

# Huawei Embedded Power System



# Embedded DC Power System

## ETP4830-A1

### Introduction

ETP4830-A1 can convert from 220V or dual-wire of 110V input to stabilized -48V DC output. It can also be configured with 48V/15A rectifiers and provide 30A output. All the function units have standard sized design with 1U. ETP4830-A1 can be embedded in 19-inch rack or cabinet or other scenarios. The system can provide excellent performance such as intelligent battery management, remote monitoring, etc.

### Features

- Wide range of AC input voltage from 85V to 300V
- Wide operation temperature range of rectifier from -40°C to 75°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 environment monitoring and remote management through dry contact, serial interface or Ethernet interface

### Application Scenarios

- Access network
- Transmission network
- Communication network of enterprise



ETP4830-A1



15A rectifier



Monitor unit  
SMU01C

### Specifications

Product		ETP4830-A1
System	Dimension	442mm(W)×255mm(D)×43.6mm(1U,H)
	Weight	≤8kg(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 change
	Protection level	IP20
AC Distribution	Input mode	220VAC single phase or 110VAC dual-live wire
	Input frequency	45–66Hz, rated value: 50Hz/60Hz
	SPD	5kA/10kA, 8/20μs
DC Distribution	Output voltage	42–58VDC, rated value: 53.5VDC
	Maximum capacity	2kW
	Battery breakers	1×20A(fuse)
	Load breakers	2×20A(fuse)
Environment	Operating temperature	-40°C~+65°C
	Storage temperature	-40°C~+70°C
	Operating humidity	5%–95%(non-condensing)
	Altitude	0–4000m (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.)
Rectifier	Rated power	870W(176–300VAC)      1000W(176–300VAC)
	Input voltage	85VAC–300 VAC, rated 220VAC
	Working temperature	-40°C~+75°C (derated output above 65°C)      -40°C~+75°C (derated output above 55°C)
	Dimension	95.5mm(W)×208mm(D)×40.8mm(1U, H)
	Weight	≤1.5kg      ≤1.1kg
	Cooling mode	Forced cooling
	Power factor	≥0.99
	THD	≤5%
Controller	Type	SMU01C
	Signal input	2 digital input
	Alarm output	4 dry contact
	Communication port	RS232/485
	Display mode	LCD

Remark: Optional rectifiers with power efficiency >92% are available for this system.

# Embedded DC Power System

## ETP4890-A2

### Introduction

ETP4890-A2 embedded DC power system can convert from AC input to stabilized -48V DC output. It can be compatible with 15A and 30A rectifiers and provide 90A output with 2U in height. ETP4890-A2 can be embedded in 19-inch rack or cabinet or other scenarios. The system can provide excellent performance such as intelligent battery management, remote management, etc.

### Features

- Wide range of AC input voltage from 85V to 300V
- Wide operation temperature range of rectifier from -40°C to 75°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 environment monitoring and remote management through dry contact, serial interface or Ethernet interface

### Application Scenarios

- Access network
- Transmission network
- Communication network of enterprise



ETP4890-A2



15A rectifier



30A rectifier



Monitoring unit  
SMU01C

### Specifications

Product		ETP4890-A2		
System	Dimension	442mm(W)×255mm(D)×86.1mm(2U,H)		
	Weight	≤10kg(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 Distribution	Input mode	220/380VAC 3-phase or 220VAC Single phase or 110VAC dual-live wire		
	Input frequency	45~66Hz, rated value: 50Hz/60Hz		
	SPD	5kA/10kA, 8/20μs		
DC Distribution	Output voltage	42~58VDC, rated value: 53.5VDC		
	Maximum capacity	4.8kW		
	Battery breakers	1×80A		
	Load breakers	1×10A, 1×30A, 2×40A		
Environment	Operating temperature	-40°C~+65°C		
	Storage temperature	-40°C~+70°C		
	Operating humidity	5%~95%(non-condensing)		
	Altitude	0~4000m (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.)		
Rectifier	Rated power	870W (176~300VAC)	1000W (176~300VAC)	1600W (176~300VAC)
		Input voltage: 85VAC~300 VAC, rated 220VAC		
	Working temperature	-40°C~+75°C (derated output above 65°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	Type	SMU01C		
	Signal input	2 digital input		
	Alarm output	4 dry contact		
	Communication port	RS232/485		
	Display mode	LCD		

Remark: Optional rectifiers with power efficiency >92% are available for this system.

