

PTPOWER 35 - High-current terminal block



3212064

<https://www.phoenixcontact.com/de/produkte/3212064>

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High-current terminal block, nom. voltage: 1000 V, nominal current: 125 A, number of connections: 2, connection method: PowerTurn connection, Rated cross section: 35 mm², cross section: 2.5 mm² - 35 mm², mounting type: NS 35/15, color: gray

Your advantages

- Quick and easy connection is now also possible for large conductors with the high-current terminal block
- 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
- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off
- The compact design and front connection enable wiring in a confined space

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Technical data

Product properties

Product type	High current terminal block
Number of connections	2
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	4.06 W

Connection data

Number of connections per level	2
Nominal cross section	35 mm ²
Rated cross section AWG	2
Stripping length	25 mm
Conductor cross section rigid	2.5 mm ² ... 35 mm ²
Cross section AWG	12 ... 2 (converted acc. to IEC)
Conductor cross section flexible	2.5 mm ² ... 35 mm ²
Conductor cross section, flexible [AWG]	12 ... 2 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	2.5 mm ² ... 35 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	2.5 mm ² ... 35 mm ²
Nominal current	125 A
Maximum load current	125 A (with 35 mm ² conductor cross section)
Nominal voltage	1000 V
Nominal cross section	35 mm ²

Connection cross sections directly pluggable

Conductor cross section rigid	2.5 mm ² ... 35 mm ²
Conductor cross section, rigid [AWG]	12 ... 2 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	2.5 mm ² ... 35 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	2.5 mm ² ... 35 mm ²

Ex data

Rated data (ATEX/IECEx)

Identification	Ⓔ II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	1206612 SZF 3-1,0X5,5 1201662 E/AL-NS 35

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List of bridges	Plug-in bridge / FBS 2-16 / 3005963
Bridge data	89 A / 25 mm ²
Ex temperature increase	40 K (120 A/35 mm ²)
Rated voltage	690 V
for bridging with bridge	690 V
Rated insulation voltage	660 V
output	(Permanent)

Ex level General

Rated current	109 A
Maximum load current	109 A
Contact resistance	0.16 mΩ

Ex connection data General

Ferrule length	25 mm
Stripping length	25 mm
Nominal cross section	35 mm ²
Rated cross section AWG	2
Connection capacity rigid	2.5 mm ² ... 35 mm ²
Connection capacity AWG	12 ... 2
Conductor cross section flexible, with ferrule without plastic sleeve min.	6 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve max.	35 mm ²

Dimensions

Width	16 mm
Height	91.6 mm
Depth on NS 35/7,5	69.8 mm
Depth on NS 35/15	77.3 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
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

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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 35 mm ²	4.2 kA
Result	Test passed

Power-frequency withstand voltage

Test voltage setpoint	2.2 kV
Result	Test passed

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
Test force setpoint	10 N
Result	Test passed

Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	2.5 mm ² / 0.7 kg
	35 mm ² / 6.8 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

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Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2008-03
	DIN EN 50155 (VDE 0115-200):2022-06
	DIN EN 50155 (VDE 0115-200):2022-06
Spectrum	Service life test category 2, bogie-mounted
	Service life test category 2, bogie-mounted
	Service life test category 1, class B, body mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
	$f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$
	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	$6.12 \text{ (m/s}^2\text{)}^2/\text{Hz}$
	$6.12 \text{ (m/s}^2\text{)}^2/\text{Hz}$
	$0.964 \text{ (m/s}^2\text{)}^2/\text{Hz}$
Acceleration	3.12g
	3.12g
	5.72 m/s^2
Test duration per axis	5 h
	5 h
	5 h
Test directions	X-, Y- and Z-axis
	X-, Y- and Z-axis
	X-, Y- and Z-axis
Result	Test passed
	Test passed

Shocks

Specification	DIN EN 50155 (VDE 0115-200):2008-03
	DIN EN 50155 (VDE 0115-200):2022-06
	DIN EN 50155 (VDE 0115-200):2022-06
Pulse shape	Half-sine
	Half-sine
	Half-sine
Acceleration	30g
	30g
	50 m/s^2
Shock duration	18 ms
	18 ms
	30 ms
Number of shocks per direction	3
	3
	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
	X-, Y- and Z-axis (pos. and neg.)
	X-, Y- and Z-axis (pos. and neg.)

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Result	Test passed
	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 %

Mounting

Mounting type	NS 35/15
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