MPE-700SAR

700W Enclosed AC/DC Power Supplies

Key Features:

- 700W Output Power
- 4,000 VAC Isolation
- Efficiency to 92%
- -30°C to +70°C Temp
- Remote On/Off
- Meets EN 55032 B
- >100 kHour MBTF
- UL62368 Approval

Electrical Specifications

Specifications typical @ +25°C, nominal input voltage & rated output current, unless otherwise noted. Specifications subject to change without notice.

Input

Parameter	Conditions		Min.	Typ.	Max.	Units
Input Voltage Range	AC Input		90		264	VAC
	DC Input		120		370	VDC
Input Frequency			47		63	Hz
Input Current	Full Load	115 VAC			8.0	A
		230 VAC			3.5	
Inrush Current (<2ms)		115 VAC			55	A
		230 VAC			90	
Leakage Current		264 VAC			0.75	mA
Power Factor	Full Load	230 VAC		PF > 0.9		

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage Accuracy			±2		%
Voltage Adjustable Range			±5		%VOUT
Line Regulation	115 - 264 VAC		±0.5		%
Load Regulation	10% to 100% Load		±1		%
Minimum Load		1			%
Trim			±5		%
Ripple & Noise, See Note 1	12, 15V Outputs		160		mV P - P
	24V Output		240		
	28V Output		280		
	48V Output		480		
Hold-Up Time, See Note 3	115 VAC	5			ms
Temperature Coefficient	-30°C to 0°C		±0.06		%/°C
	0°C to +50°C		±0.03		
Short Circuit Protection			Latch Off		
Over Voltage Protection			Autorecovery		
Over Temperature Protection			Continuous		

General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage, See Note 2	Input - Output	4,000			VAC
	Input - Ground	2,000			
	Output - Ground	1,500			

EMI Characteristics

Parameter	Standard	Criteria	Level
Radiated Emissions	CISPR32/EN 55032		Class A
Conducted Emissions	CISPR32/EN 55032		Class B
EMS (Noise Immunity)	EN 55035 / EN60601-1-2 4th Edition		

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	With Derating	-30		+70	°C
Storage Temperature Range		-35		+85	°C
Cooling	Forced Air Cooling				
Operating Humidity	Non-condensing			95	%RH
Vibration	IEC60068-2-6 (10-500Hz, 2G 10 min/1 cycle, 60 min each along X, Y, Z axis)				
Shock	IEC60068-2-27				

Physical

Case Size	6.7 x 3.66 x 1.61 in (See Mechanical Drawing on Page 4)
Weight	31.39 oz (890g) (See Mechanical Drawing on Page 4)

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	100			kHours
Safety Standards	UL/cUL 62368-1 Recognition (UL Certificate)				
Safety Class	Class I				

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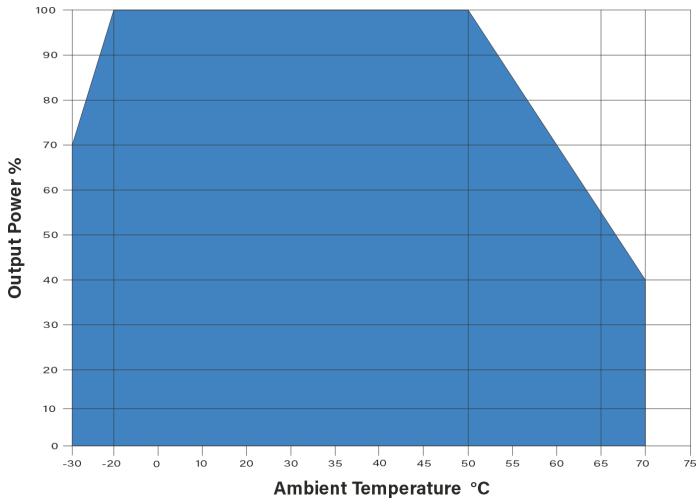
Model Selection Guide

Model Number	Input		Output				
	Current (mA) (Max)		Voltage (VDC)	Current (A, Max)	Power (W)	Output Capacitive Load (μF Max)	Efficiency (%, Typ)
	115 VAC	230 VAC					
MPE-700SAR-12	8.0	3.5	12	52.08	625	5000	89
MPE-700SAR-15	8.0	3.5	15	41.66	625	3750	90
MPE-700SAR-24	8.0	3.5	24	29.16	700	2500	91
MPE-700SAR-28	8.0	3.5	28	25	700	2000	92
MPE-700SAR-48	8.0	3.5	48	14.58	700	1250	92

