

# 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
GTIN	4046356869829
Weight per piece (including packing)	99.8 g
Weight per piece (excluding packing)	88.11 g
Customs tariff number	85369010
Country of origin	TR

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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
Connection method	PowerTurn connection
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 cross section	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

### 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
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Operating temperature range	-60 °C ... 110 °C
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> )
for bridging with bridge	690 V
Rated insulation voltage	660 V
output	(Permanent)

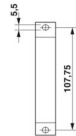
## Ex level General

Rated voltage	690 V
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 (RAL 7042)
Flammability rating according to UL 94	V0
Insulating material group	I

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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

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

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## Test for conductor damage and slackening

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	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> ) <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 %

## Mounting

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Mounting type	direct screw connection
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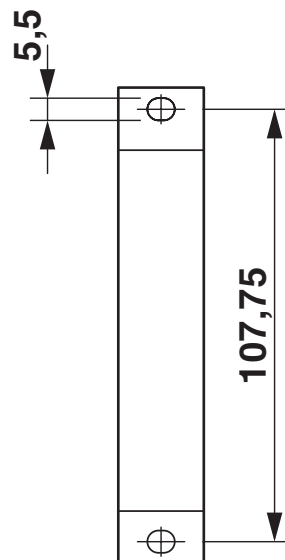
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## Drawings

Dimensional drawing



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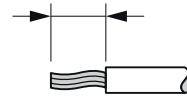
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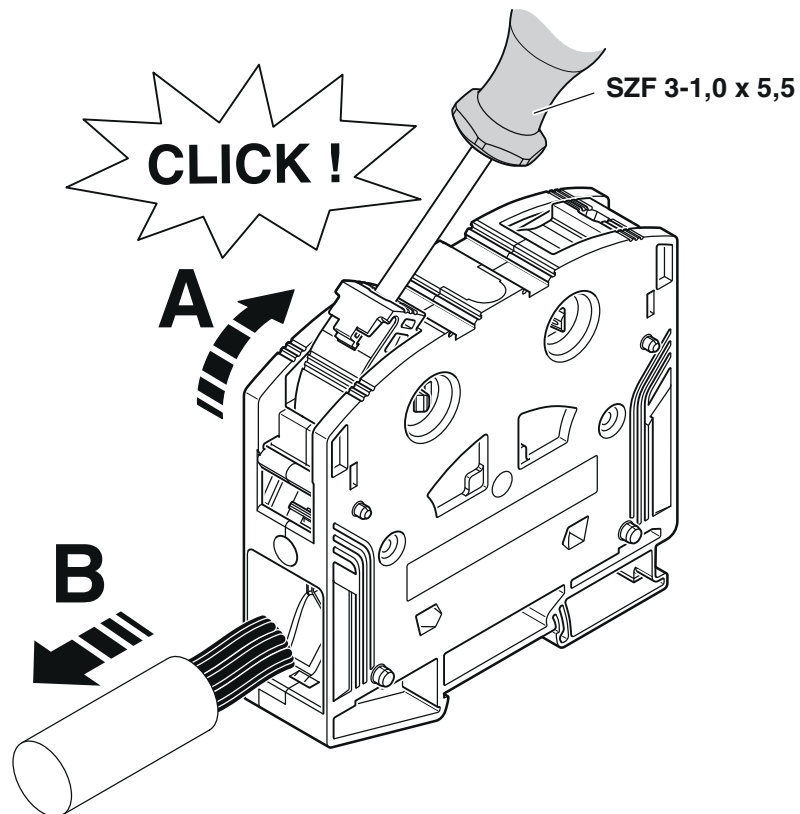


Schematic diagram

## PTPOWER



AGK 10-PTPOWER	0,5 mm <sup>2</sup> ... 16 mm <sup>2</sup>	18 mm
PTPOWER 35	2,5 mm <sup>2</sup> ... 35 mm <sup>2</sup>	25 mm
PTPOWER 50	10 mm <sup>2</sup> ... 50 mm <sup>2</sup>	32 mm
PTPOWER 95	25 mm <sup>2</sup> ... 95 mm <sup>2</sup>	40 mm
PTPOWER 185	95 mm <sup>2</sup> ... 185 mm <sup>2</sup>	40 mm



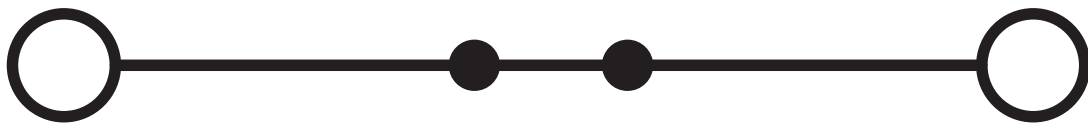
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Circuit diagram



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## Approvals


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 <b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B	600 V	115 A	14 - 2	-
C	1000 V	115 A	14 - 2	-


 <b>EAC</b> Approval ID: RU C-DE.BL08.B.00644				
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<b>DNV</b> Approval ID: TAE0000029				
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 <b>cUL Recognized</b> Approval ID: E60425				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
C	1000 V	115 A	14 - 2	-

 <b>UL Recognized</b> Approval ID: E60425				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
E	1000 V	115 A	14 - 2	-

 <b>CCC</b> Approval ID: 2020322313000630				
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 <b>UKCA-EX</b> Approval ID: CML 22UKEX1227U				
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 <b>IECEx</b> Approval ID: IECExSEV14.0013U				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				


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Only rigid conductors	690 V	109 A	-	2.5 - 35
multi-stranded with ferrule	690 V	109 A	-	6 - 35

 <b>ATEX</b> Approval ID: SEV14ATEX0156U				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine				
Only rigid conductors	690 V	109 A	-	2.5 - 35
multi-stranded with ferrule	690 V	109 A	-	6 - 35

 <b>EAC Ex</b> Approval ID: KZ 7500525010101950				
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## Classifications

### ECLASS

ECLASS-13.0	27250101
ECLASS-15.0	27250101

### 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	1.211 kg CO2e
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