

## Plug - SPDB 2,5/ 9 - 3040481

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Plug, number of positions: 9, connection method: Spring-cage connection, cross section: 0.08 mm<sup>2</sup>- 4 mm<sup>2</sup>, AWG: 28 - 12, nominal current: 24 A, nom. voltage: 500 V, width: 46.8 mm, color: gray

### Your advantages

- Plug with bridging option, for use with basic terminal blocks
- Tested for railway applications



### Key Commercial Data

Packing unit	25 pc
GTIN	
GTIN	4017918833169

### Technical data

#### General

Number of positions	9
Potentials	9
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
Degree of pollution	3
Overvoltage category	III
Insulating material group	I
Maximum power dissipation for nominal condition	0.77 W
Maximum load current	24 A (with 4 mm <sup>2</sup> conductor cross section)
Nominal current I <sub>N</sub>	24 A
Nominal voltage U <sub>N</sub>	500 V

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## Technical data

### General

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
Surface flammability NFPA 130 (ASTM E 162)	passed
Specific optical density of smoke NFPA 130 (ASTM E 662)	passed
Calorimetric heat release NFPA 130 (ASTM E 1354)	28 MJ/kg
Smoke gas toxicity NFPA 130 (SMP 800C)	passed
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
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	46.8 mm
Length	32.7 mm
Height	39 mm
	24 mm
Pitch	5.2 mm

### Connection data

Connection method	Spring-cage connection
Stripping length	8 mm ... 10 mm
Connection in acc. with standard	IEC 61984
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 min.	28
Conductor cross section AWG max.	12
Conductor cross section flexible min.	0.08 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Min. AWG conductor cross section, flexible	28
Max. AWG conductor cross section, flexible	14
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>
Two conductors with the same cross section, flexible, with TWIN ferrules, with plastic sleeve, maximum	0.5 mm <sup>2</sup>
Internal cylindrical gage	A3

### Standards and Regulations

Connection in acc. with standard	CSA
	IEC 61984

# Plug - SPDB 2,5/ 9 - 3040481

## Technical data

### Standards and Regulations

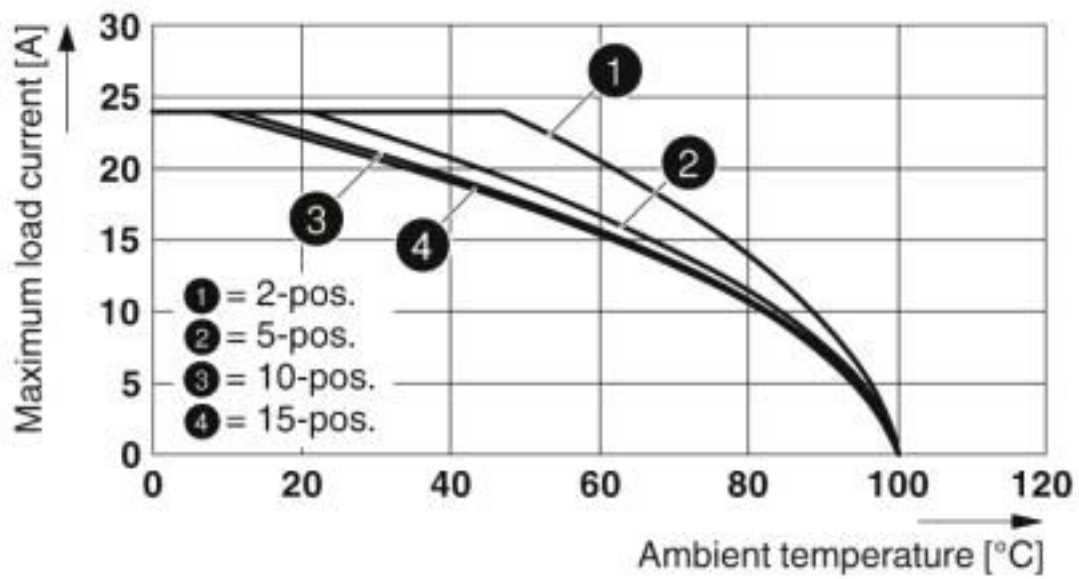
Flammability rating according to UL 94	V0
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### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

