

Section 10

MULTIPLE OUTPUT SERIES PM3380 & PM3390

The Multiple Output PFC series offers a variety of configurations of output power from 750W to 3000W with up to 11 outputs. The New PM3380 and PM3390 modular and flexible product line provides uninterrupted high performance at full output power. These multiple output units are featured with 20ms hold up time for the output, internal forced air-cooling and built-in protection from electrical overloads.

Compliant with International Safety and EMI standards, this broad selection of multiple output supplies support a wide range of applications including telecom and large multi-media computer systems.



Product Matrix I – 750W to 1500W

MODEL	PM3384B-6	PM3385B-6	PM3386B-6	PM3387B-6	PM3398E-6
MAX POWER	750W	875W	1000W	1200W	1500W
# of Channels	5	5	5	5	6
MAIN CHANNELS	CH1	CH1	CH1	CH1	CH1 CH2
Power Max	500W	625W	750W	875W	1000W 750W
Voltage VDC	*	*	*	*	*
Current Max	100A	125A	150A	175A	200A 150A
SECONDARY(S)	CH2 & CH3	CH2 & CH3	CH2 & CH3	CH2 & CH3	CH3 & CH4
Power Max	250W	250W	250W	250W	250W
Voltage VDC	2 to 28V	2 to 28V	2 to 28V	2 to 28V	2 to 28V
Current Max	15A	15A	15A	15A	15A
SECONDARY(S)	CH4 & CH5	CH4 & CH5	CH4 & CH5	CH4 & CH5	CH5 & CH6
Power Max	125W	125W	125W	125W	125W
Voltage VDC	2 to 28V	2 to 28V	2 to 28V	2 to 28V	2 to 28V
Current Max	7.5A	7.5A	7.5A	7.5A	7.5A
DIMENSIONS	5" x 5" x 11.25"				5" x 7.25" x 12.8"

* Available Outputs – 2V, 3.3V, 5V, 12V, 15V, 24V, 28V, 48V and 60V

- Notes:
1. All Models are available with wide input range 90 to 264VAC (option –6) or high input 180 to 264VAC (option –5)
 2. All Models are available in Single Phase or Three Phase AC Input.
 3. Input Current for Single Phase can be calculated using the formula $I_{in} = P_{out} / (V_{in} \times \text{Efficiency} \times 0.99\text{PFC})$
 4. Input Current for Three Phase can be calculated using the formula $I_{in} = P_{out} / (V_{in} \times \text{Efficiency} \times 0.95\text{PFC} \times \sqrt{3})$

Features:

- ◆ Power Factor Corrected
- ◆ 0°C to +50°C at full load
- ◆ All Outputs Fully Floating
- ◆ Over Current Protection on all Outputs
- ◆ Over Voltage Protection on all Outputs
- ◆ Remote Sense on all Outputs
- ◆ Over Temperature Protection
- ◆ Self-contained Forced Air Cooling
- ◆ Safety UL, CSA, TUV
- ◆ CE Marking (LVD)

Options:

- ◆ (-P) Hot Pluggable
- ◆ (-1) AC Power Fail - Primary Channel Only
- ◆ (-2) Remote Enable/Disable
- ◆ (-5) Margining/Programming
- ◆ (-6B) Single Wire Current Sharing
- ◆ (-8T) DC Power Good
- ◆ (-8UV) Undervoltage Detect
- ◆ (20C) Isolation Diodes
- ◆ (-33) Output Current Monitor - Primary Channel Only

