



320 Watt Medical Grade Switching Power Supply with PFC

PMMK320E series



3.86"W x 7.99"L x 1.57"H

- 320 Watts Output Power
- Single Outputs
- Universal 90-264VAC Input
- 5VDC to 48VDC Outputs
- 5656VDC Input to Output Isolation
- Active Power Factor Correction



Model Number	Output Voltage	Output Amps (max)	Ripple & Noise max.	Efficiency
SINGLE OUTPUT				
PMMK320S-5E	5 VDC	60	100mV pk-pk	75%
PMMK320S-12E	12 VDC	26.7	120mV pk-pk	81%
PMMK320S-15E	15 VDC	21.4	150mV pk-pk	84%
PMMK320S-24E	24 VDC	13.4	150mV pk-pk	84%
PMMK320S-36E	36 VDC	8.9	150mV pk-pk	84%
PMMK320S-48E	48 VDC	6.7	150mV pk-pk	84%



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INPUT SPECIFICATIONS

Input Voltage Range	90-264 VAC; Nom: 100-240VAC
Frequency Range	47-63 Hz
Power Factor Correction	0.95, min. Nom I/P, FL
Inrush Current, typ:	30A @ 115VAC Cold Start, FL*
	60A @ 230VAC Cold Start, FL*
Input Current	5.4 Amps max., 90V I/P
	1.8 Amps max., 264V I/P
Leakage Current	<0.2mA, 240Vin, 50Hz

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Line Regulation (LL-HL)	±1%, max.
Load Regulation 10%-FL	±1~1.5%, max.
Preset Accuracy (Note 3)	±1%, typ (2% 5 Vout)
Ripple/Noise (Notes 1, & 4)	See Selection Chart
Over Voltage Protection	130% max. Auto Recovery *
Over Current Protection	150% max. Auto Recovery *
Short Circuit Protection	Auto Recover after fault condition is removed *
Turn On Delay Time	<4S
Rise Time	<25mS, typ (Nom I/P, FL)
Hold Up Time	20mS, typ (Nom I/P, FL)
Over-Shoot/Under Shoot	<10% of Nominal Output
Remote Sense	Compensates for up to 0.5V drop
Remote Shutdown	Open Collector, Logic "1" = ON "0" = Off. No Termination necessary to maintain constant "On" operation

GENERAL SPECIFICATIONS

Isolation (Note 2)	I/P-O/P: 5656VDC I/P-Ground: 2121VDC O/P-Ground: 707VDC
Insulation Resistance	≥20MΩ
Efficiency (FL, Nom I/P)	See Selection Chart
Safety	UL/cUL60601-1, EN60601-1 (TUV) EN60601-1-2 (CE), IEC60601-1 (CB)

* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-20 to +70°C (See Derate Curve)
Storage Temperature	-25 to +85°C *
Relative Humidity	10% to +90%, *
	Storage: 5-95%
EMS	
Harmonics	Class D, 61000-3-2
Fluctuations	61000-3-3
ESD	61000-4-2
RS	61000-4-3
EFT	61000-4-4
Surge	61000-4-5
CS	61000-4-6
DIPS	61000-4-11
EMI	EN55022 Class B
MTBF Mil Std 217F, 25°C	100,000 Hrs, min.
Vibration	4G Peak, 50-500Hz, 3 Axes
Drop Test	70 CM

PHYSICAL SPECIFICATIONS

Size	7.99"(L) x 3.86"(W) x 1.57"(H)
Construction	Enclosed
Weight	1.75 lb, (794g)

