# **Embedded DC Power System**

### ETP48150-A3



### Introduction

ETP48150-A3 embedded DC power system can convert AC input to stabilized -48V DC output. It can be compatible with 15A and 30A rectifiers. ETP48150 can be embedded in 19-inch rack or cabinet or other scenarios. The system can adapt wide range of AC input voltage and provide excellent performance such as intelligent battery management, remote management, etc.



ETP48150-A3

### **Features**

- Wide range of AC input voltage from 85V to 300V
- Wide operation temperature range of rectifier from -40  $^{\circ}$ C to 75  $^{\circ}$ C
- Online-swappable rectifier provides easy installation and maintenance
- Standard installation structure design, adapting to various scenarios
- Compact design, saving space and installation cost
- High rectifier efficiency over 96% helps to save energy
- Excellent rectifier dormancy function helps to increase system efficiency
- Intelligent battery management and protection helps to prolong battery lifespan
- Support site environment monitoring and remote management through dry contact, serial interface or Ethernet interface



15A rectifier



30A rectifier



Monitoring unit SMU01A



Monitoring unit SMU01B



Monitoring unit SMU01C

## **Application Scenarios**

- Access network
- Transmission network
- Communication network of enterprise

# **Specifications**

Dimension 442mm(W)×255mm(D)×130.5mm (3U,H)  Weight ≤20kg (fully loaded)  Cooling mode Natural cooling  Installation mode Installed on 19-inch rack or cabinet  Cabling mode Front inlet and front outlet  Maintenance mode Front access, support module grade alteration  Protection level IP20  AC Input mode 220/380VAC 3-phase or 220VAC single phase or 110V dual-live wire  Distribution Input frequency 45~66Hz, rated value: 50Hz/60Hz  Output voltage 42~58VDC, rated value: 53.5VDC  Maximum capacity 8kW  Distribution Battery breakers 1x100A(HCB*)  Load breakers 2x12A(HCB), 2x20A(HCB), 4x40A(HCB)  Operating temperature -40°C→70°C  Storage temperature 40°C→70°C  Operating humidity 5%—95%(non-condensing)  Altitude 40000m(If the altitude is within the range of 2000m to 4000m, the maximum operating temperature decreases by 1°C as the altitude increases by 200m)			
Cooling mode Installation mode Installed on 19-inch rack or cabinet Cabling mode Front inlet and front outlet Maintenance mode Protection level IP20  AC Distribution Input frequency Output voltage A2-58VDC, rated value: 50Hz/60Hz  DC Distribution Battery breakers Load breakers  Cx12A(HCB), 2x20A(HCB), 4x40A(HCB)  Operating temperature -40°C~+70°C  Operating humidity  Natural cooling Installation node Installation n19-inch rack or cabinet Front access, support module grade alteration  Protection level IP20  AC Diput mode 220/380VAC 3-phase or 220VAC single phase or 110V dual-live wire  100 Mainum capacity Battery breakers 1x100A(HCB*)  Load breakers 2x12A(HCB), 2x20A(HCB), 4x40A(HCB)  Operating temperature -40°C~+70°C  Operating humidity 5%~95%(non-condensing)  O=4000m(If the altitude is within the range of 2000m to 4000m, the maximum operating	System	Dimension	442mm(W)×255mm(D)×130.5mm (3U,H)
Installation mode		Weight	≤20kg (fully loaded)
Cabling mode  Front inlet and front outlet  Maintenance mode Protection level  IP20  Input mode Input mode Input frequency Output voltage  Maximum capacity Battery breakers Load breakers  Operating temperature  Storage temperature  Operating humidity  Altitude  Cabling mode Front inlet and front outlet Front and front outlet Front and front outlet Front inlet and front outlet Front access, support module grade alteration  IP20  220/380VAC 3-phase or 220VAC single phase or 110V dual-live wire  45~66Hz, rated value: 50Hz/60Hz  42~58VDC, rated value: 53.5VDC  Maximum capacity 8kW  Distribution  Battery breakers  1x100A( HCB*)  2x12A( HCB), 2x20A( HCB), 4x40A( HCB)  Operating temperature -40°C~+70°C  Storage temperature  -40°C~+70°C  Operating humidity -40°C~+70°C		Cooling mode	Natural cooling
Maintenance mode Protection level IP20  AC Distribution Input frequency  A5~66Hz, rated value: 50Hz/60Hz  Output voltage  42~58VDC, rated value: 53.5VDC  Maximum capacity Battery breakers Load breakers  Coperating temperature  A0°C~+70°C  Storage temperature  Operating humidity  Attitude  Protection level IP20  220/380VAC 3-phase or 220VAC single phase or 110V dual-live wire  250Hz/60Hz  45~66Hz, rated value: 53.5VDC  Maximum capacity 8kW  Distribution  Battery breakers  1x100A(HCB*)  Coperating temperature  -40°C~+70°C  Storage temperature  -40°C~+70°C  Storage temperature  -40°C~+70°C  Operating humidity  5%~95%(non-condensing)  O-4000m(If the altitude is within the range of 2000m to 4000m, the maximum operating		Installation mode	Installed on 19-inch rack or cabinet
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Output voltage  A2~58VDC, rated value: 53.5VDC  Maximum capacity  Battery breakers  Load breakers  Value (HCB), 2x20A(HCB), 4x40A(HCB)  Operating temperature  Storage temperature  Operating humidity  Altitude  Output voltage  42~58VDC, rated value: 53.5VDC  8kW  2x10A(HCB*)  2x12A(HCB), 2x20A(HCB), 4x40A(HCB)  Operating temperature  -40°C~+70°C  Storage temperature  -40°C~+70°C  Operating humidity  0~4000m(lif the altitude is within the range of 2000m to 4000m, the maximum operating		Input mode	220/380VAC 3-phase or 220VAC single phase or 110V dual-live wire
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Environment Operating humidity  5%~95%(non-condensing)  0~4000m(If the altitude is within the range of 2000m to 4000m, the maximum operating	Environment	Operating temperature	-40°C~+70°C
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		Operating humidity	5%~95%(non-condensing)
temperature decreases by 1 of as the distribute mercases by 200m.		Altitude	0~4000m(If the altitude is within the range of 2000m to 4000m, the maximum operating temperature decreases by 1 $^\circ\!\! C$ as the altitude increases by 200m.)

Rectifier	Rated power	870W (176~300VAC)	1000W (176~300VAC)	1600W (176~300VAC)	
	Input voltage	85VAC~300 VAC, rated 220VAC			
	Working temperature	-40 $^{\circ}$ C ~+75 $^{\circ}$ (derated output abore 65 $^{\circ}$ C)	-40°C~+75°C (derated output above 55°C)	-40 °C~+75 °C (derated output above 55 °C)	
	Dimension	95.5mm(W)×208mm(D)×40.8mm(H)			
	Weight	≤1.5kg	≤1.1kg	<1.6kg	
	Cooling mode	Forced cooling			
	Power factor	≥0.99			
	THD	≤5%			
Controller	Туре	SMU01A	SMU01B	SMU01C	
	Signal input	7 digital input, 2 analog input		2 digital input	
	Alarm output	8 dry contact output		4 dry contact output	
	Communication port	RS232/485, FE	RS232/485		
	Display mode	LCD			

Remark: \* HCB is short for hydraulic circuit breaker. Optional rectifiers with power efficiency >92% are available for this system.

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#### **HUAWEI TECHNOLOGIES CO., LTD.**

Huawei Industrial Base **Bantian Longgang** Shenzhen 518129, P.R. China Tel: +86-755-28780808 www.huawei.com