Product Matrix II – 1000W to 1500W

MODEL	PM3386B-5	PM3387B-5	PM3398E-5		PM3398D-5		PM3398D-5	
MAX POWER	1000W	1200W	1500W		1500W		1500W	
# of Channels	5	5	6		8		8	
MAIN CHANNELS	CH1	CH1	CH1	CH2	CH1	CH2	CH1	CH2
Power Max	750W	875W	1000W	750W	750W	375W	875W	375W
Voltage VDC	*	*	*		*		*	
Current Max	150A	175A	200A	150A	150A	75A	175A	75A
SECONDARY(S)	CH2 & CH3	CH2 & CH3	CH3 & CH4		CH3 & CH4		CH3 & CH4	
Power Max	250W	250W	250W		250W		250W	
Voltage VDC	2 to 28V	2 to 28V	2 to 28V		2 to 28V		2 to 28V	
Current Max	15A	15A	15A		15A		15A	
SECONDARY(S)	CH4 & CH5	CH4 & CH5	CH4 & CH5		CH5 TO CH8		CH5 TO CH8	
Power Max	125W	125W	125W		125W		125W	
Voltage VDC	2 to 28V	2 to 28V	2 to 28V		2 to 28V		2 to 28V	
Current Max	7.5A	7.5A	7.5A		7.5A		7.5A	
DIMENSIONS	5" x 5" x 11.25"		5" x 7.25" x 12.8"		5" x 6.5" x 12.8"			

* Outputs Available 2, 3.3, 5, 12, 15, 24, 28, 48 and 60VDC.

SPECIFICATION

Inputs

RANGE: From 90 to 264 VAC, 1φ or 3φ.
FREQUENCY: 47 to 63 Hz.
POWER FACTOR: 0.99 @ Full Load for 1φ only.
INRUSH CURRENT: < 25A when averaged over 1/2 cycle.
HARMONIC CURRENT: < 5% for 1φ
HOLD UP TIME: At least 20msec from loss of input to loss of regulation.

Environmental

AUDIBLE NOISE: 63dBA/70dba max at 1 meter
TEMPERATURE: Operating: 0°C to +50°C at full load. Storage: -55°C to +85°C.
HUMIDITY: 20% to 95% non-condensing.
ALTITUDE: Operating: 5,000 feet. De-rates to 70% at 15,000 feet. Non-Operating: To 30,000 feet.
VIBRATION: Operating: From 5 to 27 Hz, 0.02 in double amplitude; from 27 Hz to 500 Hz, 0.75G, 3 Axes, 3 min per octave sweep, dwell 15 min at resonance. Non-operating: From 5 to 17 Hz, 0.10 in double amplitude, from 17 to 500Hz, 1.5G peak; 3 axes, 5 min per octave sweep; dwell 15 min at resonance.
SHOCK: Operating: 5G, half sine, 11msec, 3 axes. Non-Operating: 15G, half sine, 11msec, 3 axes.
COOLING: Forced air, internal fan. Airflow exits at connector end.

Safety

SAFETY: UL1950, CSA22.2 No 950 and TUV to EN60950. CE Mark (LVD)
EMI: Conducted & Radiated: EN55022 Level A CE Certification is optional

Output

POWER: See Product Matrix
VOLTAGE & CURRENT: See Product Matrix.
ADJUSTMENT RANGE: ±10% of nominal output voltage for all channels.
POLARITY: Outputs are isolated. They may be referenced plus/minus as required.
REMOTE SENSING: Compensates for up to 0.5V total loop drop in the output line.
STATIC REGULATION:
 Line: ±0.25% over full line range.
 Load: ±0.25% zero load to full load.
VOLTAGE STABILITY: ±0.1% for 24 hour period after 30 minute warm up.
TEMP COEFFICIENT: ±0.02%/°C from 0°C to +50°C.
P-P RIPPLE AND NOISE: 1% on Primary Channels (Bandwidth: 20Hz to 50MHz). 1% or 120mV, whichever is greater on Secondary Channels
MINIMUM LOAD: 50 watts required on Primary Channel to support the Secondary Channels.

Internal Protection

OVER VOLTAGE PROTECTION: 125% ±5% of nominal. OVP shutdown is latched until the input line is removed for 30 seconds and then reapplied. OVP sensing is done at the output terminals.
OVER CURRENT PROTECTION: Current Limit Point: 110% to 120% of full load.
SHORT CIRCUIT CURRENT: Fold back type to 40%-80% of full rated current. Unit will recover when overload is removed.
REVERSE VOLTAGE PROTECTION: Protected to rated load with the fan running.
OVER TEMPERATURE PROTECTION: The unit automatically shuts down in the event of an over temperature condition. After cool down, power must be recycled to restart unit. Optionally, non-latchable protection is also available.