

FMP20.24 AC/DC RECTIFIER



FEATURES

- Highly efficient topology with power factor correction
- Wide output voltage range: 23-28.5VDC
- High density design: 1.4 kW/l
- 1U high: 4.2" x 1.6" x 13.3" cassette
- RS485 interface status and control
- RS485 voltage and current limit setting
- Over temperature, output overvoltage and output overcurrent protection, Power limitation

DESCRIPTION

The FMP20.24 rectifier is a 2000 W, AC to DC power-factor-corrected (PFC) power supply unit that converts standard AC mains power into DC output in the range of 23 - 28.5 VDC for powering telecommunication, data communication and other distributed power applications and can be used in hot-swap redundant systems.

The rectifier incorporates resonance-soft-switching technology to reduce component stresses, providing increased system reliability and very high efficiency.

A wide variety of distribution options are available to provide the maximum system flexibility for a wide range of communications applications that demand efficiency, reliability, and flexibility including wireless base stations, remote switches and broadband access.

Status information is provided with front panel LEDs and via RS485 management interface.

The FMP20.24 meets international safety standards and displays the CE-Mark for the European Low Voltage Directive (LVD).

TECHNICAL DATA

INPUT		
Voltage	Nominal:	85 – 264 VAC
	Permitted:	85 – 300 VAC
	Derated Output Power:	85 – 180 VAC
Input Current (max.)	13 A	
Frequency	47 – 63 Hz	
Power Factor	> 0.96 W/VA at > 30 % load	
OUTPUT		
Output voltage	23 – 28.5 VDC	
Power (max.)	2000 W at ≥ 180VAC; 1500 W at ≥ 150 VAC; 1000 W at ≥ 85 VAC	
Output Current (nom.)	74.6 ADC at ≥ 180 VAC; 62.2 ADC at ≥ 150 VAC; 37.3 ADC at ≥ 85 VAC	
Efficiency	92.5 % typical at 230 VAC, 50-100% load	
Capacitive Load	< 500 µF/A	
Tolerance	± 1.0% deviation from programmed set point	
Dynamic Load Regulation	± 3.0% for 10-90% or 90-10% load variation	
Current Sharing	< 5 % deviation from average output current	
Ripple and Noise	< 100 mV peak to peak, 20 MHz bandwidth	
Psophometric Noise	< 2 mV (ETS300-132-2)	
OTHER TECHNICAL DATA		
Protection	Input fuse; Inrush current limitation; Overvoltage protection latching; Programmable over-voltage protection; Over-temperature protection	
Alarms	Fan failure; Temperature alarm / shutdown; Output undervoltage; Module alarm; Overvoltage shut down; Input voltage out of range; Internal communication failure	
LED Indicators	Green	AC power ON/OFF (normal operation)
	Bicolour	Yellow ON: Temperature or fan warning; Yellow Blinking: Communication failure Red ON: Temp. shutdown; Fan failure; Overvoltage shutdown
DESIGN STANDARDS		
EMC	EN 300 386 V.1.3.2 ; EN 61000-6-3 (Emission) ; EN 61000-6-2 (Immunity); ETSI EN 300 386 V.1.3.2; EN 61000-6-1; EN 61000-6-3; EN55024 (Performance Criterion A); EN 61000-6-2; EN 61000-6-4; EN 55022 Class B; Telcordia NEBS GR1089	
Safety Approvals	UL60950-1-2011 (CSAus); CSA 60950-1-07+A1-2011; EN60950-1+A12: 2012; IEC 60950-1:2005 2 Ed. +A1:2009	
ENVIRONMENTAL		
Storage:	ETSI EN 300 019-2-1	
Transport:	ETSI EN 300 019-2-2	
Operation:	ETSI EN 300 019-2-3	
Damp Heat:	IEC 60068-2-78	
Operating Temperature and Altitude	-40°C to +55°C up to 2000 m; Reduced spec.: -40°C to -20°C	
Extended Temperature and Altitude	Linear derating from 100% to 70% maximum power at 55 to 65°C Reduced ambient temperatures by 5°C at 3000 m	
Storage Temperature	-40 °C to +85 °C	
Audible Noise	< 54.5 dBA @ at 230 VAC; TA = 25°C (70% load)	
MTBF	350 kh at GB 25°C, fan excluded	
MECHANICAL		
Dimensions (W x H x D)	106.8 x 41.4 x 355.1 mm (4.2 x 1.6 x 11.3 inch)	
Weight	2.1 kg (4.7 lb)	
Mounting / Integration	1U Rack mount (19in/4 pos, 23in/5 pos)	
Cooling	Fan cooled (front to rear airflow), speed controlled	
Insulation	Reinforced insulation 3000 VAC from input to output	
Enclosure	IP20	

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