

# Embedded Power System

ETP48400-C9A2



## Introduction

ETP48400-C9A2 is an AC/DC embedded power system with excellent performance such as high power efficiency, intelligent battery management, remote management, wide range of AC input voltage, etc.

The system can configure 8 pieces of 1U 50A high rectifier modules, and provides 400A rated current output.

ETP48400-C9A2 can be embedded in 19-inch rack or cabinet.

## Features

- 1U rectifier: high density, high efficiency (98% max), excellent high temperature performance (fully output below 55°C)
- Wide operation temperature range of embedded power from -40°C to 65°C
- Hot-swappable
- Standard structure design, adapt 19/21 inch installation
- Compact design(only 9U in height), saving user space
- Excellent rectifier dormancy function increases system efficiency
- Intelligent battery management and protection help to prolong battery lifespan
- Support environmental signal monitoring and remote management through dry contact, serial interface or

## Scenarios

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



ETP48400-C9A2



50A rectifier

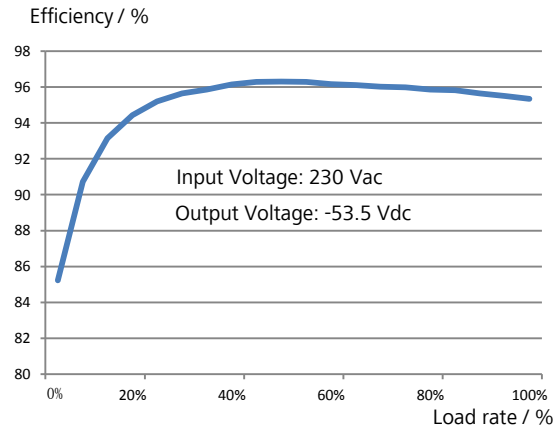


Controller

# Efficiency Curve



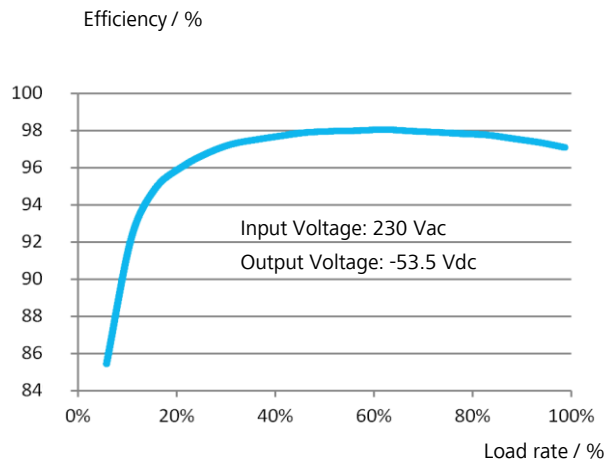
**Rectifier -3000 W-96%  
(R4850G2)**



**Energy Efficiency Curve**



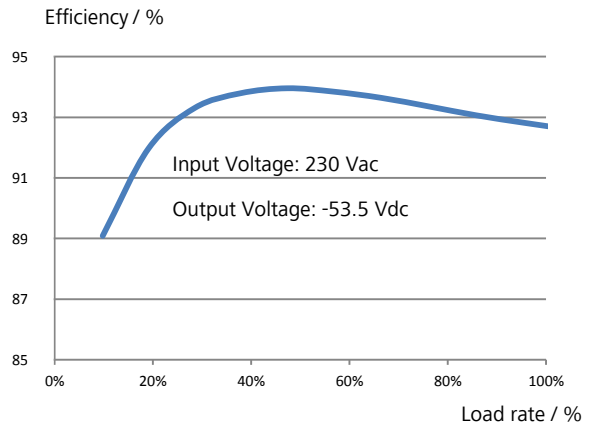
**Rectifier -3000 W-98%  
(R4850S1)**



**Energy Efficiency Curve**

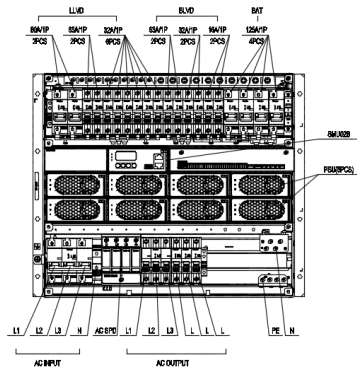


**Rectifier -3000 W-94%  
(R4850N6)**

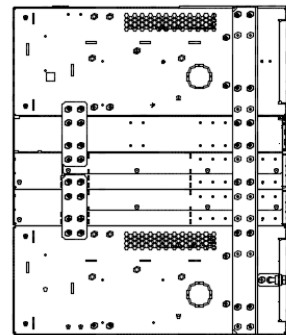


**Energy Efficiency Curve**

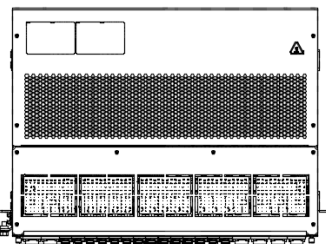
## Dimension Drawings



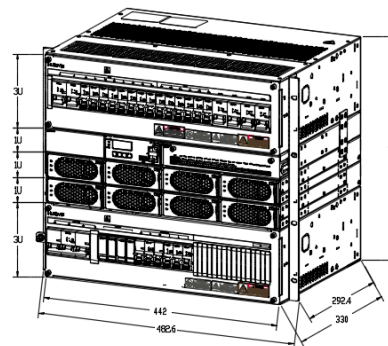
Front View of ETP48400-C9A2



Side View of ETP48400-C9A2

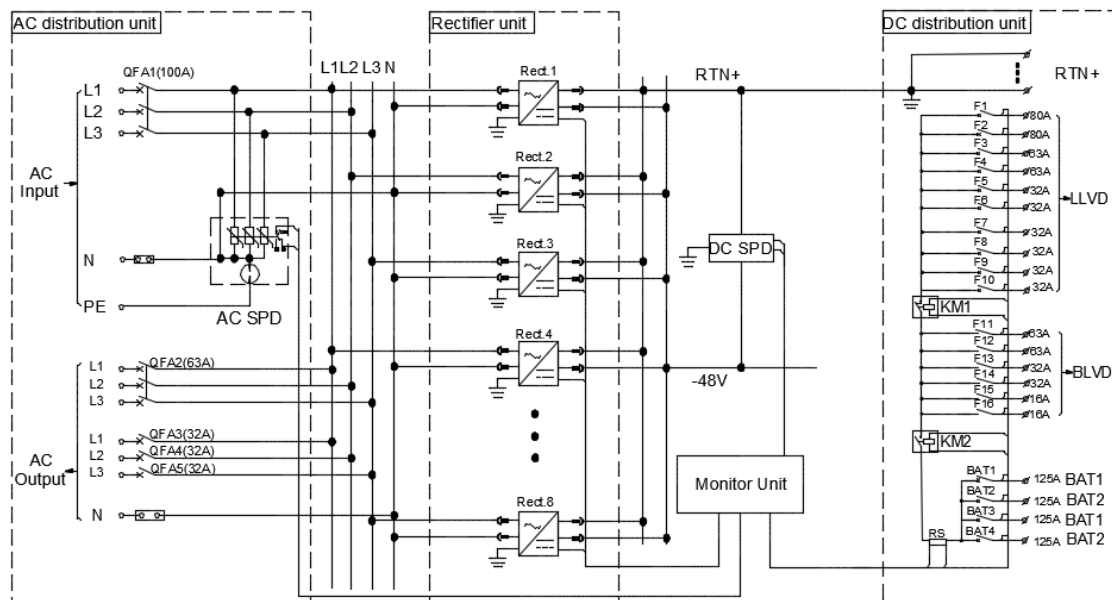


Top View of ETP48400-C9A2



Overview of ETP48400-C9A2

## Schematic Diagram



ETP48400-C9A2

## Specifications

Product Type		ETP48400-C9A2
System	Dimension	482.6 mm (W) × 330 mm (D) × 397.3 mm (9U,H)