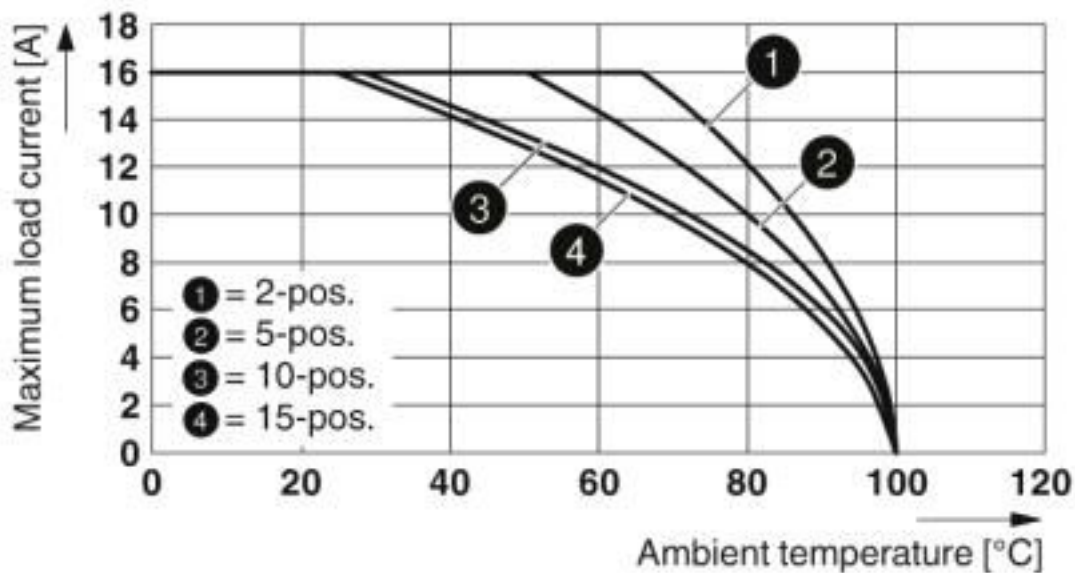
Diagram



Derating curve for ST 2,5/ 1P, ST 2,5/ 2P, ST 2,5-TWIN/ 1P and for all plug versions SP...

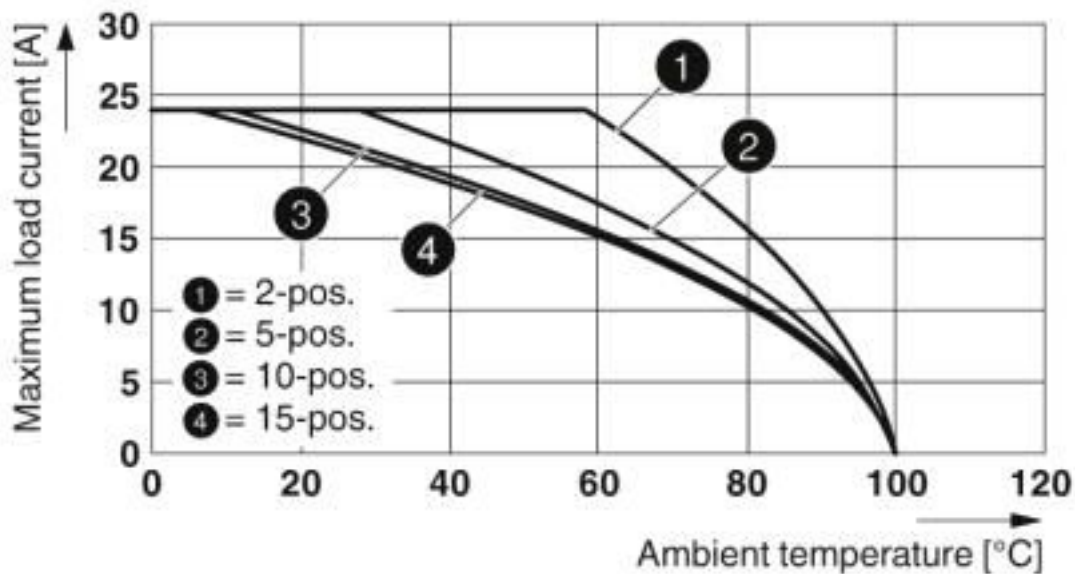
# Plug - SPDB 2,5/ 9 - 3040481

Diagram



Derating curve for ST 2,5-TWIN-MT/1P, ST 2,5-TWIN-TG/1P and for all plug versions SP...

