MDR-75SNY

Single Output, Very Compact 75W DIN Rail AC/DC Power Supplies

Key Features:

- 75W Output Power
- 3,000 VAC I/O Isolation
- Universal AC Input
- Takes AC or DC Input
- Ultra Slim Case
- UL Approved
- -20°C to 70°C Operation
- Meets EN 55032 B
- >450 kHour MTBF
- High Efficiency

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		90		264	VAC
		127		370	VDC
Input Frequency		47		63	Hz
Input Current	See Model Selection Guide				
Leakage Current	240 VAC			1.0	mA
Start Up, Full Load	115 VAC			2500	mS
	230 VAC			1200	
Inrush Current, Cold Start	115 VAC		20		A Pk
	230 VAC		35		

Output

Parameter	Conditions		Min.	Typ.	Max.	Units
Output Voltage Accuracy				±2.0		%
Line Regulation				±0.5		%
Load Regulation				±1.0		%
Ripple & Noise (20 MHz), See Note 1	12V Output				80	mVp-p
	24V Output				120	
	48V Output				150	
Hold-Up Time	Full Load	115 VAC		12		ms
		230 VAC		60		
Temperature Coefficient				±0.03		%/°C
Over Current Protection			105		150	%IOUT
Short Circuit Protection, See Note 2	Continuous (Autorecovery)					

General

Parameter	Conditions		Min.	Typ.	Max.	Units
Isolation Voltage	Input to Output		3,000			VAC
	Input to Field Ground		2,000			
	Output to Field Ground		500			
	Output to DC OK Relay		500			
Isolation Resistance	500VDC	Input to Output				MΩ
		Input to Field Ground	100			
		Output to Field Ground				

EMI **See Page 2**

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	-20		+70	°C
Storage Temperature Range		-40		+85	°C
Cooling	Free Air Convection (See Derating Curves on Page 2)				
Humidity, RH, Non-condensing	Working	20		95	%
	Storage	10		95	
Overtemperature Protection	Autorecovery				

Physical

Size	1.26 x 4.92 x3.96 in. (See Mechanical Drawing on Page 3)
Weight	17.99 oz (510g) (See Mechanical Drawing on Page 3)
Case Material	Aluminum and Steel

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C	450			kHours
Safety Standards	UL508, EN62369-1				
Vibration	IEC 60068-2-6, 10-500 Hz, 2G 10 min/1 cycle, 60 min each along X, Y, Z axis				

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Model Selection Guide

Model Number	Input		Output						
	Current (A)		Voltage (VDC)	Adjust Range (VDC)	Current (A)		Power (W)	Over Voltage Protection (VDC) See Note 4	Efficiency % (Typ @ 230 VAC)
	115 VAC	230 VAC			Rated	% Min.			
MDR-75SNY-12	1.45	0.9	12	12.0 - 14.0	6.3	0	75.6	14.0 - 17.0	85.5
MDR-75SNY-24	1.45	0.9	24	24.0 - 28.0	3.2	0	76.8	29.0 - 33.0	88
MDR-75SNY-48	1.45	0.9	48	48.0 - 55.0	1.6	0	76.8	56.0 - 65.0	88

