

## Feed-through terminal block - ST 2,5-TWIN/ 1P BU - 3042104

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Feed-through terminal block, nom. voltage: 500 V, nominal current: 24 A, connection method: Spring-cage/ plug-in connection, number of connections: 3, number of positions: 1, cross section: 0.08 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 28 - 12, width: 5.2 mm, color: blue, mounting type: NS 35/7,5, NS 35/15

### Why buy this product

- Tested for railway applications
- The plug-in ST-COMBI spring-cage terminal block series combines the system advantages of the ST standard terminal block series with those of the COMBI plug-in system

### Key Commercial Data

Packing unit	50 STK
GTIN	 4 017918 927165
GTIN	4017918927165

### Technical data

#### General

Number of levels	1
Number of connections	3
Nominal cross section	2.5 mm <sup>2</sup>
Color	blue
Insulating material	PA
Flammability rating according to UL 94	V0
Area of application	Railway industry Machine building Plant engineering
Rated surge voltage	6 kV
Degree of pollution	3
Overvoltage category	III
Insulating material group	I

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## Technical data

### General

Maximum power dissipation for nominal condition	0.77 W
Connection in acc. with standard	IEC 61984
Nominal current $I_N$	24 A (observe derating)
Maximum load current	24 A (For 4 mm <sup>2</sup> conductor cross section, see derating curve)
Nominal voltage $U_N$	500 V
Open side panel	Yes
Number of positions	1
Insertion/withdrawal cycles mechanical	100
Result of surge voltage test	Test passed
Surge voltage test setpoint	7.3 kV
Result of power-frequency withstand voltage test	Test passed
Power frequency withstand voltage setpoint	1.89 kV
Result of tight fit on support	Test passed
Tight fit on carrier	NS 35
Setpoint	1 N
Short circuit stability result	Test passed
Conductor cross section short circuit testing	2.5 mm <sup>2</sup>
Short-time current	0.3 kA
Result of thermal test	Test passed
Proof of thermal characteristics (needle flame) effective duration	30 s
Oscillation, broadband noise test result	Test passed
Test specification, oscillation, broadband noise	DIN EN 50155 (VDE 0115-200):2008-03
Test spectrum	Service life test category 1, class B, body mounted
Test frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	0.964 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	0.58 g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Shock test result	Test passed
Test specification, shock test	DIN EN 50155 (VDE 0115-200):2008-03
Shock form	Half-sine
Acceleration	5 g
Shock duration	30 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Relative insulation material temperature index (Elec.; UL 746 B)	130 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	125 °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

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### General

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)	27,5 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	60.5 mm
Height NS 35/7,5	36.5 mm
Height NS 35/15	44 mm

### Connection data

Connection method	Spring-cage/plug-in 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 flexible min.	0.08 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	28
Conductor cross section AWG max.	12
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

### 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
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## Technical data

### Environmental Product Compliance

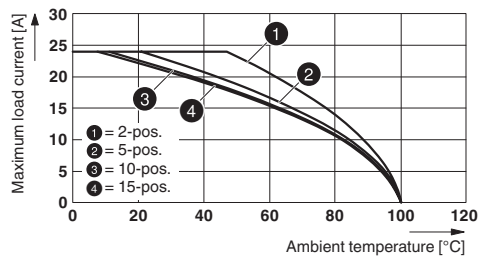
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

### Circuit diagram

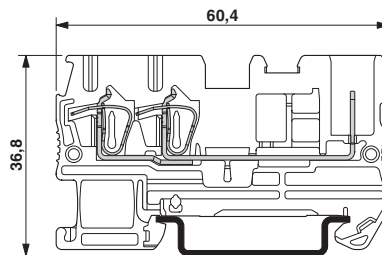


### Diagram



Applies to all male connector variants SP...

### Dimensional drawing



## Approvals

### Approvals

#### Approvals

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

#### Ex Approvals

### Approval details

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## Approvals

CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	13631
	B	C	
Nominal voltage UN	600 V	600 V	
Nominal current IN	20 A	20 A	
mm <sup>2</sup> /AWG/kcmil	28-12	28-12	

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	
Nominal voltage UN	600 V	600 V	
Nominal current IN	20 A	20 A	
mm <sup>2</sup> /AWG/kcmil	28-12	28-12	

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	


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	
Nominal voltage UN	600 V	600 V	
Nominal current IN	20 A	20 A	
mm <sup>2</sup> /AWG/kcmil	28-12	28-12	

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

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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EAC		RU C- DE.A*30.B.01742
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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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