

STU 10/ 4X2,5 - Potential collective terminal



3033139

<https://www.phoenixcontact.com/us/products/3033139>

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Potential collective terminal, nom. voltage: 800 V, nominal current: 55 A, connection method: Screw connection, Rated cross section: 10 mm², cross section: 0.5 mm² - 16 mm², connection method: Spring-cage connection, Rated cross section: 2.5 mm², cross section: 0.08 mm² - 4 mm², mounting: NS 35/7,5, NS 35/15, color: gray

Your advantages

- The STU 10/4x2,5 spring-cage hybrid terminal block is a space-saving potential distributor that distributes a 10 mm² supply line to four 2.5 mm² connections
- Supplied using a 10 mm² screw connection
- The system-internal distribution is via four spring-cage connections with a nominal cross section of 2.5 mm²
- The double bridge shaft supports further potential distributions
- Can be consistently bridged to standard terminal blocks in the ST spring-cage terminal block series

Commercial data

Item number	3033139
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE02
Product key	BE2119
Catalog page	Page 244 (C-1-2019)
GTIN	4046356148030
Weight per piece (including packing)	20.7 g
Weight per piece (excluding packing)	20.7 g
Customs tariff number	85369010
Country of origin	PL

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Technical data

Product properties

Product type	Hybrid terminal block
Number of connections	5
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	1.82 W

Connection data

Type of additional hybrid connection	UT 10
Number of connections per level	5
Nominal cross section	10 mm ²
Screw thread	M4
Tightening torque	1.5 ... 1.8 Nm
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A6
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.5 mm ² ... 16 mm ²
Cross section AWG	20 ... 8 (converted acc. to IEC)
Conductor cross section flexible	0.5 mm ² ... 16 mm ²
Conductor cross section, flexible [AWG]	20 ... 6 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 mm ² ... 10 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.5 mm ² ... 10 mm ²
2 conductors with same cross section, solid	0.5 mm ² ... 4 mm ²
2 conductors with same cross section, flexible	0.5 mm ² ... 4 mm ²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.5 mm ² ... 2.5 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 6 mm ²
Nominal current	55 A
Maximum load current	57 A
Nominal voltage	800 V
Nominal cross section	10 mm ²

Level 1 above 1+2

Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A3

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Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	0.08 mm ² ... 4 mm ²
Cross section AWG	24 ... 10 (converted acc. to IEC)
Conductor cross section flexible	0.08 mm ² ... 2.5 mm ²
Conductor cross section, flexible [AWG]	24 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm ² ... 2.5 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm ² ... 2.5 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.14 mm ² ... 0.5 mm ²
Nominal current	24 A
Maximum load current	24 A
Nominal voltage	800 V
Nominal cross section	2.5 mm ²

Dimensions

Width	10.3 mm
End cover width	2.2 mm
Height	68 mm
Depth on NS 35/7,5	48.3 mm
Depth on NS 35/15	55.8 mm

Material specifications

Color	gray
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	9.8 kV
Result	Test passed

Temperature-rise test

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Requirement temperature-rise test	Increase in temperature ≤ 45 K
Result	Test passed
Short-time withstand current 2.5 mm ²	0.3 kA
Short-time withstand current 4 mm ²	0.48 kA
Result	Test passed

Power-frequency withstand voltage

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	5 N
Result	Test passed

Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	0.08 mm ² / 0.1 kg
	2.5 mm ² / 0.7 kg
	4 mm ² / 0.9 kg
Result	Test passed

Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	0.5 mm ² / 0.3 kg
	10 mm ² / 2 kg
	16 mm ² / 2.9 kg
Result	Test passed

Environmental and real-life conditions

Aging

Temperature cycles	192
Result	Test passed

Needle-flame test

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Time of exposure	30 s
Result	Test passed

Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2008-03
Spectrum	Service life test category 2, bogie-mounted
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
Result	Test passed

Shocks

Specification	DIN EN 50155 (VDE 0115-200):2008-03
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.)
Result	Test passed

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, no longer than 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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Classifications

ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250201

ETIM

ETIM 9.0	EC000897
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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