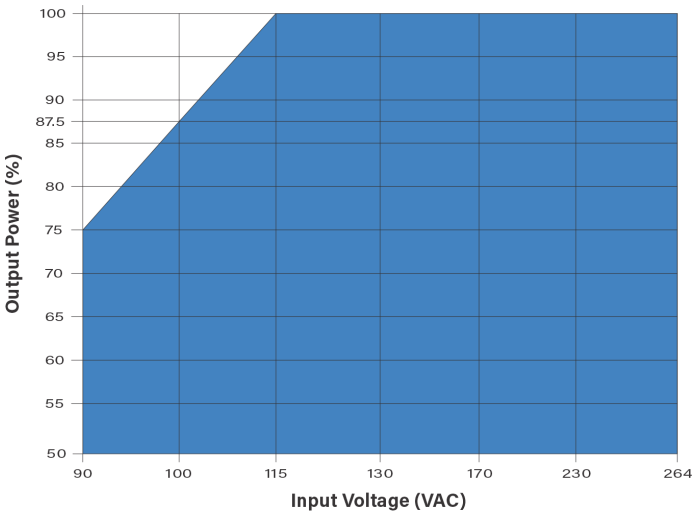
Notes:

1. The "tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor.
2. It is highly recommended that this test be conducted using a DC votlage. If an AC voltage is used, all Y capacitors must be disconnected from the power supply. For more information, please contact the factory.
3. Hold-up time is measured at 90% Vout.
4. Caution: Double pole, neutral fusing. Disconnect mains before servicing.

