

5 kW Universal Power Module

For more than 10 years, PRE's Universal Power Module is one of the most competitive AC/DC products in the market for industrial power supplies. It has a 3 phase input and can work in constant voltage mode or in constant current mode. The UPM features active PFC and is based on the latest techniques of HF power electronics design, which results in a high efficiency and excellent overall performance. The power rating is 5kW continuous and there are several output voltages available. The UPM output can be controlled through a voltage- or current set point. Other control methods and/or configurations are optionally available.



Features

- True 3 phase Input with active PFC
- Very good price / performance ratio
- Standard Industrial controls
- Robust, durable and lightweight design
- Up to 5 units in parallel

Applications

- Cathodic protection
- Industrial applications
- Industrial Battery Charger
- Process Industry

Specifications

Model	UPM24V200A	UPM48V100A	UPM120V50A*	
Output	Voltage range	2 – 28V	4 – 56V	8 – 120V
	Current Range (max.)	0 – 180A (200A)	0 – 90A (120A)	0 – 45A (50A)
	Rated Power (max.) (5)	4200W (5000W)	4500W (5000W)	4500W (5000W)
	Ripple + Noise (2)	100mVp-p	100mVp-p	150mVp-p
	Voltage & Current Tolerance (3)	2% (typ.) 5% max.		
	Line / Load Regulation (typ.)	2%		
	Setup Time	500ms		
	Hold up Time (typ.)	10ms		
Input	AC Voltage Range (5)	400Vac ±10% 47 – 63Hz	(440Vac 47 – 63Hz / 480Vac 47 – 63Hz optional)	
	Power Factor	>0,97 @ 400Vac & Rated Power		
	Efficiency (typ.)	90%	91%	92%
	AC Current (typ.)	8A @ 400Vac & Rated Power		
	Inrush Current (typ.)	50A (100us) Cold Start @ 400Vac		
	Leakage Current	<3.5mA @ 400Vac		
Protection	Input UVP & OVP	±20% @ 400Vac		
	Output OVP	31V	62V	140V
	Over Temperature	85°C at main Heatsink. Output Power derating at >40 °C temperature ambient		
Control	Current	4–20mA or 2–10V		
	Current Control Speed	200A/s	100A/s	50A/s
	Voltage	4–20mA or 2–10V		
	Voltage Control Speed	28V/s	56V/s	120V/s
	Remote on/off	Enable Input (5 – 24V logic High) & Power OK relay output (N/O 30V/1A max.)		
General	Storage Temperature	–20 – 70°C		
	Working Temperature	0 – 50°C (rated power up to 40C)		
	Working Humidity	20 – 90% Non Condensing		
	Dimension & Weight	500x280x160mm / 10kg		
	Lifetime (MTBF, Telcordia)	>1Mio hours @ 25 °C (Designed to meet a failure rate of <0.1% / Year)		
Safety & EMC(4)	Safety	EN60950		
	Emission (Industrial)	EN55011, class A (optional B)		
	Immunity (Industrial)	EN61000–4–2, EN61000–4–3, EN61000–4–4, EN61000–4–5, EN61000–4–6, EN61000–4–11.		
	Ingress Protection Rating	IP20		
	Approvals	CE		

1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 20°C ambient temperature. *) on request.
 2. Ripple & noise are measured at 20MHz of bandwidth by using a standard probe.
 3. Tolerance : includes set up tolerance, line regulation and load regulation.
 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
 5. Derating may be needed under low input voltage and higher ambient temperature. Please check the derating curve for more details.
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