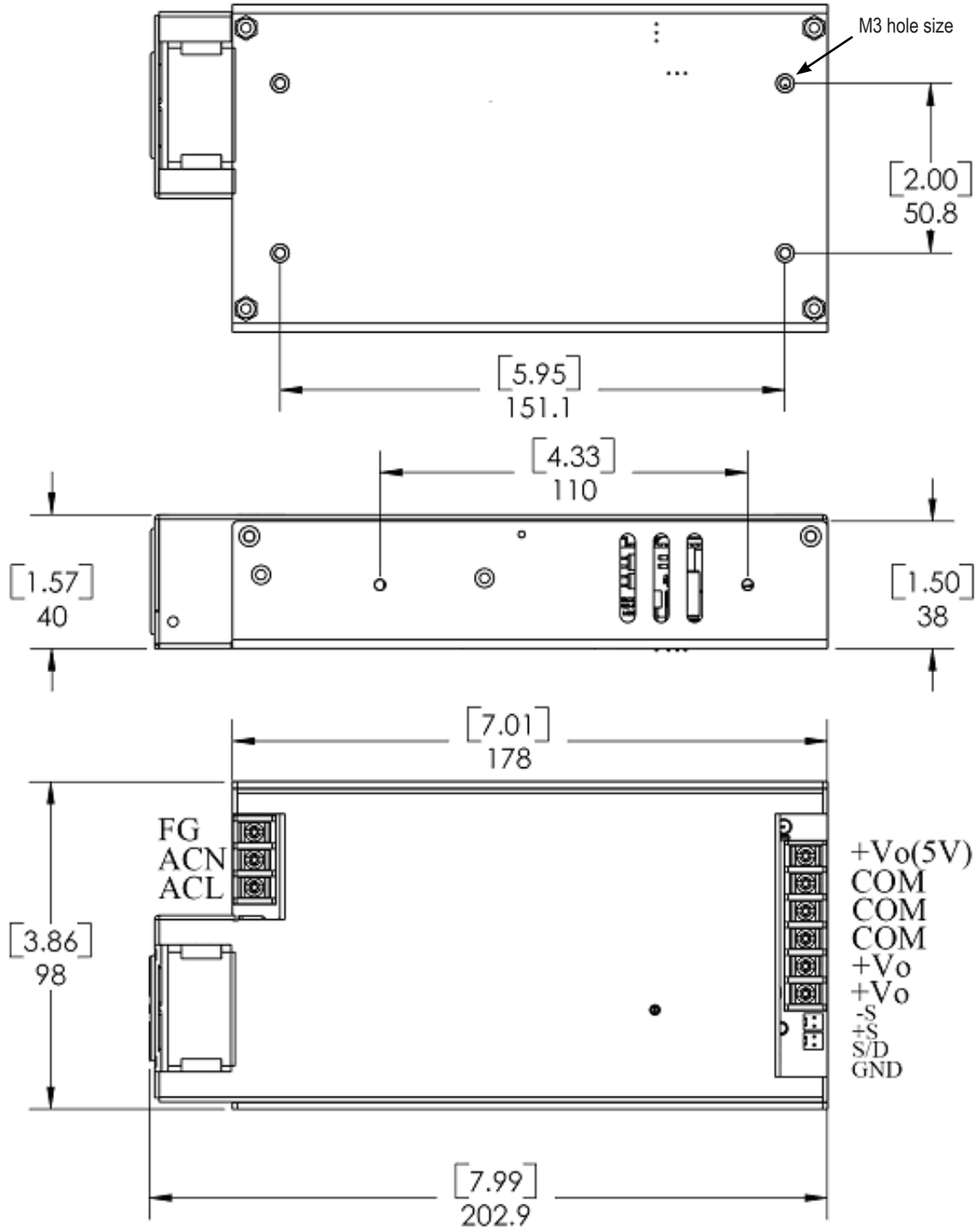
NOTES

1. All measurements should be made directly at the terminals of the power supply
2. Isolation for up to 1 minute duration.
3. Preset Accuracy measured at nominal load, 120VAC input.
4. O/P Noise measured directly at the pins/terminals at nominal load, 0.1uF ceramic bypass and 47uF electrolytic, pk-pk @ 20MHz bandwidth.

Astrodyne products are not authorized or warranted for use as critical components in life support systems, equipment used in hazardous environments, nuclear controls systems, or other mission-critical applications.

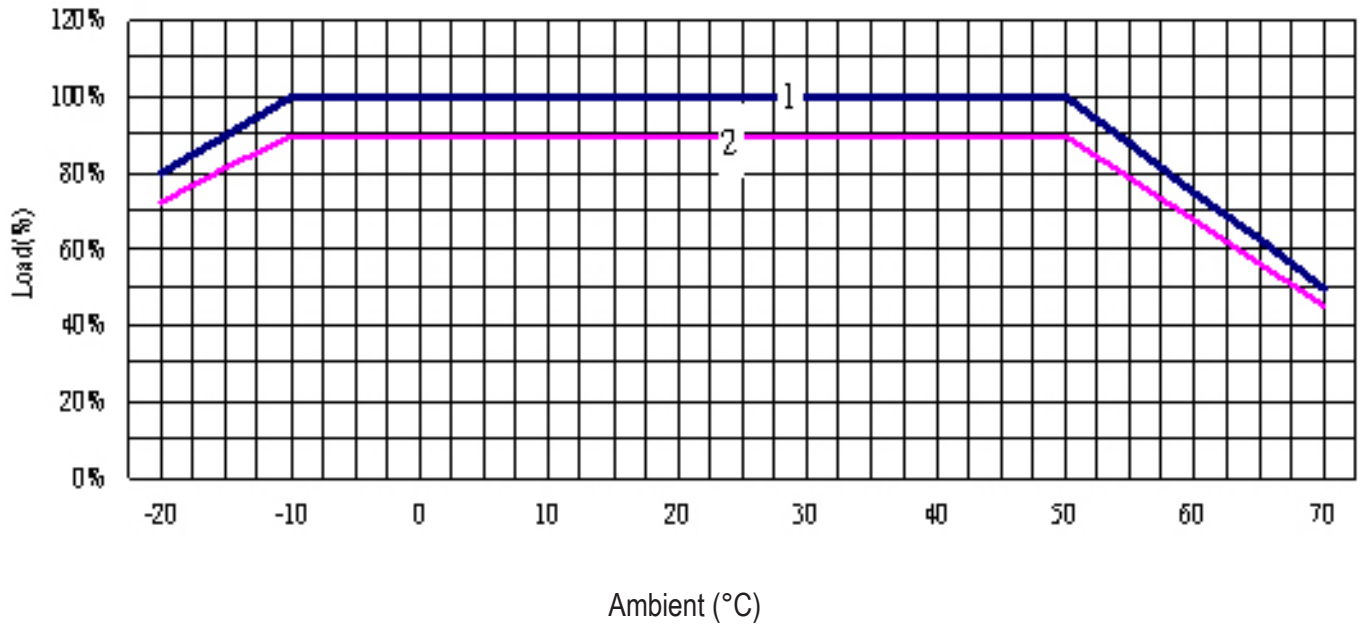
All specifications are typical at nominal input, full load, and 25°C unless otherwise noted

MECHANICAL DIMENSIONS



UNITS:mm (in)

OUTPUT DERATING CURVE



1. 100-264VAC: 5V~48V & 90-100VAC: 15V~48V
2. 90-100VAC: 5V & 12V