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

3050057

https://www.phoenixcontact.com/nl/products/3050057

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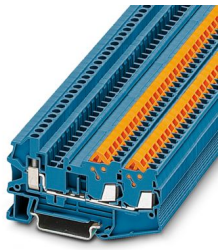

Feed-through terminal block, nom. voltage: 800 V, nominal current: 17.5 A, connection method: Quick connection, Rated cross section: 1.5 mm^2, cross section: 0.25 mm^2 - 1.5 mm^2, connection method: Screw connection, Rated cross section: 1.5 mm^2, cross section: 0.14 mm^2 - 4 mm^2, mounting: NS 35/7,5,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

Your advantages

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

Commercial data

Item number	3050057
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE3112
Product key	BE3112
GTIN	4017918975760
Weight per piece (including packing)	12,01 g
Weight per piece (excluding packing)	12,01 g
Customs tariff number	85369010
Country of origin	CN

Technical data

Product properties

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

Number of connections per level	3
Frequency of connections with the same cross section	100
Nominal cross section	1.5 mm²
Connection method	Quick connection
Material wire insulation	PVC / PE
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.25 mm² ... 1.5 mm²
Cross section AWG	24 ... 16 (converted acc. to IEC)
Conductor cross-section flexible	0.25 mm² ... 1.5 mm²
Conductor cross-section, flexible [AWG]	24 ... 16 (converted acc. to IEC)
Cross section, sensor conductors	0.25 mm² ... 0.34 mm²
Nominal cross section	1.5 mm²
Nominal current	17.5 A
Maximum load current	17.5 A (with 1.5 mm² 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 mm² ... 4 mm²
Cross section AWG	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible	0.14 mm² ... 2.5 mm²
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm² ... 2.5 mm²
Flexible conductor cross-section (ferrule with plastic sleeve)	0.14 mm² ... 2.5 mm²
2 conductors with same cross section, rigid	0.14 mm² ... 1.5 mm²
2 conductors with same cross section, flexible	0.14 mm² ... 1.5 mm²
2 conductors with same cross section, flexible, with ferrule	0.14 mm² ... 1.5 mm²

without plastic sleeve	
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm² ... 1.5 mm²
Nominal cross section	1.5 mm²
Nominal current	17.5 A
Maximum load current	17.5 A (with 1.5 mm² conductor cross-section)
Nominal voltage	800 V

Ex data

Rated data (ATEX/IECEx)

Identification	Ⓔx 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
Ex temperature increase	40 K (18.5 A / 1.5 mm²)
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 mm²
Rated cross section AWG	16
Connection capacity rigid	0.25 mm² ... 1.5 mm²
Connection capacity AWG	24 ... 16
Connection capacity flexible	0.25 mm² ... 1.5 mm²
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 mm²
Rated cross section AWG	16
Connection capacity rigid	0.14 mm² ... 4 mm²
Connection capacity AWG	26 ... 12
Connection capacity flexible	0.14 mm² ... 2.5 mm²
Connection capacity AWG	26 ... 14
2 conductors with same cross section, solid	0.14 mm² ... 1.5 mm²
2 conductors with the same cross-section AWG rigid	26 ... 16
2 conductors with same cross section, stranded	0.14 mm² ... 1.5 mm²
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	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
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

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
	Test passed
Short-time withstand current 1.5 mm²	0.18 kA
Result	Test passed

Power-frequency withstand voltage

Result	Test passed

Mechanical properties

Mechanical data

Open side panel	Yes

Mechanical tests

Mechanical strength

Result	Test passed

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 mm² / 0.2 kg
	1.5 mm² / 0.4 kg
	4 mm² / 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
Frequency	f_1 = 5 Hz to f_2 = 250 Hz
ASD level	6.12 (m/s²)²/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

Drawings

Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/nl/products/3050057

cULus Recognized
Approval ID: E60425

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
Screw connection	600 V	0 A	26 - 12	-
Fast connection	600 V	10 A	24 - 16	-
C				
Screw connection	600 V	0 A	26 - 12	-
Fast connection	600 V	10 A	24 - 16	-

CSA
Approval ID: 2030668

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
Screw connection	600 V	10 A	26 - 12	-
Fast connection	600 V	10 A	24 - 16	-
C				
Screw connection	600 V	10 A	26 - 12	-
Fast connection	600 V	10 A	24 - 16	-

IECEx
Approval ID: IECExKIWA19.0011U

ATEX
Approval ID: KIWA19ATEX0019U

CCC
Approval ID: 2020322313000625

UKCA-EX
Approval ID: CSAE 22UKEX1429U

EAC Ex
Approval ID: KZ 7500525010101950

Classifications

ECLASS

ECLASS-13.0	27250201

ETIM

ETIM 9.0	EC000897

UNSPSC

UNSPSC 21.0	39121400

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	8183395d-8a94-4d14-8db3-53e0dd5b1bb2

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