

# PTPOWER 35-F - High-current terminal block



3212078

<https://www.phoenixcontact.com/us/products/3212078>

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High-current terminal block, nom. voltage: 1000 V, nominal current: 125 A, number of connections: 2, number of positions: 1, connection method: PowerTurn connection, Rated cross section: 35 mm<sup>2</sup>, cross section: 2.5 mm<sup>2</sup> - 35 mm<sup>2</sup>, mounting type: direct screw connection, color: gray

## Your advantages

- Quick and easy connection is now also possible for large conductors with the high-current terminal block
- 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
- 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	3212078
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	BE22
Product key	BE2211
Catalog page	Page 135 (C-1-2019)
GTIN	4046356869829
Weight per piece (including packing)	97.7 g
Weight per piece (excluding packing)	88.11 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Product properties

Product type	High current terminal block
Number of positions	1
Pitch	16 mm
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 <sup>2</sup>
Rated cross section AWG	2
Stripping length	25 mm
Conductor cross section rigid	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Cross section AWG	12 ... 2 (converted acc. to IEC)
Conductor cross section flexible	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	12 ... 2 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Nominal current	125 A
Maximum load current	125 A (with 35 mm <sup>2</sup> conductor cross section)
Nominal voltage	1000 V
Nominal cross section	35 mm <sup>2</sup>

### Connection cross sections directly pluggable

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

### Ex data

#### Rated data (ATEX/IECEX)

Identification	⊕ II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C

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Ex-certified accessories	1206612 SZF 3-1,0X5,5 1201662 E/AL-NS 35
List of bridges	Plug-in bridge / FBS 2-16 / 3005963
Bridge data	89 A / 25 mm <sup>2</sup>
Ex temperature increase	40 K (120 A/35 mm <sup>2</sup> )
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 <sup>2</sup>
Rated cross section AWG	2
Connection capacity rigid	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Connection capacity AWG	12 ... 2
Conductor cross section flexible, with ferrule without plastic sleeve min.	6 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve max.	35 mm <sup>2</sup>

## Dimensions

Dimensional drawing	
Width	16 mm
Height	120.2 mm
Depth	68.3 mm
Drill hole spacing	108 mm
Hole diameter	5.5 mm
Pitch	16 mm

## Material specifications

Color	gray
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA

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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

Requirement temperature-rise test	Increase in temperature $\leq$ 45 K
Result	Test passed
Short-time withstand current 35 mm <sup>2</sup>	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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### Technical data

Drill hole spacing	108 mm
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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

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

### 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 (m/s <sup>2</sup> ) <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, 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	direct screw connection
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## Classifications

### ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250101

### ETIM

ETIM 9.0	EC000897
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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