

## Feed-through terminal block - STS 2,5-TWIN - 3031720

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Feed-through terminal block, Connection method: Spring-cage connection, Cross section: 0.08 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 28 - 12, Width: 5.2 mm, Color: gray, Mounting type: NS 35/7,5, NS 35/15

### Why buy this product

- Same shape and pitch as the feed-through terminal blocks
- Cross connection to adjacent feed-through terminal blocks with the consistent FBS ... plug-in bridge system



### Key commercial data

Packing unit	50 pc
Minimum order quantity	50 pc
GTIN	 4 017918 193270
Weight per Piece (excluding packing)	7.45 g
Custom tariff number	85369010
Country of origin	Germany

### Technical data

#### General

Number of levels	1
Number of connections	3
Color	gray
Insulating material	PA
Inflammability class according to UL 94	V0
Maximum load current	28 A (with 4 mm <sup>2</sup> conductor cross section)
Rated surge voltage	8 kV
Pollution degree	3
Surge voltage category	III
Insulating material group	I
Connection in acc. with standard	IEC 60947-7-1

# Feed-through terminal block - STS 2,5-TWIN - 3031720

## Technical data

### General

Maximum load current	28 A (In case of a 4 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>	24 A (with 4 mm <sup>2</sup> conductor cross section)
Nominal voltage U <sub>N</sub>	800 V
Maximum load current	28 A (In case of a 4 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	9.8 kV
Result of surge voltage test	Test passed
Power frequency withstand voltage setpoint	2 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
	2.5 mm <sup>2</sup> / 0.7 kg
	4 mm <sup>2</sup> / 0.9 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	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
Tensile test result	Test passed
Tight fit on carrier	NS 35
Setpoint	1 N
Result of tight fit test	Test passed
Requirements, voltage drop	≤ 3.2 mV
Result of voltage drop test	Test passed
Temperature-rise test	Test passed
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
Short circuit stability result	Test passed

# Feed-through terminal block - STS 2,5-TWIN - 3031720

## Technical data

### General

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	Half-sine
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	5.2 mm
End cover width	2.2 mm
Length	51 mm
Height NS 35/7,5	43 mm
Height NS 35/15	50.5 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.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	12
Conductor cross section stranded min.	0.08 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Min. AWG conductor cross section, stranded	28
Max. AWG conductor cross section, stranded	14

# Feed-through terminal block - STS 2,5-TWIN - 3031720

## 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.	2.5 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.	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>
Minimum stripping length	8 mm
Maximum stripping length	10 mm
Internal cylindrical gage	A3

## 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	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 / SEV / VDE Gutachten mit Fertigungsüberwachung / cUL Recognized / LR / GL / BV / DNV / RS / ABS / KR / NK / CCA / IECCEB Scheme / EAC / cULus Recognized

# Feed-through terminal block - STS 2,5-TWIN - 3031720


## Approvals


Ex Approvals

ATEX / IECEx / EAC Ex


Approvals submitted

## Approval details

CSA 		
	B	C
mm <sup>2</sup> /AWG/kcmil	28-12	28-12
Nominal current I <sub>N</sub>	20 A	20 A
Nominal voltage U <sub>N</sub>	600 V	600 V


UL Recognized 		
	B	C
mm <sup>2</sup> /AWG/kcmil	28-12	28-12
Nominal current I <sub>N</sub>	20 A	20 A
Nominal voltage U <sub>N</sub>	600 V	600 V

SEV	
mm <sup>2</sup> /AWG/kcmil	2.5-1.5
Nominal voltage U <sub>N</sub>	800 V

VDE Gutachten mit Fertigungsüberwachung 	
mm <sup>2</sup> /AWG/kcmil	0.2-2.5
Nominal current I <sub>N</sub>	24 A
Nominal voltage U <sub>N</sub>	800 V

# Feed-through terminal block - STS 2,5-TWIN - 3031720

## Approvals

cUL Recognized 		
	B	C
mm <sup>2</sup> /AWG/kcmil	28-12	28-12
Nominal current I <sub>N</sub>	20 A	20 A
Nominal voltage U <sub>N</sub>	600 V	600 V

LR

GL

BV

DNV


RS

ABS

KR

NK

CCA	
mm <sup>2</sup> /AWG/kcmil	1.5

IECEE CB Scheme 	
mm <sup>2</sup> /AWG/kcmil	2.5
Nominal voltage U <sub>N</sub>	800 V

EAC

cULus Recognized 	
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## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

Accessories

Documentation

Mounting material - ST-IL - 3039900

Operating decal for the ST terminal block



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### End cover

End cover - D-ST5 2,5 - 3031762



End cover, Length: 51 mm, Width: 2.2 mm, Height: 43 mm, Color: gray

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Spacer plate - DP PS-5 - 3036725



Spacer plate, Color: red

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### Insulating sleeve

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

## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

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



Insulating sleeve, Color: black

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### Jumper

Plug-in bridge - FBS 2-5 - 3030161



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

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## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

Plug-in bridge - FBS 10-5 - 3030213



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

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Plug-in bridge - FBS 20-5 - 3030226



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

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Plug-in bridge - FBS 50-5 - 3038930



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

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Plug-in bridge - FBSR 2-5 - 3033702



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

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Plug-in bridge - FBSR 3-5 - 3001591



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

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## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

Plug-in bridge - FBSR 4-5 - 3001592



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

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Plug-in bridge - FBSR 5-5 - 3001593



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

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Plug-in bridge - FBSR 10-5 - 3033710