Temperature Derating



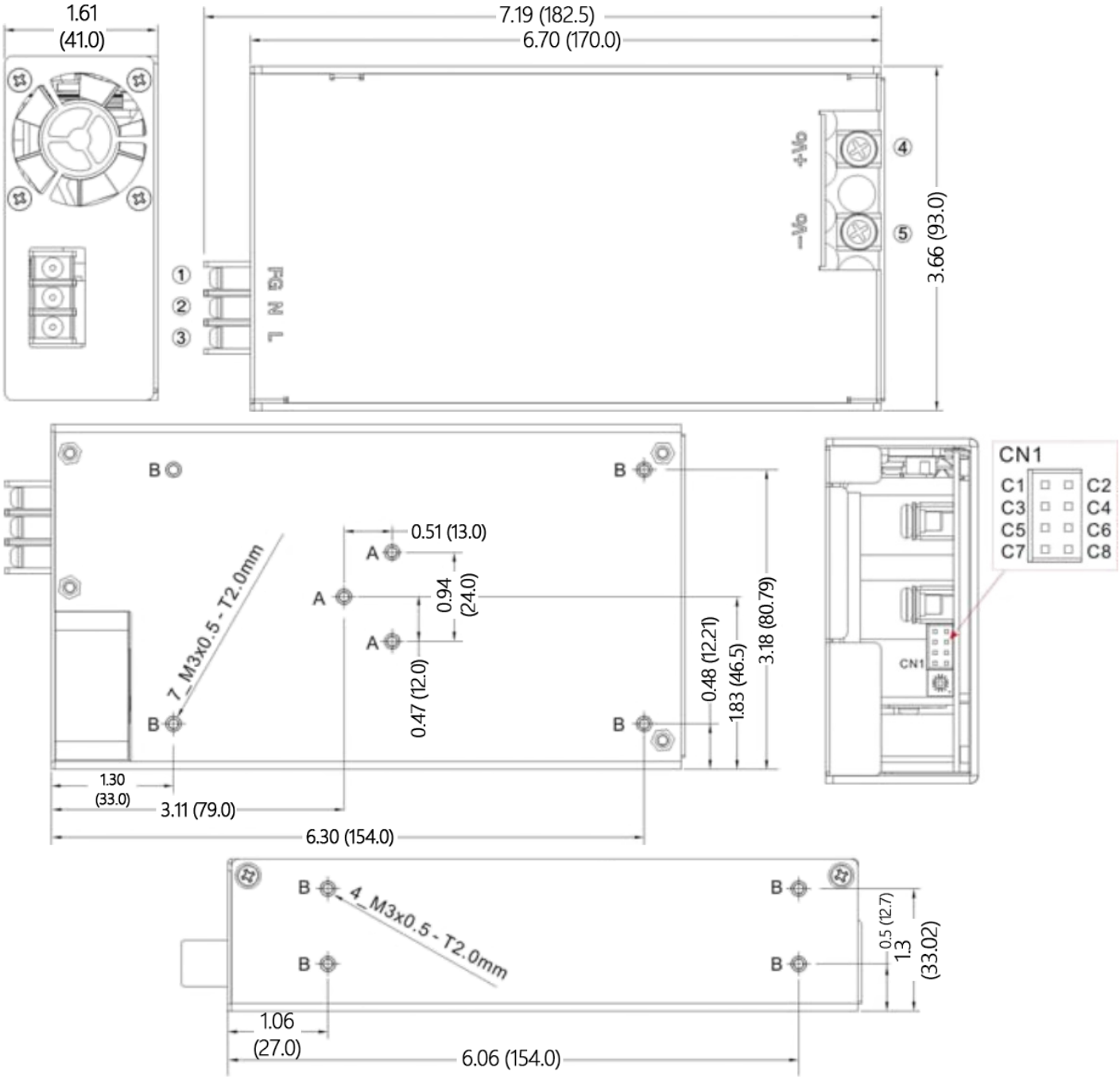
Input Voltage Derating



Function Description of CN1

Pin	Function	Description
C1	+S	Remote sensing (+)
C2	-S	Remote Sensing (-)
C3	NC	
C4	-5V SB	Connects to the negative terminal (-V).
C5	GND / -RC	Connects to the negative terminal (-V). Return for DC OK signal output.
C6	+RC	Turns the output on and off by electrical or dry contact between pin C5 (GND / -RC). Short: Power OFF, Open: Power ON.
C7	+PG	DC OK signal is a DC output (DC-OK).
C8	+5V SB	Standby voltage output ground 4.5 - 5.5V, referenced to pin C4 or C5 (GND). The maximum load current is 1A.

