

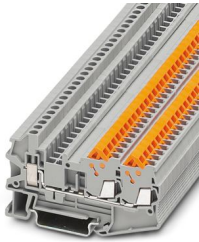
# QTCU 1,5-TWIN - Feed-through terminal block



3050044

<https://www.phoenixcontact.com/us/products/3050044>

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Feed-through terminal block, nom. voltage: 800 V, nominal current: 17.5 A, connection method: Quick connection, Rated cross section: 1.5 mm<sup>2</sup>, cross section: 0.25 mm<sup>2</sup> - 1.5 mm<sup>2</sup>, connection method: Screw connection, Rated cross section: 1.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting: NS 35/7,5, NS 35/15, color: gray

## 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 screw connection is used on the connection side

## Commercial data

Item number	3050044
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE03
Product key	BE3112
GTIN	4017918975753
Weight per piece (including packing)	11.82 g
Weight per piece (excluding packing)	11 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

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Electrical properties

Rated surge voltage	8 kV
Maximum power dissipation for nominal condition	0.56 W

### Connection data

Type of additional hybrid connection	Web reference for UT
Number of connections per level	3
Frequency of connections with the same cross section	100
Nominal cross section	1.5 mm <sup>2</sup>
Connection method	Quick connection
Material wire insulation	PVC / PE
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Cross section AWG	24 ... 16 (converted acc. to IEC)
Conductor cross-section flexible	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	24 ... 16 (converted acc. to IEC)
Cross section, sensor conductors	0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
Nominal cross section	1.5 mm <sup>2</sup>
Nominal current	17.5 A
Maximum load current	17.5 A (with 1.5 mm <sup>2</sup> conductor cross-section)
Nominal voltage	800 V
Connection method	Screw connection
Screw thread	M3
Tightening torque	0.5 ... 0.6 Nm
Stripping length	9 mm
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Cross section AWG	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
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 same cross section, rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>

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2 conductors with same cross section, flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Nominal cross section	1.5 mm <sup>2</sup>
Nominal current	17.5 A
Maximum load current	17.5 A (with 1.5 mm <sup>2</sup> conductor cross-section)
Nominal voltage	800 V

## Ex data

### Rated data (ATEX/IECEx)

Identification	⊕ II 2 GD Ex eb IIC Gb
Operating temperature range	-45 °C ... 90 °C
Ex-certified accessories	3206296 D-QTCU 1,5-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 2-5 / 3030161 Plug-in bridge / FBS 3-5 / 3030174 Plug-in bridge / FBS 4-5 / 3030187 Plug-in bridge / FBS 5-5 / 3030190 Plug-in bridge / FBS 10-5 / 3030213 Plug-in bridge / FBS 20-5 / 3030226
Bridge data	16.5 A / 1.5 mm <sup>2</sup>
Ex temperature increase	40 K (18.5 A / 1.5 mm <sup>2</sup> )
for bridging with bridge	550 V
- At bridging between non-adjacent terminal blocks	275 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 voltage	550 V
Rated current	16.5 A
Maximum load current	16.5 A
Contact resistance	1.21 mΩ

### Ex connection data Fast connection

Nominal cross section	1.5 mm <sup>2</sup>
Rated cross section AWG	16
Connection capacity rigid	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Connection capacity AWG	24 ... 16

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Connection capacity flexible	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Connection capacity AWG	24 ... 16
Frequency of connections with the same cross section	100

## Ex connection data Screw connection

Stripping length	9 mm
Torque range	0.5 Nm ... 0.6 Nm
Nominal cross section	1.5 mm <sup>2</sup>
Rated cross section AWG	16
Connection capacity rigid	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Connection capacity AWG	26 ... 12
Connection capacity flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Connection capacity AWG	26 ... 14
2 conductors with same cross section, solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross-section AWG rigid	26 ... 16
2 conductors with same cross section, stranded	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross-section AWG flexible	26 ... 16

## Dimensions

Width	5.2 mm
End cover width	2.2 mm
Height	76.4 mm
Depth on NS 35/7,5	42.8 mm
Depth on NS 35/15	50.3 mm

## Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA
Static insulating material application in cold	-60 °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
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 mm
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## Electrical tests

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## Surge voltage test

Result	Test passed
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## Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq 45$ K
Result	Test passed
Short-time withstand current 1.5 mm <sup>2</sup>	0.18 kA
Result	Test passed

## Power-frequency withstand voltage

Result	Test passed
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## 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 slackening

Rotation speed	10 (+/- 2) rpm
Revolutions	135
Conductor cross-section/weight	0.2 mm <sup>2</sup> / 0.2 kg
	1.5 mm <sup>2</sup> / 0.4 kg
	4 mm <sup>2</sup> / 0.9 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

### Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2018-05
Spectrum	Long life test category 2, bogie-mounted

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Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	$6.12 \text{ (m/s}^2\text{)}^2\text{/Hz}$
Acceleration	3.12g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis

## Shocks

Pulse shape	Half-sine
Acceleration	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)

## Ambient conditions

Ambient temperature (operation)	-60 °C ... 110 °C (Operating temperature range incl. self-heating; for max. short-term operating temperature, see 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 (operation)	20 % ... 90 %
Permissible humidity (storage/transport)	30 % ... 70 %

## Standards and regulations

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

## Mounting

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

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## Drawings

Circuit diagram



# QTCU 1,5-TWIN - Feed-through terminal block





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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3050044>

 <b>cULus Recognized</b> Approval ID: E60425				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
<b>B</b>				
Screw connection	600 V	0 A	26 - 12	-
Fast connection	600 V	10 A	24 - 16	-
<b>C</b>				
Screw connection	600 V	0 A	26 - 12	-
Fast connection	600 V	10 A	24 - 16	-

 <b>CSA</b> Approval ID: 158887				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
<b>B</b>				
Screw connection	600 V	10 A	26 - 12	-
Fast connection	600 V	10 A	24 - 16	-
<b>C</b>				
Screw connection	600 V	10 A	26 - 12	-
Fast connection	600 V	10 A	24 - 16	-

 <b>IECEx</b> Approval ID: IECExKIWA19.0011U				
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 <b>ATEX</b> Approval ID: KIWA19ATEX0019U				
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 <b>CCC</b> Approval ID: 2020322313000625				
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 <b>UKCA-EX</b> Approval ID: CSAE 22UKEX1429U				
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 <b>EAC Ex</b> Approval ID: KZ 7500525010101950				
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## Classifications

### ECLASS

ECLASS-13.0

27250201

### ETIM

ETIM 9.0

EC000897

### UNSPSC

UNSPSC 21.0

39121400

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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	25e0d296-d276-4184-b1fa-825ecff90497

### EF3.1 Climate Change

CO2e kg	0.088 kg CO2e
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