Embedded Power System

ETP48200-C5B4

Introduction

ETP48200-C5B4 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 4 pieces of 1U 50A high rectifier modules, and provides 200A rated current output.

ETP48200-C5B4 can be embedded in 19-inch rack or cabinet.

Features

- 1U rectifier: high density, high efficiency (> 96%), 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 5U 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 Ethernet interface

Scenarios

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





ETP48200-C5B4



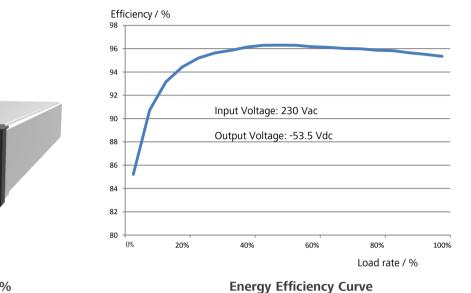
50A rectifier



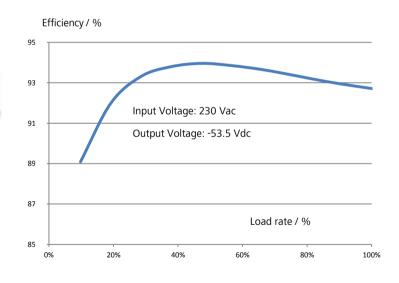
Controller

Efficiency Curve

UAWEI



Rectifier -3000 W-96% (R4850G2)

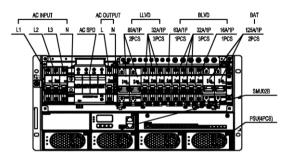


Rectifier -3000 W-94% (R4850N6)

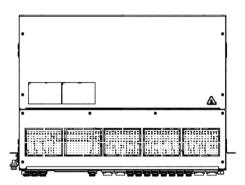
Energy Efficiency Curve

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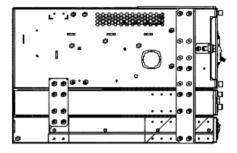
Dimension Drawings



