

## Plug - SPDB 2,5/ 1-R GNYE - 3043271

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Plug, nom. voltage: 500 V, nominal current: 24 A, connection method: Spring-cage connection, Plug connection, number of connections: 1, number of positions: 1, cross section: 0.08 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 28 - 12, width: 5.2 mm, height: 39 mm, color: green-yellow

### Product Description

Connector element right, left housing with engagement pin, right closed with cover

### Why buy this product

- Plug with bridging option, for use with basic terminal blocks
- The plug with spring-cage connection is assembled directly on site by snapping together single-position plug elements
- The ST-COMBI plugs for self-assembly provide solutions that users can implement themselves
- Tested for railway applications



### Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 50 STK        |
| GTIN         |               |
| GTIN         | 4017918895136 |

### Technical data

#### General

|  |                     |
|--|---------------------|
| Number of positions                    | 1                   |
| Number of levels                       | 1                   |
| Number of connections                  | 1                   |
| Potentials                             | 1                   |
| Nominal cross section                  | 2.5 mm <sup>2</sup> |
| Color                                  | green-yellow        |
| Insulating material                    | PA                  |
| Flammability rating according to UL 94 | V0                  |
| Area of application                    | Railway industry    |
|  | Machine building    |

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## Technical data

### General

|   |   |
|---|---|
|   | Plant engineering   |
| Maximum load current  | 24 A (with a 2.5 mm <sup>2</sup> conductor cross section) |
| 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   |
| Open side panel   | No  |
| 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   |
| 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 | 32.7 mm |
| Height | 39 mm   |
|        | 24 mm   |
| Pitch  | 5.2 mm  |

### Connection data

|                                    |                        |
|------------------------------------|------------------------|
| Connection method                  | Spring-cage connection |
| 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                     |

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## Technical data

### Connection data

|   |                      |
|---|----------------------|
| 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>  |
| 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                   |
| Connection method   | Plug connection      |

### Standards and Regulations

|  |   |
|--|---|
| Connection in acc. with standard                       | CSA   |
|  | IEC 61984                                       |
| Flammability rating according to UL 94                 | V0  |
| Fire protection for rail vehicles (DIN EN 45545-2) R22 | HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 |
| Fire protection for rail vehicles (DIN EN 45545-2) R23 | HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 |
| Fire protection for rail vehicles (DIN EN 45545-2) R24 | HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 |
| Fire protection for rail vehicles (DIN EN 45545-2) R26 | HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 |

### Environmental Product Compliance

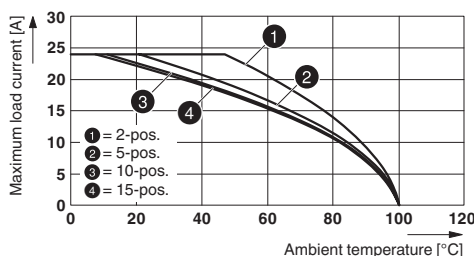
|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

