

Feed-through terminal block - ST 2,5-TWIN - 3031241

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Feed-through terminal block, Connection method: Spring-cage connection, Cross section: 0.08 mm² - 4 mm², AWG: 28 - 12, Width: 5.2 mm, Color: gray, Mounting type: NS 35/7,5, NS 35/15

Why buy this product

- The consistent double function shaft offers every opportunity for time-saving potential distribution and accommodating test accessories
- Tested for railway applications
- User-friendly implementation of all potential branching tasks
- Space-saving and practical multi-conductor connection without additional bridges



Key commercial data

Packing unit	50 pc
GTIN	 4 017918 186753
Weight per Piece (excluding packing)	6.911 g
Weight per piece (including packing)	7.945 g
Custom tariff number	85369010
Country of origin	Germany
Sales Key	A1 - Terminal Strips

Technical data

General

Number of levels	1
Number of connections	3
Color	gray
Insulating material	PA
Inflammability class according to UL 94	V0
Area of application	Railway industry
	Mechanical engineering
	Plant engineering

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Technical data

General

	Process industry
Maximum load current	28 A (with 4 mm ² 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
Nominal current I _N	24 A (the maximum load current must not be exceeded by the total current of all connected conductors)
Nominal voltage U _N	800 V
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 ² / 0.1 kg
	2.5 mm ² / 0.7 kg
	4 mm ² / 0.9 kg
Result of bending test	Test passed
Conductor cross section tensile test	0.08 mm ²
Tractive force setpoint	5 N
Conductor cross section tensile test	2.5 mm ²
Tractive force setpoint	50 N
Conductor cross section tensile test	4 mm ²
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 ²
Short-time current	0.3 kA

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General

Conductor cross section short circuit testing	4 mm ²
Short-time current	0.48 kA
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 Hz to f ₂ = 250 Hz
ASD level	6.12 (m/s ²) ² /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	30 g
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
Length	60.5 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 ²
Conductor cross section solid max.	4 mm ²
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	12
Conductor cross section stranded min.	0.08 mm ²
Conductor cross section stranded max.	2.5 mm ²
Min. AWG conductor cross section, stranded	28

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Connection data

Max. AWG conductor cross section, stranded	14
Conductor cross section stranded, with ferrule without plastic sleeve min.	0.14 mm ²
Conductor cross section stranded, with ferrule without plastic sleeve max.	2.5 mm ²
Conductor cross section stranded, with ferrule with plastic sleeve min.	0.14 mm ²
Conductor cross section stranded, with ferrule with plastic sleeve max.	2.5 mm ²
2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, max.	0.5 mm ²
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

Approvals

UL Recognized / VDE Gutachten mit Fertigungsüberwachung / cUL Recognized / GOST / LR / GL / BV / DNV / RS / KR / NK / IECCE CB Scheme / GOST / VDE Gutachten mit Fertigungsüberwachung / IECCE CB Scheme / CSA / cULus Recognized

Ex Approvals

IECEX / ATEX

Approvals submitted

Approval details

UL Recognized

	B	C
mm ² /AWG/kcmil	28-12	28-12
Nominal current IN	20 A	20 A
Nominal voltage UN	600 V	600 V

VDE Gutachten mit Fertigungsüberwachung

mm ² /AWG/kcmil	0.2-2.5
Nominal current IN	24 A
Nominal voltage UN	800 V

cUL Recognized

	B	C
mm ² /AWG/kcmil	28-12	28-12
Nominal current IN	20 A	20 A
Nominal voltage UN	600 V	600 V

GOST

LR

Feed-through terminal block - ST 2,5-TWIN - 3031241

Approvals

GL	
mm ² /AWG/kcmil	2.5
Nominal current I _N	24 A
Nominal voltage U _N	800 V


BV

DNV


RS


KR

NK

IECEE CB Scheme 	
mm ² /AWG/kcmil	2.5
Nominal voltage U _N	800 V

GOST 
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VDE Gutachten mit Fertigungsüberwachung 	
mm ² /AWG/kcmil	0.2-2.5
Nominal current I _N	24 A
Nominal voltage U _N	800 V

IECEE CB Scheme 	
mm ² /AWG/kcmil	2.5
Nominal voltage U _N	800 V

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Approvals

CSA			
	B	C	
	mm ² /AWG/kcmil	28-12	28-12
	Nominal current I _N	20 A	20 A
	Nominal voltage U _N	600 V	600 V

cULus Recognized

Accessories

Accessories

Bridge

Plug-in bridge - FBS 20-5 - 3030226



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

Plug-in bridge - FBS 10-5 - 3030213



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

Plug-in bridge - FBS 5-5 - 3030190



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

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Accessories

Plug-in bridge - FBS 4-5 - 3030187



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

Plug-in bridge - FBS 3-5 - 3030174



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

Plug-in bridge - FBS 2-5 - 3030161



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

Plug-in bridge - FBS 50-5 - 3038930



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

Documentation

Mounting material - ST-IL - 3039900

Operating decal for the ST terminal block



End block

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Accessories

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

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

End clamp - E/NS 35 N - 0800886



End clamp, width: 9.5 mm, color: gray

End clamp - E/UK - 1201442



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

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

End cover

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Accessories

End cover - D-ST 2,5-TWIN - 3030488



End cover, Length: 60.5 mm, Width: 2.2 mm, Height: 29 mm, Color: gray

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

End cover - D-ST 2,5-TWIN-0,8 OG - 3030512



End cover, Length: 60.5 mm, Width: 0.8 mm, Height: 29 mm, Color: orange

Spacer plate - DP PS-5 - 3036725



Spacer plate, Color: red

Front adapter

Front adapters - VIP-PA-PWR/20XOE/ 1,0M/S7 - 2904724



VIP power cabling, universal front adapter for connection to all popular 20-pos. SIMATIC S7-300 I/O modules, via 20 individual wires in rope structure, not assembled (field connection, e.g., via 20 modular terminal blocks), cable length: 1 m

