

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



3042104

<https://www.phoenixcontact.com/us/products/3042104>

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Feed-through terminal block, nom. voltage: 500 V, nominal current: 24 A, number of connections: 3, number of positions: 1, connection method: Spring-cage/plug-in connection, Rated cross section: 2.5 mm<sup>2</sup>, 1st level connection left, cross section: 0.08 mm<sup>2</sup> - 4 mm<sup>2</sup>, 1st level connection right, mounting type: NS 35/7,5, NS 35/15, color: blue

## Your advantages

- 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
- Tested for railway applications

## Commercial data

Item number	3042104
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE02
Product key	BE2141
GTIN	4017918927165
Weight per piece (including packing)	7.341 g
Weight per piece (excluding packing)	6.748 g
Customs tariff number	85369010
Country of origin	DE

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## Technical data

### Notes

General	The max. load current must not be exceeded by the total current of all connected conductors. Current and voltage are determined by the plug used.
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### Product properties

Product type	Plug-in terminal block
Area of application	Railway industry
	Machine building
	Plant engineering
Number of positions	1
Number of connections	3
Number of rows	1
Potentials	1

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	6 kV
Maximum power dissipation for nominal condition	0.77 W

### Connection data

Number of connections per level	3
Nominal cross section	2.5 mm <sup>2</sup>

#### 1st level connection left

Connection method	Spring-cage/plug-in connection
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A3
Connection in acc. with standard	IEC 61984
Conductor cross-section rigid	0.08 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Cross section AWG	28 ... 12 (converted acc. to IEC)
Conductor cross-section flexible	0.08 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	28 ... 14 (converted acc. to IEC)
Conductor cross-section flexible ultrasound-compressed	0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section, flexible [AWG] ultrasound-compressed	22 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup>
Nominal cross section	2.5 mm <sup>2</sup>

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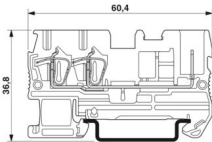


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Nominal current	24 A (observe derating)
Maximum load current	24 A (For 4 mm <sup>2</sup> conductor cross-section, see derating curve)
Nominal voltage	500 V

## Dimensions

Dimensional drawing	
Width	5.2 mm
End cover width	2.2 mm
Height	60.5 mm
Depth on NS 35/7,5	36.5 mm
Depth on NS 35/15	44 mm

## Material specifications

Color	blue (RAL 5015)
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA
Static insulating material application in cold	-60 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	125 °C
Relative insulation material temperature index (Elec., UL 746 B)	130 °C
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
Calorimetric heat release NFPA 130 (ASTM E 1354)	27,5 MJ/kg
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

## Electrical tests

### Surge voltage test

Test voltage setpoint	7.3 kV
Result	Test passed
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

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## Mechanical properties

### Mechanical data

Open side panel	Yes
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## Mechanical tests

### Attachment on the carrier

DIN rail/fixing support	NS 35
Test force setpoint	1 N
Result	Test passed

## Environmental and real-life conditions

### Needle-flame test

Time of exposure	30 s
Result	Test passed

### Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2008-03
Spectrum	Long life test category 1, class B, body mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	$0.964 \text{ (m/s}^2\text{)}^2\text{/Hz}$
Acceleration	0.58g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Result	Test passed

### Shocks

Specification	DIN EN 50155 (VDE 0115-200):2008-03
Pulse shape	Half-sine
Acceleration	5g
Shock duration	30 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Result	Test passed

### Ambient conditions

Ambient temperature (operation)	-60 °C ... 100 °C (max. operating temperature range including self-heating, see derating curve)
Ambient temperature (storage/transport)	-25 °C ... 60 °C (for a short time, not exceeding 24 h, -60 °C to +70 °C)
Ambient temperature (assembly)	-5 °C ... 70 °C
Ambient temperature (actuation)	-5 °C ... 70 °C
Permissible humidity (operation)	20 % ... 90 %
Permissible humidity (storage/transport)	30 % ... 70 %

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## Standards and regulations

Connection in acc. with standard	IEC 61984
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## Mounting