## Drawings

### Circuit diagram



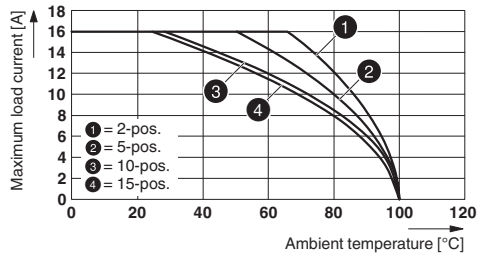
### Diagram



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

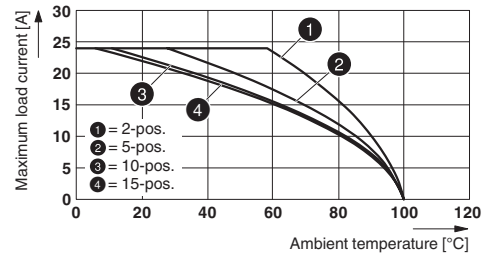
# Plug - SPDB 2,5/ 1-R GNYE - 3043271

Diagram



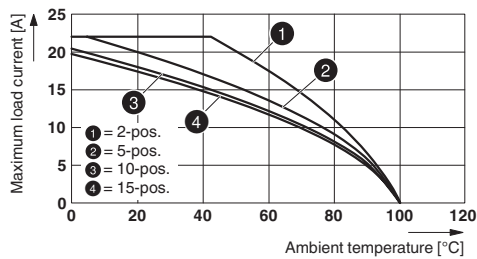
Derating curve for ST 2,5-TWIN-MT/1P, ST 2,5-TWIN-TG/1P and for all plug versions SP...

Diagram



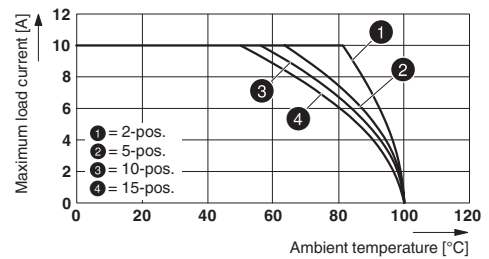
Derating curve for ST 2,5-QUATTRO/2P, ST 2,5-QUATTRO/4P and for all plug versions SP...

Diagram



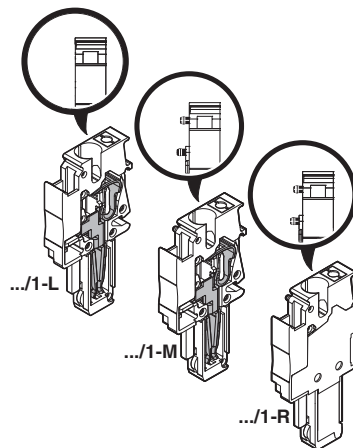
Derating curve for STTB 2,5/ 2P, STTB 2,5/ 2P-PV and for all plug versions SP...

Diagram



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

Schematic diagram



## Approvals

### Approvals

#### Approvals

CSA / VDE Gutachten mit Fertigungsüberwachung / LR / BV / IEC EE CB Scheme / DNV GL / UL Recognized / cUL Recognized / cULus Recognized

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## Approvals

Ex Approvals

### Approval details

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

|   |       |   |          |
|---|-------|---|----------|
| VDE Gutachten mit Fertigungsüberwachung |       | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40019518 |
| Nominal voltage UN                      | 500 V |   |          |
| mm <sup>2</sup> /AWG/kcmil              | 0.2-4 |   |          |

|    |  |   |          |
|----|--|---|----------|
| LR |  | <a href="http://www.lr.org/en">http://www.lr.org/en</a> | 05/20042 |
|----|--|---|----------|

|    |  |   |             |
|----|--|---|-------------|
| 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/A0 BV |
|----|--|---|-------------|

|                            |       |   |              |
|----------------------------|-------|---|--------------|
| IECEE CB Scheme            |       | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-57873_B1 |
| Nominal voltage UN         | 500 V |   |              |
| mm <sup>2</sup> /AWG/kcmil | 0.2-4 |   |              |

|        |   |            |
|--------|---|------------|
| DNV GL | <a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a> | TAE00001CS |
|--------|---|------------|

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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 |
|---------------|--|---|--------------|

|                            | D     | B     | C     |
|----------------------------|-------|-------|-------|
| Nominal voltage UN         | 600 V | 300 V | 300 V |
| Nominal current IN         | 5 A   | 20 A  | 20 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 |
|----------------|--|---|--------------|

|                            | D     | B     | C     |
|----------------------------|-------|-------|-------|
| Nominal voltage UN         | 600 V | 300 V | 300 V |
| Nominal current IN         | 5 A   | 20 A  | 20 A  |
| mm <sup>2</sup> /AWG/kcmil | 26-12 | 26-12 | 26-12 |

|                  |  |   |
|------------------|--|---|
| cULus 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> |
|------------------|--|---|

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