	Weight	≤ 30 kg (without rectifiers)
	Cooling Mode	Natural cooling
	Installation Mode	Installed on 19-inch rack or cabinet
	Cabling Mode	Bottom inlet and top outlet
	Maintenance Mode	Front
	Protection Level	IP20
Input	AC Input Voltage	85–300 Vac, rated value: 220 Vac, 220/380 Vac three-phase four-line
	Input Frequency	45–66 Hz, rated value: 50/60 Hz
	Input Capacity	1 × 100 A/3P
Output	AC Output	1 × 63 A/3P, 3 × 32 A/1P
	Output Voltage	42–58 Vdc, rated value: 53.5 Vdc
	Maximum Capacity	24 kW
	Battery Breakers	4 × 125 A/1P
	LLVD Breakers	2 × 80 A/1P, 2 × 63 A/1P, 6 × 32 A/1P
	BLVD Breakers	2 × 63 A/1P, 2 × 32 A/1P, 2 × 16 A/1P
	SPD	20/40 kA, 8/20 μs (AC) , 10/20 kA, 8/20 μs (DC)
EMC & Safety	EMC	EN 55022, IEC 61000-3-3, IEC 61000-3-12, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-11
	Safety	IEC/EN60950-1 and GB4943
Environment	Operating Temperature	–40°C to +65°C
	Storage Temperature	–40°C to +70°C
	Operating Humidity	5% – 95% (non-condensing)
	Altitude	0 – 4000 m (When the altitude ranges from 2000 m to 4000 m, the operating temperature decreases by 1°C for each additional 200 m.)

Product Type		R4850G2	R4850S1	R4850N6
Rectifier	Efficiency	> 95% (30% to 100% load) > 96% Max	> 96% (30% to 100% load) 98% Max	> 92% (30% to 100% load) Near to 94% Max
	Maximum Power	3000W (176 to 300 Vac )		
	Input Voltage	85 to 300 Vac		
	Working Temperature	-40 °C to +75 °C (non-derating below 55 °C), ETS EN 300-019		-40 °C to +75 °C (non-derating below 40 °C), ETS EN 300-019
	Dimension	105 mm(W) × 281 mm(D) × 40.8 mm(H)		
	Weight	≤ 2.0 kg	≤ 2.5 kg	≤ 2.0 kg
	Cooling Mode	Forced air cooling (Built-in fan)		
	Power Factor	≥ 0.99 (> 50% load at 230 Vac)		
THD	≤ 5% (> 50% load at 230 Vac)			

Product Type		SMU02B
Controller	Signal Input	6 digital inputs (need interface Unit UIM02C), 7 analog inputs (need interface Unit UIM02C)
	Alarm Output	8 dry contacts (need interface Unit UIM02C)
	Communication Port	RS232, RS485, FE
	Display Mode	LCD

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