

# QTCS 2,5-TWIN BU - Feed-through terminal block



3050345

<https://www.phoenixcontact.com/sg/products/3050345>

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Feed-through terminal block, nom. voltage: 800 V, nominal current: 24 A, 1 level, connection method: Quick connection, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, connection method: Spring-cage connection, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.08 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting: NS 35/7,5, NS 35/15, color: blue

## Your advantages

- The hybrid versions combine the advantages of the different connection technologies
- The time-saving QUICKON fast connection is used on the control cabinet side
- The spring-cage connection is used on the connection side

## Commercial data

Item number	3050345
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	0170*
Product key	BE3112
Catalog page	Page 265 (C-1-2019)
GTIN	4046356056182
Weight per piece (including packing)	13.75 g
Weight per piece (excluding packing)	13.75 g
Customs tariff number	85369010
Country of origin	CN

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## Technical data

### Product properties

Product type	Hybrid terminal block
Number of connections	3
Number of rows	1
Potentials	1

### Data management status

Article revision	04
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### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	8 kV
Maximum power dissipation for nominal condition	0.77 W

### Connection data

Number of connections per level	3
Frequency of connections with the same cross section	100
Nominal cross section	2.5 mm <sup>2</sup>

#### 1 level

Stripping length	10 mm
Material wire insulation	PVC / PE
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cross section AWG	20 ... 14 (converted acc. to IEC)
Conductor cross section flexible	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	20 ... 14 (converted acc. to IEC)
Nominal current	24 A
Maximum load current	24 A (with a 2.5 mm <sup>2</sup> conductor cross section)
Nominal voltage	800 V
Nominal cross section	2.5 mm <sup>2</sup>

#### Level 1 below 1

Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.08 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Cross section AWG	28 ... 10 (converted acc. to IEC)
Conductor cross section flexible	0.08 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN	0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>

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ferrule with plastic sleeve	
Nominal current	24 A
Maximum load current	24 A (with 2.5 mm <sup>2</sup> conductor connection cross section)
Nominal voltage	800 V
Nominal cross section	2.5 mm <sup>2</sup>

## Ex data

### Rated data (ATEX/IECEx)

Identification	Ⓜ II 2 GD Ex eb IIC Gb
Operating temperature range	-45 °C ... 90 °C
Ex-certified accessories	3050523 D-QTCS 2,5 TWIN
	3206212 ATP-QTC TWIN
	1204517 SZF 1-0,6X3,5
	3022276 CLIPFIX 35-5
	3022218 CLIPFIX 35
List of bridges	Plug-in bridge / FBS 2-6 / 3030336
	Plug-in bridge / FBS 3-6 / 3030242
	Plug-in bridge / FBS 4-6 / 3030255
	Plug-in bridge / FBS 5-6 / 3030349
	Plug-in bridge / FBS 10-6 / 3030271
Plug-in bridge / FBS 20-6 / 3030365	
Ex temperature increase	40 K (26 A / 2,5 mm <sup>2</sup> )
Rated voltage	550 V
for bridging with bridge	550 V
- At bridging between non-adjacent terminal blocks	352 V
- At cut-to-length bridging with cover	220 V
- At cut-to-length bridging with partition plate	275 V
Rated insulation voltage	500 V
output	(Permanent)

### Ex level General

Rated current	23.5 A
Maximum load current	23.5 A
Contact resistance	0.93 mΩ

### Ex connection data Fast connection

Nominal cross section	2.5 mm <sup>2</sup>
Rated cross section AWG	14
Connection capacity rigid	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Connection capacity AWG	20 ... 14
Connection capacity flexible	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Connection capacity AWG	20 ... 14
Frequency of connections with the same cross section	100

### Ex connection data Spring-cage connection

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Stripping length	10 mm
Nominal cross section	2.5 mm <sup>2</sup>
Rated cross section AWG	14
Connection capacity rigid	0.08 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Connection capacity AWG	28 ... 10
Connection capacity flexible	0.08 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Connection capacity AWG	28 ... 12

## Dimensions

Width	6.2 mm
End cover width	2.2 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))	130 °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)	28 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

## Cable/line

Wire diameter incl. insulation	3.8 mm
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## Electrical tests

### Surge voltage test

Test voltage setpoint	9.8 kV
Result	Test passed

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature ≤ 45 K
Result	Test passed
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 kA
Result	Test passed

### Power-frequency withstand voltage

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Test voltage setpoint	2 kV
Result	Test passed

## Mechanical properties

### Mechanical data

Open side panel	Yes
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## Mechanical tests

### Mechanical strength

Result	Test passed
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### Attachment on the carrier

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

### Test for conductor damage and slacking

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	0.2 mm <sup>2</sup> / 0.2 kg
	2.5 mm <sup>2</sup> / 0.7 kg
	6 mm <sup>2</sup> / 1.4 kg
Result	Test passed

## Environmental and real-life conditions

### Aging

Temperature cycles	192
Result	Test passed

### Needle-flame test

Time of exposure	30 s
Result	Test passed

### Ambient conditions

Ambient temperature (operation)	-60 °C ... 105 °C (max. short-term operating temperature RTI Elec.)
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 (storage/transport)	30 % ... 70 %

## Standards and regulations

Connection in acc. with standard	IEC 60947-7-1
	IEC 60947-7-1

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## Mounting

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

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## Drawings

Circuit diagram



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## Classifications

### ECLASS

ECLASS-11.0

27141120

### ETIM

ETIM 8.0

EC000897

### 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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