

## High-current terminal block - PTPOWER 50-F - 3260061

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High-current terminal block, nom. voltage: 1500 V, nominal current: 150 A, connection method: Power-Turn connection, number of connections: 2, cross section: 10 mm<sup>2</sup> - 70 mm<sup>2</sup>, AWG: 8 - 2/0, width: 20 mm, height: 96 mm, color: gray, mounting type: direct screw connection

### Why buy this product

- ✓ 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
- ✓ The compact design enables wiring in a confined space
- ✓ In addition to using the existing test connection, pick-off terminal blocks can be connected, each of which can also accommodate two test cables



### Key Commercial Data

Packing unit	10 STK
GTIN	 4 046356 998055
GTIN	4046356998055

### Technical data

#### General

Number of levels	1
Number of connections	2
Potentials	1
Nominal cross section	50 mm <sup>2</sup>
Color	gray
Insulating material	PA
Flammability rating according to UL 94	V0
Rated surge voltage	8 kV
Degree of pollution	3
Overvoltage category	III
Insulating material group	I

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## Technical data

### General

Maximum power dissipation for nominal condition	4.73 W
Maximum load current	150 A (with 50 mm <sup>2</sup> conductor cross section)
Nominal current I <sub>N</sub>	150 A
Nominal voltage U <sub>N</sub>	1500 V DC
	1000 V AC
Open side panel	No
Shock protection test specification	DIN EN 50274 (VDE 0660-514):2002-11
Back of the hand protection	guaranteed
Finger protection	guaranteed
Result of surge voltage test	Test passed
Surge voltage test setpoint	9.8 kV
Result of power-frequency withstand voltage test	Test passed
Result of the test for mechanical stability of terminal points (5 x conductor connection)	Test passed
Result of bending test	Test passed
Bending test rotation speed	10 rpm
Bending test turns	135
Bending test conductor cross section/weight	10 mm <sup>2</sup> / 2 kg
	50 mm <sup>2</sup> / 9.5 kg
	70 mm <sup>2</sup> /10.4 kg
Tensile test result	Test passed
Conductor cross section tensile test	10 mm <sup>2</sup>
Tractive force setpoint	90 N
Conductor cross section tensile test	50 mm <sup>2</sup>
Tractive force setpoint	236 N
Conductor cross section tensile test	70 mm <sup>2</sup>
Tractive force setpoint	285 N
Result of tight fit on support	Test passed
Setpoint	10 N
Result of voltage-drop test	Test passed
Requirements, voltage drop	≤ 3.2 mV
Result of temperature-rise test	Test passed
Short circuit stability result	Test passed
Conductor cross section short circuit testing	50 mm <sup>2</sup>
Short-time current	6 kA
Result of thermal test	Test passed
Ageing test for screwless modular terminal block temperature cycles	192
Proof of thermal characteristics (needle flame) effective duration	30 s
Result of aging test	Test passed
Oscillation, broadband noise test result	Test passed
Test specification, oscillation, broadband noise	DIN EN 50155 (VDE 0115-200):2008-03

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### General

Test spectrum	Service life test category 2, bogie-mounted
Test 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	3.12 g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Shock test result	Test passed
Test specification, shock test	DIN EN 50155 (VDE 0115-200):2008-03
Shock form	Half-sine
Acceleration	30g
Shock duration	18 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Relative insulation material temperature index (Elec., UL 746 B)	130 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	125 °C
Static insulating material application in cold	-60 °C
Behavior in fire for rail vehicles (DIN 5510-2)	Test passed
Flame test method (DIN EN 60695-11-10)	V0
Oxygen index (DIN EN ISO 4589-2)	>32 %
NF F16-101, NF F10-102 Class I	2
NF F16-101, NF F10-102 Class F	2
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
Calorimetric heat release NFPA 130 (ASTM E 1354)	27,5 MJ/kg
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

### Dimensions

Width	20 mm
Length	101 mm
Height	96 mm
Hole diameter	6.5 mm
Drill hole spacing	123.4 mm
Pitch	20 mm

### Connection data

Connection method	Power-Turn connection
Connection in acc. with standard	IEC 60947-7-1

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## Technical data

### Connection data

Conductor cross section solid min.	10 mm <sup>2</sup>
Conductor cross section solid max.	70 mm <sup>2</sup>
Conductor cross section AWG min.	8
Conductor cross section AWG max.	2/0
Conductor cross section flexible min.	10 mm <sup>2</sup>
Conductor cross section flexible max.	70 mm <sup>2</sup>
Min. AWG conductor cross section, flexible	8
Max. AWG conductor cross section, flexible	2/0
Conductor cross section flexible, with ferrule without plastic sleeve min.	10 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve max.	50 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve min.	10 mm <sup>2</sup>
Conductor cross section flexible, with ferrule with plastic sleeve max.	50 mm <sup>2</sup>
Cross section with insertion bridge solid min.	10 mm <sup>2</sup>
Cross section with insertion bridge, solid max.	50 mm <sup>2</sup>
Cross section with insertion bridge stranded min.	10 mm <sup>2</sup>
Cross section with insertion bridge, stranded max.	50 mm <sup>2</sup>
Cross section with insertion bridge stranded, with ferrule without plastic sleeve min.	10 mm <sup>2</sup>
Cross section with insertion bridge stranded, with ferrule without plastic sleeve max.	50 mm <sup>2</sup>
Cross section with insertion bridge stranded, with ferrule without plastic sleeve min.	10 mm <sup>2</sup>
Cross section with insertion bridge stranded, with ferrule with plastic sleeve max.	50 mm <sup>2</sup>
2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, min.	10 mm <sup>2</sup>
2 conductors with same cross section, stranded, TWIN ferrules with plastic sleeve, max.	16 mm <sup>2</sup>
Stripping length	30 mm
Internal cylindrical gage	A10

### Standards and Regulations

Connection in acc. with standard	IEC 60947-7-1
Flammability rating according to UL 94	V0
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3
Fire protection for rail vehicles (DIN EN 45545-2) R26	HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3 HL 1 - HL 3

### Environmental Product Compliance

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

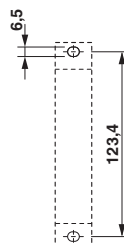
## Drawings

# High-current terminal block - PTPOWER 50-F - 3260061

Circuit diagram



Dimensional drawing



## Approvals

### Approvals

#### Approvals

CSA / UL Recognized / cUL Recognized / DNV GL / LR / BV / EAC / cULus Recognized

#### Ex Approvals

### Approval details

CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	13631
	B	C	
Nominal voltage UN	600 V	1000 V	
Nominal current IN	140 A	140 A	
mm <sup>2</sup> /AWG/kcmil	8-1/0	8-1/0	

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
Nominal voltage UN	1000 V		
Nominal current IN	140 A		
mm <sup>2</sup> /AWG/kcmil	8-1/0		

cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 60425
Nominal voltage UN	1000 V		
Nominal current IN	140 A		

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### Approvals

		C	
mm²/AWG/kcmil		8-1/0	
DNV GL		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	TAE00000Z9
LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	15/20030
BV		<a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a>	40933/A1 BV
EAC			RU C- DE.A*30.B.01742
cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	

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