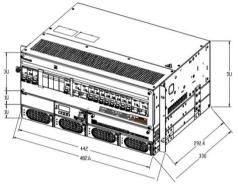
Front View of ETP48200-C5B4



Top View of ETP48200-C5B4

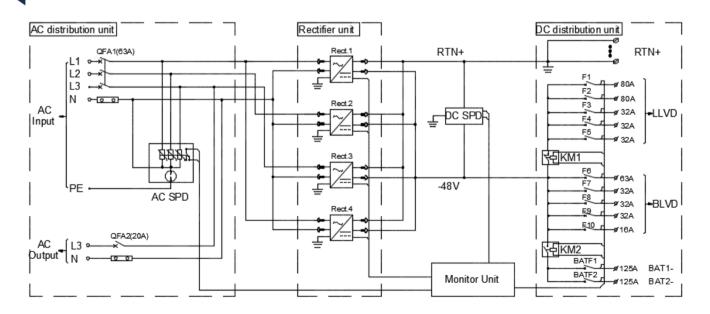


Side View of ETP48200-C5B4



Overview of ETP48200-C5B4

Schematic Diagram



ETP48200-C5B4

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Specifications

Р	roduct Type	ETP48200-C5B4	
	Dimension	482.6 mm (W) × 330 mm (D) × 219.5 mm (5	5U,H)
	Weight	\leq 20 kg (without rectifiers)	
System	Cooling Mode	Natural cooling	
	Installation Mode	Installed on 19-inch rack or cabinet	
	Cabling Mode	Top 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 or 220 Vac single phase	
	Input Frequency	45–66 Hz, rated value: 50/60 Hz	
	Input Capacity	1 × 63 A/3P	
Output	AC Output	1 × 20 A/1P	
	Output Voltage	42–58 Vdc, rated value: 53.5 Vdc	
	Maximum Capacity	12 kW	
	Battery Breakers	2 × 125 A/1P	
	LLVD Breakers	2 × 80 A/1P, 3 × 32 A/1P	
	BLVD Breakers	1 × 63 A/1P, 3 × 32 A/1P, 1 × 16 A/1P	
	SPD	30/60 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, IEC61000-4-3, II IEC61000-4-5, IEC61000-4-6, IEC 61000-4-11	
		IEC/EN60950-1 and GB4943	
	Safety	IEC/EN60950-1 and GB4943	
	Safety Operating Temperature		
	Operating Temperature	−40°C to +65°C	
Environment			
Environment	Operating Temperature Storage Temperature	-40°C to +65°C -40°C to +70°C 5% − 95% (non-condensing)	000 m to 4000 m, the operating temperature
	Operating Temperature Storage Temperature Operating Humidity	-40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3	000 m to 4000 m, the operating temperature R4850N6
	Operating Temperature Storage Temperature Operating Humidity Altitude	 -40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3 decreases by 1°C for each additional 200 m) 	
	Operating Temperature Storage Temperature Operating Humidity Altitude	-40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3 decreases by 1°C for each additional 200 m) R4850G2 > 95% (30% to 100% load)	R4850N6 > 92% (30% to 100% load)
	Operating Temperature Storage Temperature Operating Humidity Altitude roduct Type Efficiency	-40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3 decreases by 1°C for each additional 200 m) R4850G2 > 95% (30% to 100% load) > 96% Max	R4850N6 > 92% (30% to 100% load)
P	Operating Temperature Storage Temperature Operating Humidity Altitude CODUCT Type Efficiency Maximum Power	-40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3 decreases by 1°C for each additional 200 m) R4850G2 > 95% (30% to 100% load) > 96% Max 3000W (176 to 300 Vac)	R4850N6 > 92% (30% to 100% load)
	Operating Temperature Storage Temperature Operating Humidity Altitude COULCT Type Efficiency Maximum Power Input Voltage	-40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3 decreases by 1°C for each additional 200 m) R4850G2 > 95% (30% to 100% load) > 96% Max 3000W (176 to 300 Vac) 85 to 300 Vac -40 °C to +75 °C (non-derating below 55	R4850N6 > 92% (30% to 100% load) Near to 94% Max -40 °C to +75 °C (non-derating below 40
P	Operating Temperature Storage Temperature Operating Humidity Altitude COULCE Type Efficiency Maximum Power Input Voltage Working Temperature	-40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3 decreases by 1°C for each additional 200 m) R4850G2 > 95% (30% to 100% load) > 96% Max 3000W (176 to 300 Vac) 85 to 300 Vac -40 °C to +75 °C (non-derating below 55 °C), ETS EN 300-019	R4850N6 > 92% (30% to 100% load) Near to 94% Max -40 °C to +75 °C (non-derating below 40
P	Operating Temperature Storage Temperature Operating Humidity Altitude COLUCT Type Efficiency Maximum Power Input Voltage Working Temperature Dimension	-40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3 decreases by 1°C for each additional 200 m) R4850G2 > 95% (30% to 100% load) > 96% Max 3000W (176 to 300 Vac) 85 to 300 Vac -40 °C to +75 °C (non-derating below 55 °C), ETS EN 300-019 105 mm(W) × 281 mm(D) × 40.8 mm(H)	R4850N6 > 92% (30% to 100% load) Near to 94% Max -40 °C to +75 °C (non-derating below 40
P	Operating Temperature Storage Temperature Operating Humidity Altitude could trype Efficiency Maximum Power Input Voltage Working Temperature Dimension Weight	$-40^{\circ}C \text{ to } +65^{\circ}C$ $-40^{\circ}C \text{ to } +70^{\circ}C$ $5\% - 95\% \text{ (non-condensing)}$ $0 - 4000 \text{ m (When the altitude ranges from 3 decreases by 1^{\circ}C for each additional 200 m)}$ $\frac{R4850G2}{2}$ $> 95\% (30\% \text{ to } 100\% \text{ load})$ $> 96\% \text{ Max}$ $3000W (176 \text{ to } 300 \text{ Vac })$ $85 \text{ to } 300 \text{ Vac}$ $-40^{\circ}C \text{ to } +75^{\circ}C \text{ (non-derating below 55 °C), ETS EN 300-019}$ $105 \text{ mm(W)} \times 281 \text{ mm(D)} \times 40.8 \text{ mm(H)}$ $\leq 2.0 \text{ kg}$	R4850N6 > 92% (30% to 100% load) Near to 94% Max -40 °C to +75 °C (non-derating below 40
