN rail 35 mm (NS 35)

## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

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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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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## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

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

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



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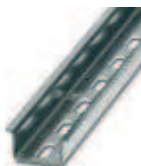
DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



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

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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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## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

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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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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## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

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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### Partition plate

Partition plate - ATP-ST QUATTRO - 3030815



Partition plate, Length: 90.9 mm, Width: 2 mm, Height: 45 mm, Color: gray

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### Screwdriver tools

Screwdriver - SZF 0-0,4X2,5 - 1204504



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip

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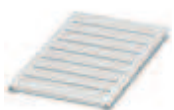
### Terminal marking

Zack marker strip - ZB 4 :UNBEDRUCKT - 0805001



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 4.2 mm, Lettering field: 4.2 x 10.5 mm

Marker for terminal blocks - UC-TM 4 - 0818111

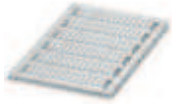


Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 4.2 mm, Lettering field: 3.6 x 10.5 mm

## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

#### Marker for terminal blocks - UCT-TM 4 - 0828732



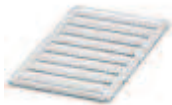
Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, Mounting type: Snap into tall marker groove, for terminal block width: 4.2 mm, Lettering field: 3.6 x 10.5 mm

#### Zack Marker strip, flat - ZBF 4:UNBEDRUCKT - 0808587



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 4 mm, Lettering field: 4.2 x 5.2 mm

#### Marker for terminal blocks - UC-TMF 4 - 0818166



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: 4.2 mm, Lettering field: 3.6 x 5.1 mm

#### Marker for terminal blocks - UCT-TMF 4 - 0828742



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, Mounting type: Snap into flat marker groove, for terminal block width: 4.2 mm, Lettering field: 3.4 x 4.7 mm

### Test plug terminal block

#### Reducing plug - RPS - 0201647



Reducing plug, Color: gray

## Feed-through terminal block - ST 1,5-QUATTRO - 3031186

### Accessories

Test plugs - MPS-MT - 0201744



Test plugs, Color: silver

Test plugs - PAI-4 - 3030925



Test plugs, Color: gray

Test plugs - PS-4 - 3030970



Test plugs, Color: red

### Drawings

Circuit diagram

