

Output Characteristics

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage - V1	12		48	VDC	See Models and Ratings table
Initial Set Accuracy			$\pm 1^{(V1)}, \pm 5^{(V3)}$	%	50% load, 115/230 VAC
Output Voltage Adjustment			± 10	%	V1 only. See mechanical details.
Minimum Load	0			A	
Start Up Delay		0.5		s	230 VAC full load
Hold Up Time	20			ms	
Drift			± 0.2	%	After 20 min warm up
Line Regulation			± 0.5	%	90-264 VAC
Load Regulation			$\pm 1^{(V1)}, \pm 5^{(V3)}$	%	0-100% load.
Transient Response - V1			4	%	Recovery within 1% in less than 500 μ s for a 50-75% and 75-50% load step
Ripple & Noise			1	% pk-pk	V1: 20 MHz bandwidth
Overvoltage Protection	115		140	%	Vnom DC. Output 1 only, recycle input to reset
Overload Protection	110		145	% I nom	Output 1 only, auto reset. See fig 2.
Short Circuit Protection					Auto Recovery, hiccup mode
Temperature Coefficient			0.02	%/ $^{\circ}$ C	
Overtemperature Protection				$^{\circ}$ C	Protects unit from overtemperature. Auto reset.

Output Overload Characteristic

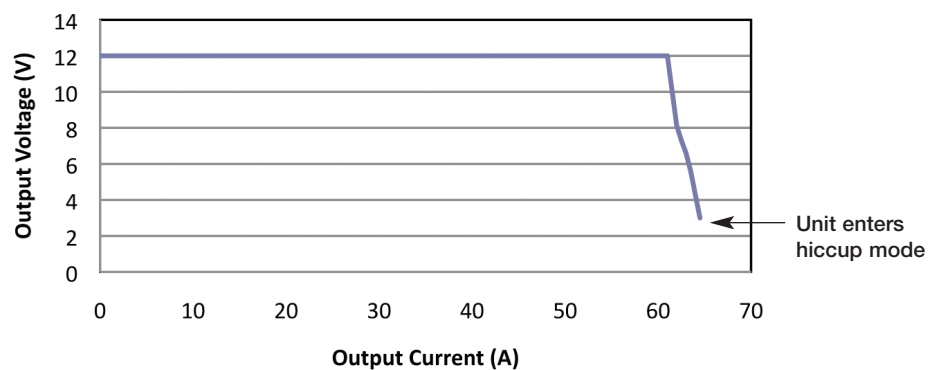


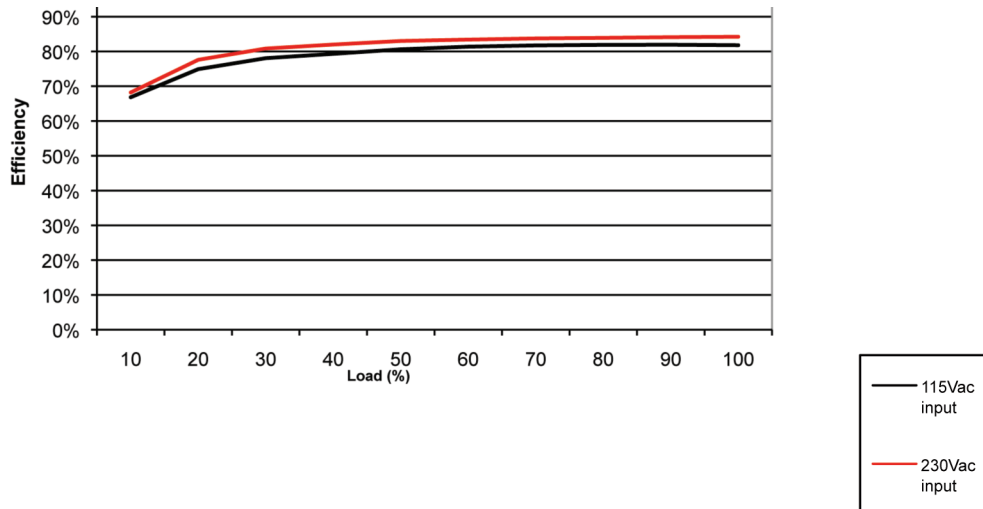
Figure 2
Typical V1 Overload Characteristic (MHP650PS12 shown)

General Specifications

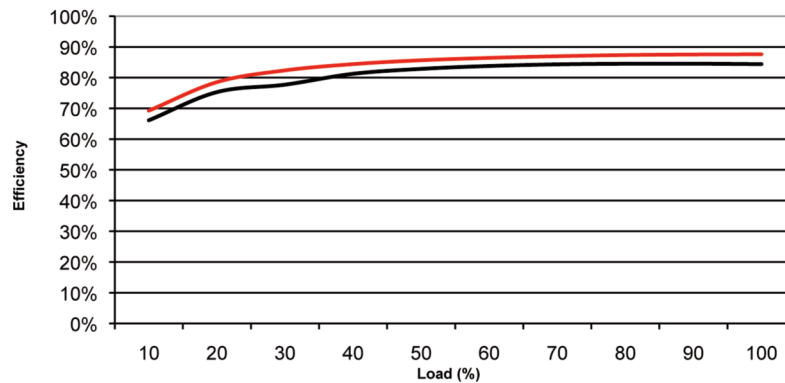
Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency		84		%	See fig 3 & 4
Isolation: Input to Output Input to Ground Output to Ground	4000			VAC	
	1500			VAC	
	500			VDC	
Switching Frequency		70/200		kHz	PFC converter / Main converter
Power Density			8.2	W/in ³	
Mean Time Between Failure		260		kHrs	MIL-HDBK-217F at 25 °C GB
Weight			2.8 (1.25)	lb (kg)	See mechanical details

Efficiency vs Load

MHP650PS12
Figure 3



MHP650PS48
Figure 4



Signals & Control

Characteristic	Notes & Conditions
Signals & Control	
Remote Sense	Compensates for 0.5 V total voltage drop
AC OK / Power Fail	Open collector referenced to negative sense, transistor normally off when AC is good (see fig. 5 & 8) AC OK: Provides ≥ 5 ms warning of loss of output from AC failure
Remote On/Off (Inhibit/Enable)	Uncommitted isolated optocoupler diode, powered diode inhibits both V1 & V2 (fan supply) (see fig.6 & 9)
Current Share	When more than one unit (with the same output voltage) is used in parallel to increase output current, the current share pins 5/6 of one unit should be connected to pins 5/6 of the other unit(s). This will force the current to share between the outputs. Similarly pins 2/4 of each unit should also be connected as a ground reference. Units share current within 10% of each other at full load. See fig 7.
Standby Supply V3	Isolated 5 V/0.2 A supply, always present when AC supplied.