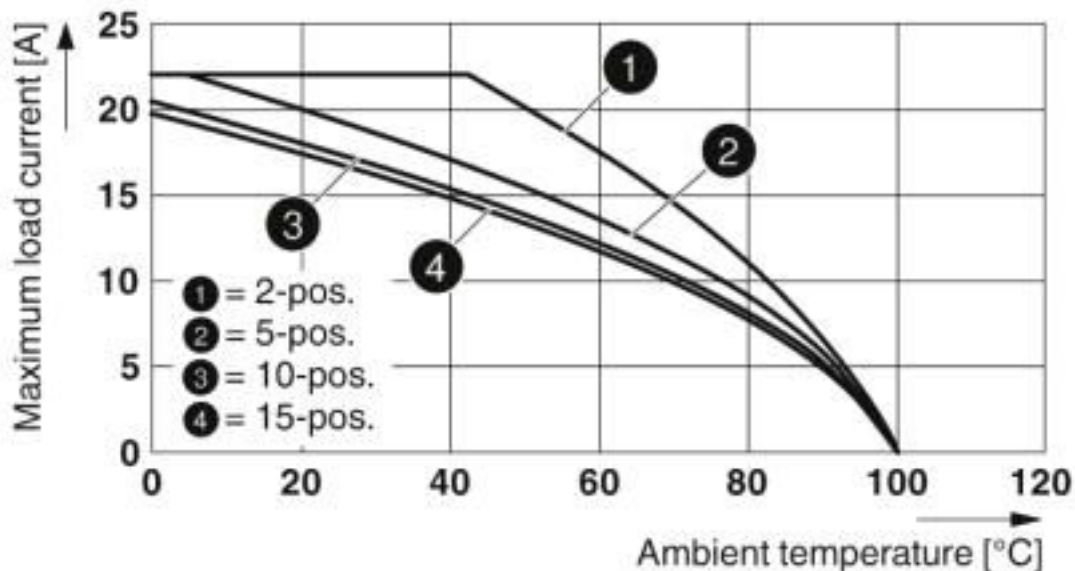
Diagram



Derating curve for ST 2,5-QUATTRO/2P, ST 2,5-QUATTRO/4P and for all plug versions SP...

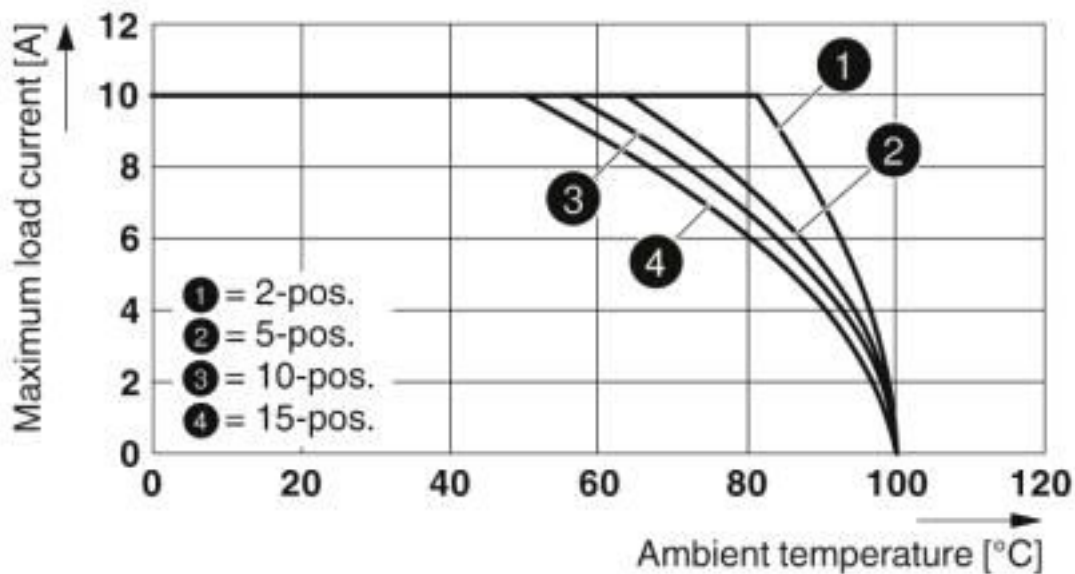
# Plug - SPDB 2,5/ 9 - 3040481

Diagram



Derating curve for STTB 2,5/ 2P, STTB 2,5/ 2P-PV and for all plug versions SP...