P	Operating TemperatureStorage TemperatureOperating HumidityAltitudecoduct TypeEfficiencyMaximum PowerInput VoltageWorking TemperatureDimensionWeightCooling Mode	-40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3 decreases by 1°C for each additional 200 m) R4850G2 > 95% (30% to 100% load) > 96% Max 3000W (176 to 300 Vac) 85 to 300 Vac -40 °C to +75 °C (non-derating below 55 °C), ETS EN 300-019 105 mm(W) × 281 mm(D) × 40.8 mm(H) \leq 2.0 kg Forced Air cooling (Built-in fan)	R4850N6 > 92% (30% to 100% load) Near to 94% Max -40 °C to +75 °C (non-derating below 40
P	Operating TemperatureStorage TemperatureOperating HumidityAltituderoduct TypeEfficiencyMaximum PowerInput VoltageWorking TemperatureDimensionWeightCooling ModePower Factor	-40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3 decreases by 1°C for each additional 200 m) R4850G2 > 95% (30% to 100% load) > 96% Max 3000W (176 to 300 Vac) 85 to 300 Vac -40 °C to +75 °C (non-derating below 55 °C), ETS EN 300-019 105 mm(W) × 281 mm(D) × 40.8 mm(H) \leq 2.0 kg Forced Air cooling (Built-in fan) \geq 0.99 (> 50% load at 230 Vac) \leq 5% (> 50% load at 230 Vac)	R4850N6 > 92% (30% to 100% load) Near to 94% Max -40 °C to +75 °C (non-derating below 40
P	Operating TemperatureStorage TemperatureOperating HumidityAltitudeColuct TypeEfficiencyMaximum PowerInput VoltageWorking TemperatureDimensionWeightCooling ModePower FactorTHD	$-40^{\circ}C \text{ to } +65^{\circ}C$ $-40^{\circ}C \text{ to } +70^{\circ}C$ $5\% - 95\% \text{ (non-condensing)}$ $0 - 4000 \text{ m (When the altitude ranges from 3 decreases by 1^{\circ}C for each additional 200 m)}$ $\frac{R4850G2}{85\% (30\% \text{ to } 100\% \text{ load})}$ $> 96\% \text{ Max}$ $3000W (176 \text{ to } 300 \text{ Vac })$ $85 \text{ to } 300 \text{ Vac}$ $-40^{\circ}C \text{ to } +75^{\circ}C \text{ (non-derating below 55 °C), ETS EN 300-019}$ $105 \text{ mm(W)} \times 281 \text{ mm(D)} \times 40.8 \text{ mm(H)}$ $\leq 2.0 \text{ kg}$ Forced Air cooling (Built-in fan) $\geq 0.99 (> 50\% \text{ load at } 230 \text{ Vac})$ $\leq 5\% (> 50\% \text{ load at } 230 \text{ Vac})$	R4850N6 > 92% (30% to 100% load) Near to 94% Max -40 °C to +75 °C (non-derating below 40 °C), ETS EN 300-019
P Rectifier Pr	Operating Temperature Storage Temperature Operating Humidity Altitude rocluct Type Efficiency Maximum Power Input Voltage Working Temperature Dimension Weight Cooling Mode Power Factor THD oduct Type Signal Input	-40°C to +65°C -40°C to +70°C 5% - 95% (non-condensing) 0 - 4000 m (When the altitude ranges from 3 decreases by 1°C for each additional 200 m) R4850G2 > 95% (30% to 100% load) > 96% Max 3000W (176 to 300 Vac) 85 to 300 Vac -40 °C to +75 °C (non-derating below 55 °C), ETS EN 300-019 105 mm(W) × 281 mm(D) × 40.8 mm(H) \leq 2.0 kg Forced Air cooling (Built-in fan) \geq 0.99 (> 50% load at 230 Vac) \leq 5% (> 50% load at 230 Vac) SN 6 digital inputs (need interface Unit UIM02C),	R4850N6 > 92% (30% to 100% load) Near to 94% Max -40 °C to +75 °C (non-derating below 40 °C), ETS EN 300-019 °C), ETS EN 300-019
P	Operating Temperature Storage Temperature Operating Humidity Altitude roduct Type Efficiency Maximum Power Input Voltage Working Temperature Dimension Weight Cooling Mode Power Factor THD Oduct Type	$-40^{\circ}C \text{ to } +65^{\circ}C$ $-40^{\circ}C \text{ to } +70^{\circ}C$ $5\% - 95\% \text{ (non-condensing)}$ $0 - 4000 \text{ m (When the altitude ranges from 3 decreases by 1^{\circ}C for each additional 200 m)}$ $\frac{R4850G2}{85\% (30\% \text{ to } 100\% \text{ load})}$ $> 96\% \text{ Max}$ $3000W (176 \text{ to } 300 \text{ Vac })$ $85 \text{ to } 300 \text{ Vac}$ $-40^{\circ}C \text{ to } +75^{\circ}C \text{ (non-derating below 55 °C), ETS EN 300-019}$ $105 \text{ mm(W)} \times 281 \text{ mm(D)} \times 40.8 \text{ mm(H)}$ $\leq 2.0 \text{ kg}$ Forced Air cooling (Built-in fan) $\geq 0.99 (> 50\% \text{ load at } 230 \text{ Vac})$ $\leq 5\% (> 50\% \text{ load at } 230 \text{ Vac})$	R4850N6 > 92% (30% to 100% load) Near to 94% Max -40 °C to +75 °C (non-derating below 40 °C), ETS EN 300-019 °C), ETS EN 300-019

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