# 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.

### Features

- Wide range of AC input voltage from 85V to 300V
- Wide operation temperature range of rectifier from -40°C to 75°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

### Application Scenarios

- Access network
- Transmission network
- Communication network of enterprise



ETP48150-A3



15A rectifier



30A rectifier



Monitoring unit  
SMU01C

### Specifications

Product		ETP48150-A3			
System	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 Distribution	Input mode	220/380VAC 3-phase or 220VAC single phase or 110V dual-live wire			
	Input frequency	45~66Hz, rated value: 50Hz/60Hz			
	SPD	5kA/10kA, 8/20μs			
DC Distribution	Output voltage	42~58VDC, rated value: 53.5VDC			
	Maximum capacity	8kW			
	Battery breakers	1x100A(HCB*)			
	Load breakers	2x12A(HCB), 2x20A(HCB), 4x40A(HCB)			
Environment	Operating temperature	-40°C~+70°C			
	Storage temperature	-40°C~+70°C			
	Operating humidity	5%~95%(non-condensing)			
	Altitude	0~4000m(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.)			
Rectifier	Rated power	870W (176~300VAC)	1000W (176~300VAC)	1600W (176~300VAC)	
		Input voltage			85VAC~300 VAC, rated 220VAC
	Working temperature	-40°C~+75°C (derated output above 65°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	Type	SMU01C		
Signal input		2 digital input			
Alarm output		4 dry contact output			
Communication port		RS232/485			
Display mode		LCD			

Remark: Optional rectifiers with power efficiency >92% are available for this system.

# Embedded DC Power System

## ETP48200-C5A1

### Introduction

ETP48200-C5A1 and ETP48200-C5A3 are AC/DC embedded power system with excellent performance such as high power efficiency, intelligent battery management, remote monitoring, wide range of AC input voltage, etc. The system configures 50A of 1U height rectifier modules, and provides up to 200A output current. ETP48200-C5A1 and ETP48200-C5A3 can be embedded in 19-inch rack or cabinet.

### Features

- Wide range of AC input voltage from 85V to 300V
- Wide operation temperature range of rectifier from -40°C to 75°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 environment monitoring and remote management through dry contact, serial interface or Ethernet interface

### Application Scenarios

- Wireless base station
- Transmission network
- Communication network of enterprise



ETP48200-C5A1



50A rectifier



Monitor unit

### Specifications

Product		ETP48200-C5A1
System	Dimension	482.6mm(W)×330mm(D)×219.5mm(5U, H)
	Weight	≤20kg (without rectifiers)
	Cooling mode	Natural cooling
	Installation mode	Installed on 19-inch rack, or embedded in cabinet
	Cabling mode	Front, top inlet and top outlet
	Maintenance mode	Front maintenance, support module grade alteration
	Protection level	IP20
AC Distribution	Input mode	220/380VAC 3-phase or 220VAC Single phase
	Input voltage	380VAC/220VAC
	Input capacity	1×63A/3P
	Frequency	45~66Hz, rated value: 50Hz/60Hz
	SPD	30kA/60kA, 8/20μs
DC Distribution	Output voltage	42~58VDC, rated value: 53.5VDC
	Maximum capacity	12kW
	Battery breakers	2×125A/1P
	Load breakers	LLVD: 1×100A/1P, 1×63A/1P, 4×32A/1P BLVD: 2×10A/1P, 4×16A/1P
	SPD	10kA/20kA, 8/20μs
Rectifier	Input voltage	85VAC~300VAC, rated value: 220VAC
	Efficiency	>96%
	Rated power	3000W(176~300VAC)
	Working temperature	-40°C~+75°C(derated output above 55°C)
	Dimension	105mm(W)×281mm(D)×40.8mm(1U, H)
	Weight	≤2kg
	Cooling mode	Forced cooling
	Power factor	≥0.99
Controller	THD	≤5%
	Signal input	6 digital input, 1 door magnetism, 1 water logging, 1 smoke, 2 temperature, 1 battery temperature, 1 environment temperature and humidity
	Alarm output	8 dry contact output
	Communication port	RS232/485, FE
Environment	Display mode	LCD
	Operating temperature	-40°C~+65°C
	Storage temperature	-40°C~+70°C
	Operating humidity	5%~95%(non-condensing)
	Altitude	0~4000m (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.)

Remark: Optional rectifiers with power efficiency >92% are available for this system.