Diagram



Derating curve for ST 2,5-4L/1P, ST 2,5-4L/2P and for all plug versions SP...

Circuit diagram



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## Classifications

### eCl@ss

eCl@ss 10.0.1	27141151
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700
eCl@ss 6.0	27141100
eCl@ss 7.0	27141151
eCl@ss 8.0	27141151
eCl@ss 9.0	27141151

### ETIM

ETIM 2.0	EC000897
ETIM 3.0	EC000897
ETIM 4.0	EC002021
ETIM 5.0	EC002021
ETIM 6.0	EC002021
ETIM 7.0	EC002021

### UNSPSC

UNSPSC 6.01	30211802
UNSPSC 7.0901	39121402
UNSPSC 11	39121402
UNSPSC 12.01	39121402
UNSPSC 13.2	39121402
UNSPSC 18.0	39121402
UNSPSC 19.0	39121402
UNSPSC 20.0	39121402
UNSPSC 21.0	39121402

## Approvals

### Approvals

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#### Approvals

DNV GL / CSA / BV / LR / UL Recognized / cUL Recognized / EAC / EAC / RS / cULus Recognized

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#### Ex Approvals

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### Approval details

# Plug - SPDB 2,5/ 9 - 3040481

## Approvals

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAE00001CS
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CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	13631
	B	C	D
Nominal voltage UN	300 V	300 V	600 V
Nominal current IN	20 A	20 A	5 A
mm <sup>2</sup> /AWG/kcmil	24-12	24-12	24-12

BV		<a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a>	27721/B0 BV
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LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	05/20042
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UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
	B	C	D
Nominal voltage UN	300 V	300 V	600 V
Nominal current IN	20 A	20 A	5 A
mm <sup>2</sup> /AWG/kcmil	26-12	26-12	26-12

cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
	B	C	D
Nominal voltage UN	300 V	300 V	600 V
Nominal current IN	20 A	20 A	5 A
mm <sup>2</sup> /AWG/kcmil	26-12	26-12	26-12

EAC		RU C- DE.A*30.B.01742
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## Plug - SPDB 2,5/ 9 - 3040481

### Approvals

EAC		RU C- DE.BL08.B.00511
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RS		<a href="http://www.rs-head.spb.ru/en/index.php">http://www.rs-head.spb.ru/en/index.php</a>	17.00013.272
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cULus Recognized		
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### Accessories

#### Accessories

#### Bridge

Wire bridge - FBSW 2-5/250MM - 3030172



Wire bridge, length: 250 mm, width: 5.1 mm, number of positions: 1, color: red/black

Wire bridge - FBSW 2-5/60MM - 3030170



Wire bridge, length: 60 mm, width: 5.1 mm, number of positions: 1, color: red/black

Wire bridge - FBSW 2-5/110MM - 3030171



Wire bridge, length: 110 mm, width: 5.1 mm, number of positions: 1, color: red/black

#### Flange



## Plug - SPDB 2,5/ 9 - 3040481

### Accessories

Flange cover - DFS-SPDB 2,5 - 3061457



Flange cover, length: 35.8 mm, width: 4.5 mm, height: 24.7 mm, color: gray

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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

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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, pitch: 5.2 mm, length: 22.7 mm, width: 9 mm, number of positions: 2, color: red

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### Accessories

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: 23 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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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 - SPDB 2,5/ 9 - 3040481

### Accessories

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 - FBS 2-5 BU - 3036877



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: blue

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Plug-in bridge - FBS 3-5 BU - 3036880



Plug-in bridge, pitch: 5.2 mm, number of positions: 3, color: blue

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Plug-in bridge - FBS 4-5 BU - 3036893



Plug-in bridge, pitch: 5.2 mm, number of positions: 4, color: blue

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Plug-in bridge - FBS 5-5 BU - 3036903



