

3 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 1 phase input and can work in constant voltage or 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 3kW and is available in several output voltages. The UPM Output has standard 0–10V and 4–20mA control Inputs and monitoring Outputs. Other control methods and/or configurations are optionally available.



Features

- 1 phase Input with active PFC
- Standard Industrial Controls
- Voltage and Current Monitoring
- Robust, durable and lightweight design
- Up to 5 units in parallel

Applications

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

Specifications

| Model | UPM12V100A | UPM24V100A* | UPM48V50A* | UPM120V25A* | |
|-----------------|---------------------------------|--|----------------------------|---------------|----------------|
| Output | Voltage range | 2 – 16V | 2 – 30V | 4 – 60V | 8 – 120V |
| | Current Range | 0 – 100A | 0 – 100A | 0 – 50A | 0 – 25A |
| | Rated Power (5) | 1600W | 3000W | 3000W | 3000W |
| | Ripple + Noise (2) | 100mVp-p | 100mVp-p | 150mVp-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) | 230Vac -20% / +10% 47 – 63Hz | | | |
| | Power Factor | >0,99 @ 230Vac & Rated Power | | | |
| | Efficiency (typ.) | 88% | 90% | 91% | 92% |
| | AC Current (typ.) | 8A @ 230Vac & | 15A @ 230Vac & Rated Power | | |
| | Inrush Current (typ.) | 50A (100us) Cold Start @ 230Vac | | | |
| | Leakage Current | <3.5mA @ 400Vac | | | |
| Protection | Input UVP & OVP | ±20% @ 400Vac | | | |
| | Output OVP | 20V | 35V | 65V | 130V |
| | Over Temperature | 85°C at main Heatsink. Output Power derating at >40 °C temperature ambient | | | |
| Control | Current / Voltage Setting | 4–20mA and 2–10V | | | |
| | Current Control Speed | 100A/s / 16V/s | 100A/s / 30V/s | 50A/s / 60V/s | 25A/s / 120V/s |
| | Current / Voltage Monitoring | 4–20mA and 2–10V | | | |
| | Digital Control (Optional) | RS485 or CANbus | | | |
| | 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 | 345x225x120mm / 5kg | | | |
| | 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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