Mechanical Diagrams



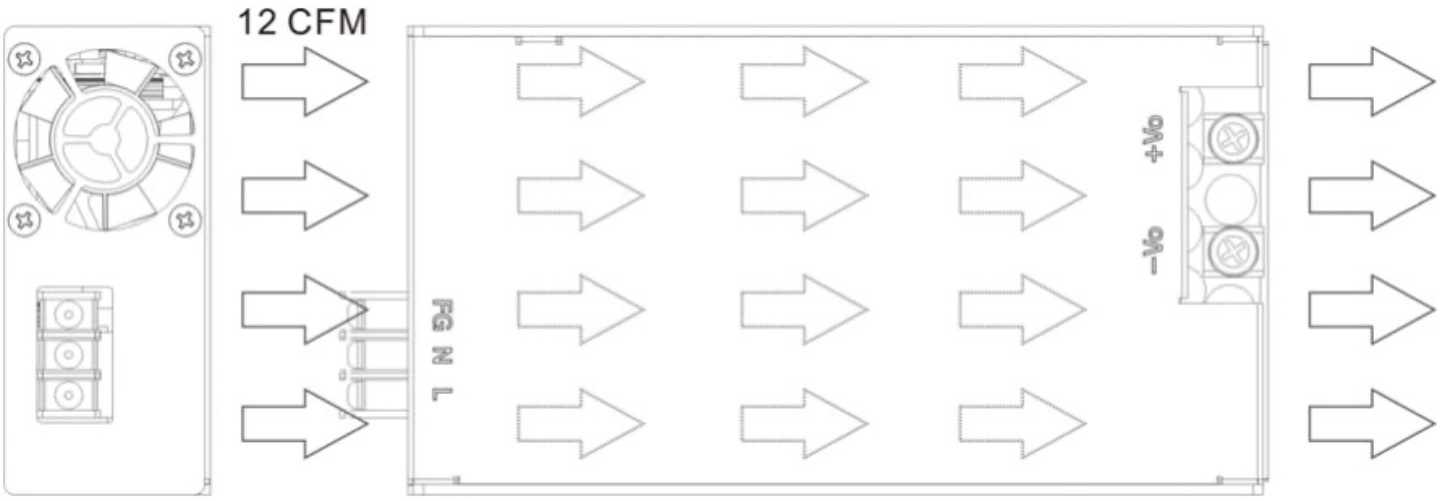
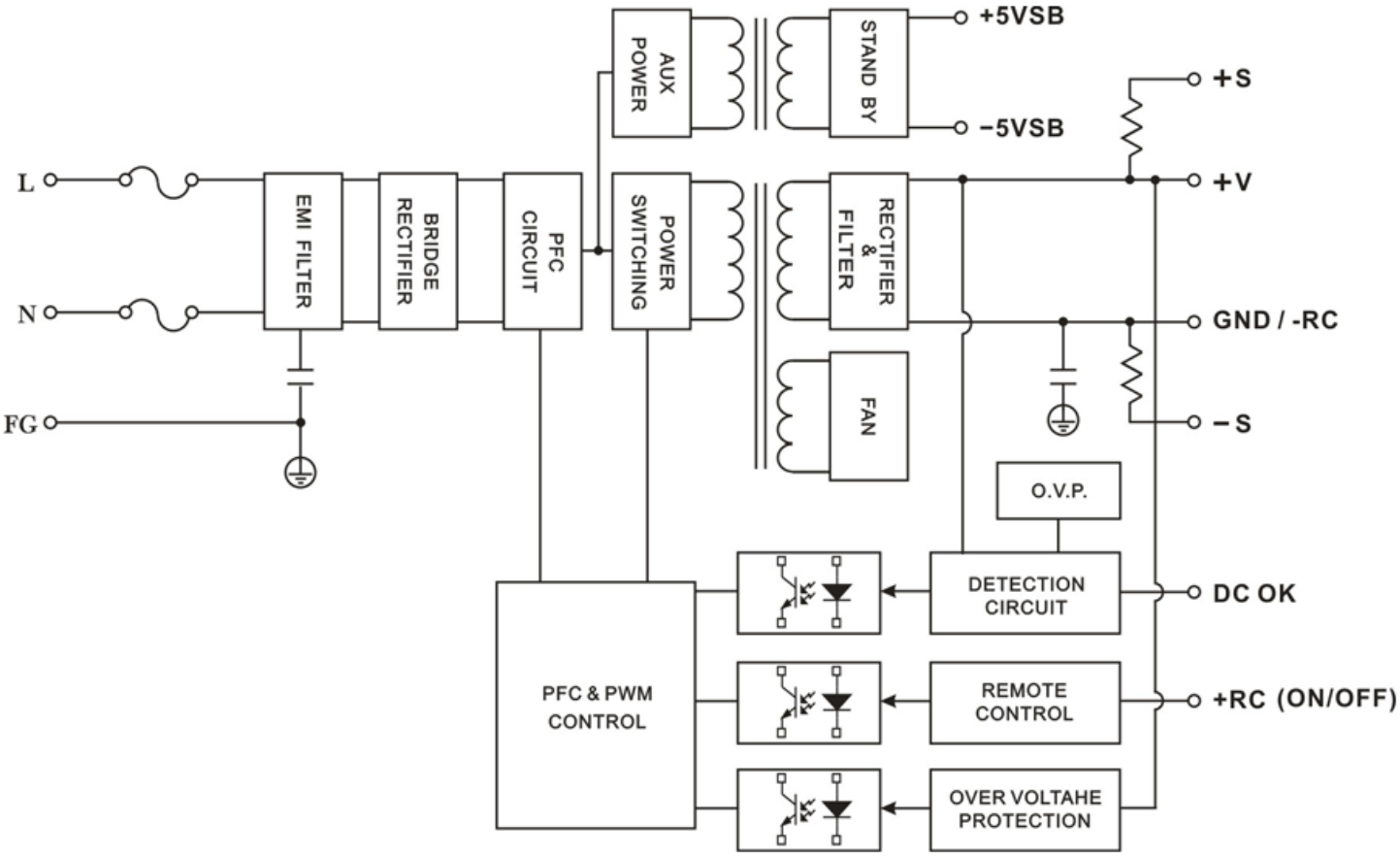
Pin	Single	Terminal
A,B	PE	--
1	AC IN	ANYTEK YK-301-3P
2	AC IN (N)	
3	AC IN (L)	
4	+DC OUT	M5 Pan HD screw in 2 positions Torque to 8lbs-in (90 cNm) max.
5	-DC OUT	

Pin	Single	Mating Housing	Terminal
C1	+S	JST PHDR-08VS	JST SPHD-001T-P0.5
C2	-S		
C3	NC		
C4	-5V SB		
C5	GND / -RC		
C6	+RC		
C7	PG		
C8	+5V SB		

Notes:
- All dimensions are typical in inches (mm)
- General tolerances: ±0.02 (±0.5)

Weight:
- 31.39 oz (890g)

Air Flow Direction



Block Diagram