

# 400-1200 Watts

MP Series



MP4



MP6



MP8



MP1

## Special Features

- Current share on all outputs with ratings of 10 A or greater
- Remote sense on all outputs with ratings greater than 2 A
- Overload protection on all outputs
- Voltage adjustment on all outputs
- Margining on all single output modules
- Input OK signal and status indicator LED
- Global DC OK signal and status indicator LED
- Global and individual module inhibits/enable
- 2 year warranty
- Forced air cooling, field replaceable fan
- Isolated 5 V bias voltage
- Power factor correction
- EN61000-3-2 harmonic distortion compliance
- CISPR 22, EN55022 Curve B conducted / radiated EMI
- European CE Mark requirements
- Optional VME timing and system DC OK module
- Customer-provided air option
- Additional 200 W output @ high line (180-264 VAC)
- Low leakage option for medical applications
- EN61000 immunity standards
- Standard modification flexibility (consult factory)
  - Low noise fan
  - Fan fail signal
  - Module enable
  - Outputs down to 0.5V

## Environmental

Operating temperature: -20°C to 50°C (start @ 0°C)  
(derate each output linearly to 50% at 70°C)  
(-20°C to 40°C max. with rear air option)

Shock/Vibration: Mil-Hdbk 810E

Humidity: 95% non-condensing

Storage temperature: -40°C to +85°C

Temperature coefficient: 0.02% per °C

Cooling: Internal DC fan or customer provided air (option)

## Safety

<b>UL</b>	UL1950
<b>CSA</b>	CSA22.2 No. 234 Level 5
<b>IEC</b>	IEC950, Class 1
<b>VDE</b>	EN60950,
<b>BABT</b>	Compliance to EN 60950, BS 7002
<b>CB</b>	Certificate and report
<b>CE</b>	Mark

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# Electrical Specs

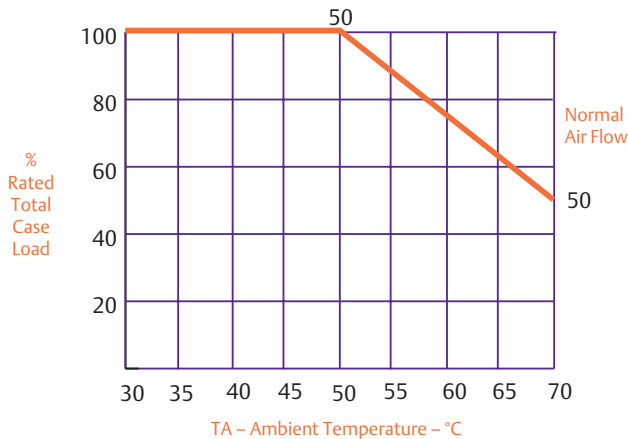
## Input

Input voltage	85-264 VAC 120-350 VDC
Frequency	47-440 Hz
Inrush current	40 A peak max. (soft start)
Efficiency	70-80% typ. @ full case load
Power factor	0.99 typ. meets EN61000-3-2
Turn-on time	AC on 1.5 sec typ., Inhibit / Enable 150 ms typ.
EMI filter standard	CISPR 22 EN55022 Level "B"
EMI filter (low leakage option)	CISPR 22 EN55022 Level "A"
Leakage current standard	2.0 mA max. @ 240 VAC
Leakage current (low leakage option).	300 µA max. @ 240 VAC
Radiated EMI	CISPR 22 EN55022 Level "B"
Holdover storage	20 ms minimum (independent of input VAC)
AC OK	>5 ms early warning min. before outputs loose regulation Full cycle ride thru (50 Hz)
Harmonic distortion	Meets EN61000-3-2
Isolation	Meets EN60950
Global Inhibit/Enable	TTL, Logic "1" and Logic "0"
Input fuse (internal)	MP4: 10 A MP6: 15 A MP8: 20 A MP1: 20 A
Warranty	2 years

## Output

Adjustment range	±10% min. all outputs
Margining	±4-6% nom. <sup>1</sup>
Overall reg	0.4% or 20 mV max. (36 W modules 4% max.)
Ripple	RMS: 0.1% or 10 mV, whichever is greater Pk-Pk: 1.0% or 50 mV, whichever is greater Bandwidth limited to 20 MHz
Dynamic response	<2% or 100 mV, with 25% load step.
Recovery time	To within 1% in <300 µsec.
Overcurrent protection	Single, main of dual output module 105-120% of rated output current. Aux output of dual output module 105-140% of rated output current. Triple output module internally protected
Short circuit protection	Protected for continuous short circuit Recovery is automatic upon removal of short.
Overvoltage protection (measured at sense connection)	Single output modules 2-5.5 V 122-134% 6-60 V 110-120% Dual output module 2-6 V 122-134% 8-28 V 110-120% Triple output module. No overvoltage protection provided. Recycle the AC input voltage to reset OVP circuit
Reverse voltage protection	100% of rated output current
Thermal protection	All outputs disabled when internal temp exceeds safe operating range. >5 ms warning (AC OK signal) before shutdown
Remote sense	Up to 0.5 V total drop (not available on triple output module)
Single wire parallel	Current share to within 2% of total rated current <sup>2</sup>
DC OK	-2% to -8% of nominal for any monitored output <sup>2</sup>
Minimum load	Not required on single or triple output modules. <sup>3</sup> 10% required on main of dual output modules <sup>3</sup>
Housekeeping bias voltage	5 VDC @1.0A mA max. present whenever AC input is applied
Module inhibit	TTL, isolated, singles and dual (both outputs) only
Switching frequency	250 kHz
Output/Output isolation	>1 Megohm
VME signal option board	POR signal & quad external DC OK
Hold-up module (HUP)	1-slot module providing an additional 34mSec (60mSec total) hold-up @ 600W loading.

Power Derating Curve



Notes:

1. Single output modules only.
2. Single and main of dual output modules only.
3. Contact factory for optional preload if required.