

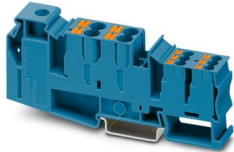
# PTU 35/4X6/6X2,5 BU - Potential collective terminal



3214081

<https://www.phoenixcontact.com/us/products/3214081>

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Potential collective terminal, In the end application, the applicable safety regulations for overload and short-circuit protection on the connected conductors must be considered., nom. voltage: 1000 V, nominal current: 105 A, 1st level connection left, connection method: Screw connection, cross section: 1.5 mm<sup>2</sup> - 50 mm<sup>2</sup>, First level connection, interior, connection method: Push-in connection, Rated cross section: 6 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 10 mm<sup>2</sup>, mounting: NS 35/7,5, NS 35/15, color: blue

## Your advantages

- The terminal block base is ideal for use in building installation and machine building applications
- The compact design and front connection enable wiring in a confined space
- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off
- The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system and by easy and tool-free wiring of conductors with ferrules or solid conductors

## Commercial data

Item number	3214081
Packing unit	20 pc
Minimum order quantity	20 pc
Sales key	BE22
Product key	BE2219
GTIN	4055626170565
Weight per piece (including packing)	76.1 g
Weight per piece (excluding packing)	76.1 g
Customs tariff number	85369010
Country of origin	CN

## Technical data

### Notes

Notes on operation	In the end application, the applicable safety regulations for overload and short-circuit protection on the connected conductors must be considered.
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### General

Note	The max. load current must not be exceeded by the total current of all connected conductors.
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### Product properties

Product type	Potential distributor
Product family	PTU
Number of connections	11
Number of rows	1
Potentials	1

### Insulation characteristics

Overvoltage category	III
Degree of pollution	2

### Electrical properties

Maximum power dissipation for nominal condition	4.06 W
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### Connection data

Service Entrance	yes
Number of connections per level	11

#### 1st level connection left

Connection method	Screw connection
Screw thread	M6
Number of connections	1
Tightening torque	3.2 ... 3.7 Nm
Stripping length	18 mm
Internal cylindrical gage	B9
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	1.5 mm <sup>2</sup> ... 50 mm <sup>2</sup>
Cross section AWG	14 ... 2 (converted acc. to IEC)
Conductor cross-section flexible	1.5 mm <sup>2</sup> ... 50 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	14 ... 2 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
2 conductors with same cross section, rigid	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
2 conductors with the same cross-section AWG rigid	16 ... 6 (converted acc. to IEC)
2 conductors with same cross section, flexible	1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>

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2 conductors with the same cross-section AWG flexible	16 ... 8 (converted acc. to IEC)
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Nominal current	105 A
Maximum load current	105 A (The maximum load current must not be exceeded by the total current of all connected conductors.)
Nominal voltage	1000 V

## First level connection, interior

Connection method	Push-in connection
Number of connections	4
Stripping length	12 mm
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Cross section AWG	20 ... 8 (converted acc. to IEC)
Conductor cross-section flexible	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	20 ... 10 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.5 mm <sup>2</sup> ... 6 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	6 mm <sup>2</sup>
Nominal current	41 A
Maximum load current	41 A
Nominal voltage	1000 V

## 1st level connection right

Connection method	Push-in connection
Number of connections	6
Stripping length	8 mm ... 10 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 [AWG]	26 ... 14 (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> ... 1.5 mm <sup>2</sup>
Nominal cross section	2.5 mm <sup>2</sup>
Nominal current	24 A
Maximum load current	24 A
Nominal voltage	1000 V

## First level connection, interior Connection cross sections directly pluggable

Conductor cross-section rigid	1 mm <sup>2</sup> ... 10 mm <sup>2</sup>
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Conductor cross-section, rigid [AWG]	18 ... 8 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	1 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	1 mm <sup>2</sup> ... 6 mm <sup>2</sup>

1st level connection right Connection cross sections directly pluggable

Conductor cross-section rigid	0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section flexible (ferrule without plastic sleeve)	0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>

## Dimensions

Width	16.3 mm
Height	110.4 mm
Depth on NS 35/7,5	48.8 mm
Depth on NS 35/15	56.3 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

## 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 35 mm <sup>2</sup>	3 kA
Short-time withstand current 50 mm <sup>2</sup>	4.8 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	2.2 kV
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Result	Test passed
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## Mechanical properties

### Mechanical data

Open side panel	No
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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
Result	Test passed

### Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross-section/weight	1.5 mm <sup>2</sup> / 0.4 kg
	35 mm <sup>2</sup> / 6.8 kg
	50 mm <sup>2</sup> / 9.5 kg
Result	Test passed

### Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross-section/weight	0.5 mm <sup>2</sup> / 0.3 kg
	6 mm <sup>2</sup> / 1.4 kg
	10 mm <sup>2</sup> / 2 kg
Result	Test passed

### Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross-section/weight	0.14 mm <sup>2</sup> / 0.2 kg
	2.5 mm <sup>2</sup> / 0.7 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
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Result	Test passed
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## Oscillation/broadband noise

Specification	EN 50155:2021-07
Spectrum	Long life test category 2, bogie-mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
ASD level	6.12 (m/s <sup>2</sup> )/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, 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
	IEC 60947-7-1

## Mounting

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

Drawings

Circuit diagram



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## Approvals

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**CSA**

Approval ID: 158887



**EAC**

Approval ID: RU C-DE.BL08.B.00644



**cULus Recognized**

Approval ID: E60425



**EAC**

Approval ID: KZ7500651131219505



**CSA**

Approval ID: 13631

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## Classifications

### ECLASS

ECLASS-13.0	27250119
ECLASS-15.0	27250119

### 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	0.618 kg CO2e
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