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Accessories

Front adapters - VIP-PA-PWR/20XOE/ 2,0M/S7 - 2904725



VIP power cabling, universal front adapter for connection to all popular 20-pos. SIMATIC S7-300 I/O modules, via 20 individual wires in rope structure, not assembled (field connection, e.g., via 20 modular terminal blocks), cable length: 2 m

Front adapters - VIP-PA-PWR/20XOE/ 3,0M/S7 - 2904726



VIP power cabling, universal front adapter for connection to all popular 20-pos. SIMATIC S7-300 I/O modules, via 20 individual wires in rope structure, not assembled (field connection, e.g., via 20 modular terminal blocks), cable length: 3 m

Front adapters - VIP-PA-PWR/20XOE/10,0M/S7 - 2904730



VIP power cabling, universal front adapter for connection to all popular 20-pos. SIMATIC S7-300 I/O modules, via 20 individual wires in rope structure, not assembled (field connection, e.g., via 20 modular terminal blocks), cable length: 10 m

Front adapters - VIP-PA-PWR/40XOE/ 1,0M/S7 - 2904731



VIP power cabling, universal front adapter for connection to all popular 40-pos. SIMATIC S7-300 I/O modules, via 40 individual wires in rope structure, not assembled (field connection, e.g., via 40 modular terminal blocks), cable length: 1 m

Front adapters - VIP-PA-PWR/40XOE/ 2,0M/S7 - 2904732



VIP power cabling, universal front adapter for connection to all popular 40-pos. SIMATIC S7-300 I/O modules, via 40 individual wires in rope structure, not assembled (field connection, e.g., via 40 modular terminal blocks), cable length: 2 m

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Accessories

Front adapters - VIP-PA-PWR/40XOE/ 3,0M/S7 - 2904733



VIP power cabling, universal front adapter for connection to all popular 40-pos. SIMATIC S7-300 I/O modules, via 40 individual wires in rope structure, not assembled (field connection, e.g., via 40 modular terminal blocks), cable length: 3 m

Front adapters - VIP-PA-PWR/40XOE/10,0M/S7 - 2904737



VIP power cabling, universal front adapter for connection to all popular 40-pos. SIMATIC S7-300 I/O modules, via 40 individual wires in rope structure, not assembled (field connection, e.g., via 40 modular terminal blocks), cable length: 10 m

Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663



Insulating sleeve, Color: white

Insulating sleeve - MPS-IH RD - 0201676



Insulating sleeve, Color: red

Insulating sleeve - MPS-IH BU - 0201689



Insulating sleeve, Color: blue

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Accessories

Insulating sleeve - MPS-IH YE - 0201692



Insulating sleeve, Color: yellow

Insulating sleeve - MPS-IH GN - 0201702



Insulating sleeve, Color: green

Insulating sleeve - MPS-IH GY - 0201728



Insulating sleeve, Color: gray

Insulating sleeve - MPS-IH BK - 0201731



Insulating sleeve, Color: black

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



Insulating sleeve, Color: white

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Accessories

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



Insulating sleeve, Color: gray

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



Insulating sleeve, Color: black

Labeled terminal marker

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

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

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

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Accessories

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

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 pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Marker pen - X-PEN 0,35 - 0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

Mounting rail

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Accessories

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)

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



DIN rail 35 mm (NS 35)

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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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

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

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

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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Accessories

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



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

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



DIN rail 35 mm (NS 35)

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



DIN rail 35 mm (NS 35)

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

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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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

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

End cap - NS 35/15 CAP - 1206573



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

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

Partition plate

Partition plate - ATP-ST-TWIN - 3030789



Partition plate, Length: 76.6 mm, Width: 2 mm, Height: 45 mm, Color: gray

Screwdriver tools

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Accessories

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, Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 5.2 mm, Lettering field: 10.5 x 4.6 mm

Marker for terminal blocks - UCT-TM 5 - 0828734



Marker for terminal blocks, Sheet, white, Unlabeled, can be labeled with: THERMOMARK CARD PLUS, THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, 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

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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

Marker for terminal blocks - UCT-TMF 5 - 0828744



Marker for terminal blocks, Sheet, white, Unlabeled, can be labeled with: THERMOMARK CARD PLUS, THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, 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

Reducing plug - RPS - 0201647



Reducing plug, Color: gray

Test plugs - MPS-MT - 0201744



Test plugs, Color: silver

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

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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

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

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

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

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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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

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

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

Test plugs - PS-5 - 3030983



Test plugs, Color: red

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



Test plugs, Color: red

Drawings

Circuit diagram