Plug-in bridge, pitch: 5.2 mm, number of positions: 5, color: blue

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## Plug - SPDB 2,5/ 9 - 3040481

### Accessories

Plug-in bridge - FBS 10-5 BU - 3036916



Plug-in bridge, pitch: 5.2 mm, number of positions: 10, color: blue

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Plug-in bridge - FBS 20-5 BU - 3036929



Plug-in bridge, pitch: 5.2 mm, number of positions: 20, color: blue

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Plug-in bridge - FBS 50-5 BU - 3032114



Plug-in bridge, pitch: 5.2 mm, number of positions: 50, color: blue

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Plug-in bridge - FBS 2-5 GY - 3038969



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: gray

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Plug-in bridge - FBS 3-5 GY - 3038972



Plug-in bridge, pitch: 5.2 mm, number of positions: 3, color: gray

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## Plug - SPDB 2,5/ 9 - 3040481

### Accessories

Plug-in bridge - FBS 4-5 GY - 3038985



Plug-in bridge, pitch: 5.2 mm, number of positions: 4, color: gray

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Plug-in bridge - FBS 5-5 GY - 3038998



Plug-in bridge, pitch: 5.2 mm, number of positions: 5, color: gray

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Plug-in bridge - FBS 10-5 GY - 3039007



Plug-in bridge, pitch: 5.2 mm, number of positions: 10, color: gray

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Plug-in bridge - FBS 20-5 GY - 3038671



Plug-in bridge, pitch: 5.2 mm, number of positions: 20, color: gray

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Plug-in bridge - FBS 50-5 GY - 3032127



Plug-in bridge, pitch: 5.2 mm, number of positions: 50, color: gray

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## Plug - SPDB 2,5/ 9 - 3040481

### Accessories

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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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

## Plug - SPDB 2,5/ 9 - 3040481

### 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 size: 5.15 x 5.15 mm, Number of individual labels: 10

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 size: 5.15 x 5.15 mm, Number of individual labels: 10

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 size: 5.15 x 5.15 mm, Number of individual labels: 10

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 size: 5.15 x 5.15 mm, Number of individual labels: 10

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 size: 5.15 x 5.15 mm, Number of individual labels: 10

## Plug - SPDB 2,5/ 9 - 3040481

### Accessories

#### 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 size: 4.6 x 5.1 mm, Number of individual labels: 96

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#### 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 size: 4.4 x 4.7 mm, Number of individual labels: 72

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### 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

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#### 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

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### Mounting material

#### Strain relief - PDZ/2 - 3040562



Strain relief, length: 28.9 mm, width: 9.6 mm, number of positions: 2, color: black



## Plug - SPDB 2,5/ 9 - 3040481

### Accessories

Strain relief - PDZ/4 - 3040575



Strain relief, length: 28.9 mm, width: 19.8 mm, number of positions: 4, color: black

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Latching - PR - 3040559



Latching, length: 29.8 mm, width: 4.4 mm, number of positions: 1, color: orange

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Latching - PR/2 - 3040630



Latching, length: 29.8 mm, width: 10 mm, number of positions: 2, color: orange

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Latching - PRT/2 - 3040631



Latching, can only be released using a screwdriver, length: 23.2 mm, width: 9 mm, number of positions: 2, color: orange

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Latching - PRZ - 3040614



Latching, length: 63.6 mm, width: 9.7 mm, number of positions: 2, color: orange

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### Screwdriver tools

## Plug - SPDB 2,5/ 9 - 3040481

### Accessories

Actuation tool - 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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### Shield connection

Shield connection clamp - PSH 3- 6 - 3040591



Shield connection clamp, color: black

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Shield connection clamp - PSH 5-10 - 3040601



Shield connection clamp, color: black

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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: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.1 x 5.2 mm, Number of individual labels: 10

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Marker for terminal blocks - UC-TMF 5 - 0818153



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 5.1 mm, Number of individual labels: 96

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## Plug - SPDB 2,5/ 9 - 3040481

### Accessories

Marker for terminal blocks - UCT-TMF 5 - 0828744



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into flat marker groove, for terminal block width: 5.2 mm, lettering field size: 4.4 x 4.7 mm, Number of individual labels: 72

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