Mounting type	NS 35/7,5
	NS 35/15

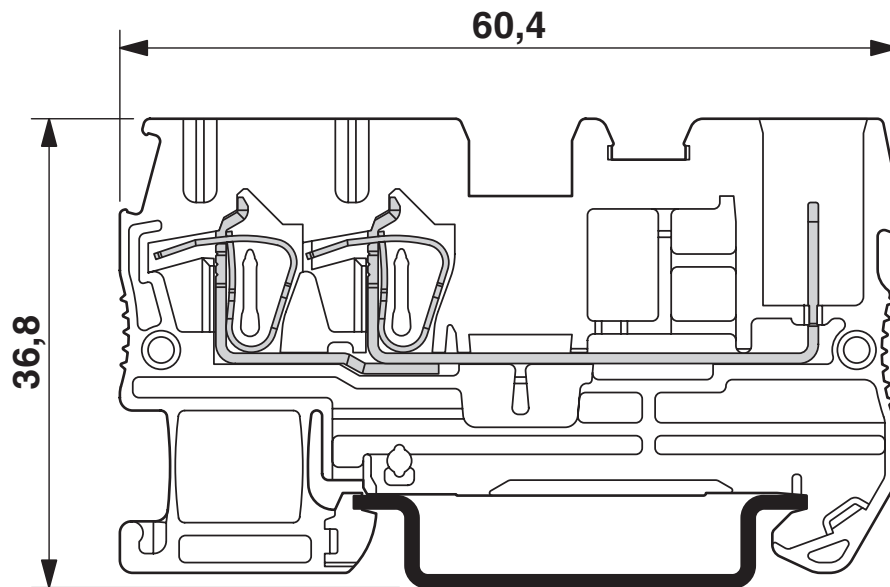
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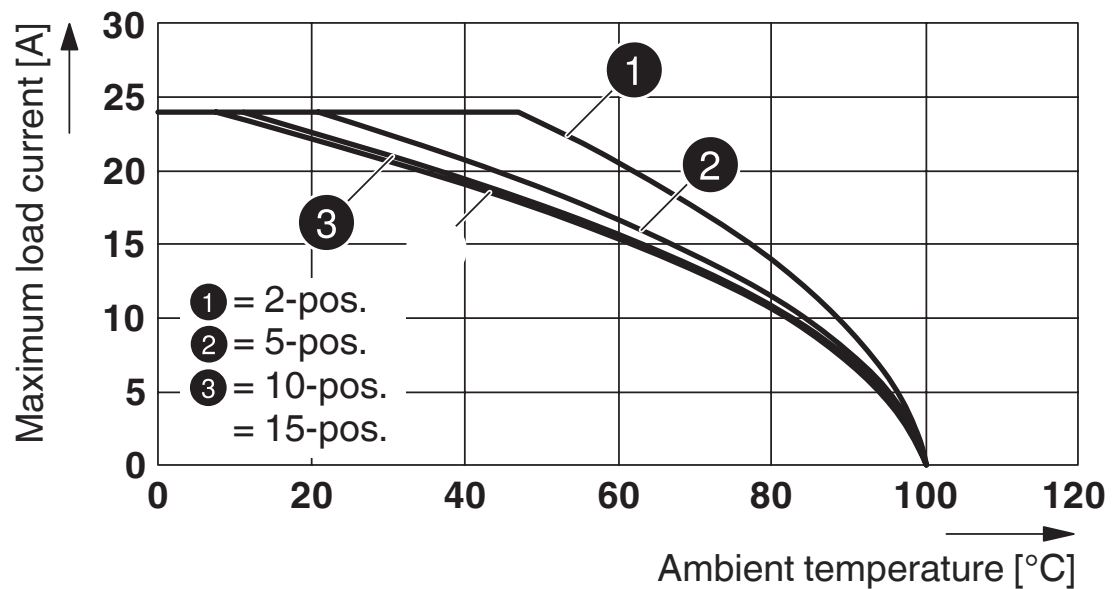
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## Drawings

Dimensional drawing



Diagram



Applies to all male connector variants SP...

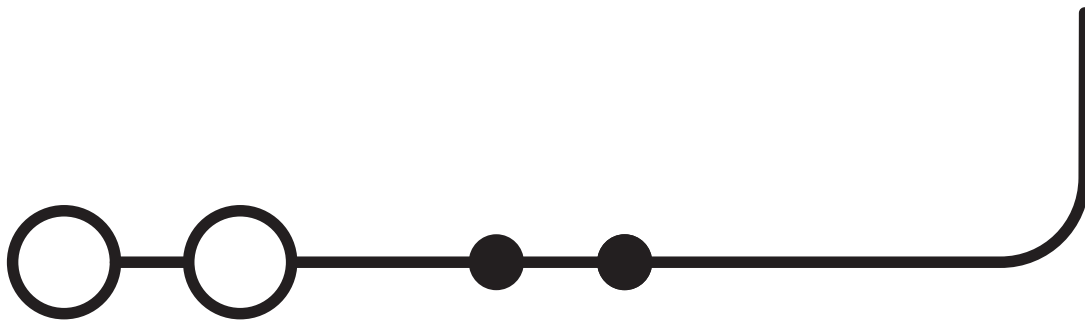
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Circuit diagram



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




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## Approvals


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 <b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	600 V	20 A	28 - 12	-
C	600 V	20 A	28 - 12	-

 <b>IECEE CB Scheme</b> Approval ID: DE1-62736/B1/B2				
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 <b>EAC</b> Approval ID: RU C-DE.BL08.B.00644				
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 <b>VDE Zeichengenehmigung</b> Approval ID: 40019518				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine				
Only flexible conductors	500 V	-	-	0.2 - 2.5
Only rigid conductors	500 V	-	-	0.2 - 4

 <b>cULus Recognized</b> Approval ID: E60425				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	600 V	20 A	28 - 12	-
C	600 V	20 A	28 - 12	-
F	500 V	20 A	28 - 12	-

<b>DNV</b> Approval ID: TAE00001CS				
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## Classifications

### ECLASS

ECLASS-13.0	27250117
ECLASS-15.0	27250117

### ETIM

ETIM 10.0	EC000897
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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### EF3.1 Climate Change

CO2e kg	0.035 kg CO2e
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