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

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Labeled terminal marker

Warning cover - WST 2,5 - 3030941



Warning cover, 5-pos., for terminal width: 5.2 mm

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Zack marker strip - ZB 5 CUS - 0824962



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, Mounting type: Snap into tall marker groove, for terminal block width: 5.2 mm, Lettering field: 5.15 x 10.5 mm

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## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

#### Zack marker strip - ZB 5,LGS:FORTL.ZAHLEN - 1050017



Zack marker strip, Strip, white, labeled, Printed horizontally: Consecutive numbers 1 - 10, 11 - 20, etc. up to 491 - 500, Mounting type: Snap into tall marker groove, for terminal block width: 5.2 mm, Lettering field: 5.15 x 10.5 mm

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#### Zack marker strip - ZB 5,QR:FORTL.ZAHLEN - 1050020



Zack marker strip, Strip, white, labeled, can be labeled with: Plotter, Printed vertically: Consecutive numbers 1 - 10, 11 - 20, etc. up to 491 - 500, Mounting type: Snap into tall marker groove, for terminal block width: 5.2 mm, Lettering field: 5.15 x 10.5 mm

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#### Zack marker strip - ZB 5,LGS:GLEICHE ZAHLEN - 1050033



Zack marker strip, Strip, white, labeled, can be labeled with: Plotter, Printed horizontally: Identical numbers 1 or 2, etc. up to 100, Mounting type: Snap into tall marker groove, for terminal block width: 5.2 mm, Lettering field: 5.15 x 10.5 mm

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#### Marker for terminal blocks - ZB 5,LGS:L1-N,PE - 1050415



Marker for terminal blocks, Strip, white, labeled, Horizontal: L1, L2, L3, N, PE, L1, L2, L3, N, PE, Mounting type: Snap into tall marker groove, for terminal block width: 5.2 mm, Lettering field: 5.15 x 10.5 mm

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#### Marker for terminal blocks - UC-TM 5 CUS - 0824581

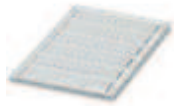


Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, Mounting type: Snap into tall marker groove, for terminal block width: 5.2 mm, Lettering field: 10.5 x 4.6 mm

## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

Marker for terminal blocks - UCT-TM 5 CUS - 0829595



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, Mounting type: Snap into tall marker groove, Lettering field: 4.6 x 10.5 mm

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

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

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

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

## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

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



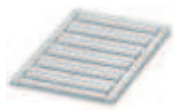
Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, Mounting type: Snap into flat marker groove, for terminal block width: 5 mm, Lettering field: 5.15 x 5.15 mm

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

### 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

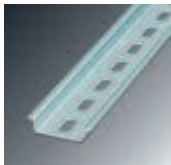


DIN rail, material: Steel, unperforated, height 7.5 mm, width 35 mm, length: 2 m

## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

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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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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## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

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

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



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

### 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

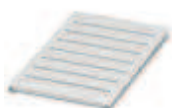
### Terminal marking

Zack marker strip - ZB 5 :UNBEDRUCKT - 1050004



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 5.2 mm, Lettering field: 5.1 x 10.5 mm

Marker for terminal blocks - UC-TM 5 - 0818108



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, Mounting type: Snap into tall marker groove, for terminal block width: 5.2 mm, Lettering field: 10.5 x 4.6 mm

## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

#### Marker for terminal blocks - UCT-TM 5 - 0828734



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: 5.2 mm, Lettering field: 4.6 x 10.5 mm

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



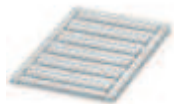
Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 5 mm, Lettering field: 5.1 x 5.2 mm

#### 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

#### 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, Mounting type: Snap into flat marker groove, for terminal block width: 5.2 mm, Lettering field: 4.4 x 4.7 mm

### Test plug terminal block

#### Test adapter - PAI-4-FIX-5/6 BU - 3035975



Test adapter, for 4 mm Ø safety test plugs, latches into the bridge shaft; color: Blue



## Feed-through terminal block - STS 2,5-TWIN - 3031720

### Accessories

Test adapter - PAI-4-FIX-5/6 OG - 3035974



Test adapter, for 4 mm Ø safety test plugs, latches into the bridge shaft; color: Orange

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Test adapter - PAI-4-FIX-5/6 YE - 3035977



Test adapter, for 4 mm Ø safety test plugs, latches into the bridge shaft; color: Yellow

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Test adapter - PAI-4-FIX-5/6 RD - 3035976



Test adapter, for 4 mm Ø safety test plugs, latches into the bridge shaft; color: Red

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Test adapter - PAI-4-FIX-5/6 GN - 3035978



Test adapter, for 4 mm Ø safety test plugs, latches into the bridge shaft; color: Green

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Test adapter - PAI-4-FIX-5/6 BK - 3035980



Test adapter, for 4 mm Ø safety test plugs, latches into the bridge shaft; color: Black

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# Feed-through terminal block - STS 2,5-TWIN - 3031720

## Accessories

Test adapter - PAI-4-FIX-5/6 GY - 3035982



Test adapter, for 4 mm Ø safety test plugs, latches into the bridge shaft; color: Gray

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Test adapter - PAI-4-FIX-5/6 VT - 3035979



Test adapter, for 4 mm Ø safety test plugs, latches into the bridge shaft; color: Violet

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Test adapter - PAI-4-FIX-5/6 BN - 3035981



Test adapter, for 4 mm Ø safety test plugs, latches into the bridge shaft; color: Brown

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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

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## Drawings

Circuit diagram