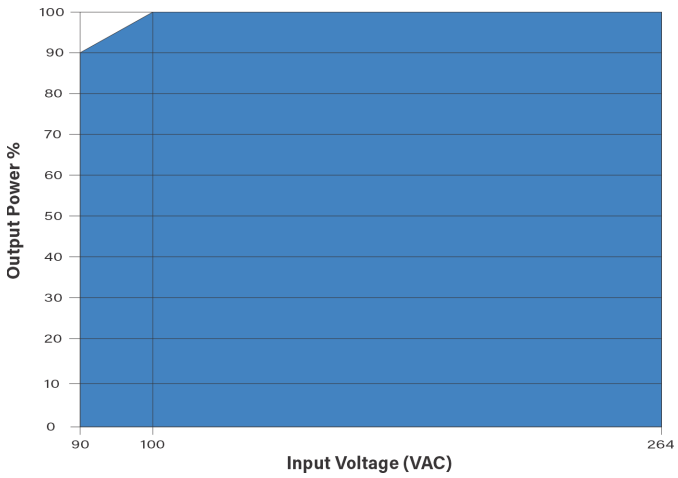
EMI/RFI

Parameter	Standard	Criteria	Level
Radiated Emissions	CISPR 32/EN 55032		B
Conducted Emissions	CISPR 32/EN 55032		B
Harmonic Current	EN 61000-3-2	A	
Voltage Flicker	EN 61000-3-3	A	
ESD	EN 61000-4-2	B	±4KV Contact, ±8KV Air
RS	EN 61000-4-3	A	3V/m
EFT	EN 61000-4-4	B	±1KV
Surge	EN 61000-4-5	A	±1KV line to line
	EN 61000-4-5	A	±2KV line to ground
CS	EN 61000-4-6	A	3V.r.m.s
EMC	EN 61000-4-8	A	1A/m
Voltage Dip, Short, Interruption	EN61000-4-11	B	0%, 70%

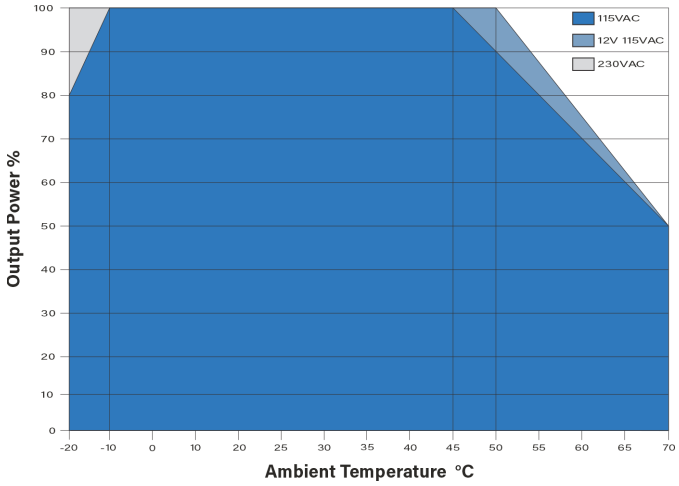
Notes:

1. Output ripple is measured at 20 MHz bandwidth using 0.1 μF and 47 μF capacitors connected in parallel as close to the power supply terminals as possible.
2. Output short circuit protection is provided by constant current limiting until hiccup after 3 seconds. The unit recovers automatically when the fault condition is removed.
3. Protection type: shutdown, recycle input to recover.
4. There is an ambient temperature derating of 3.5°C /1000m for operating higher than 2000m (6500ft).

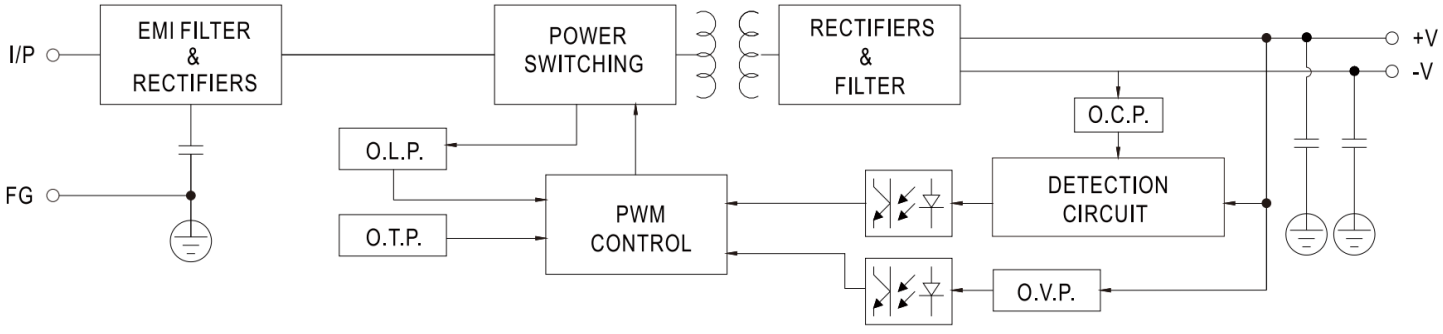
Input Voltage Derating



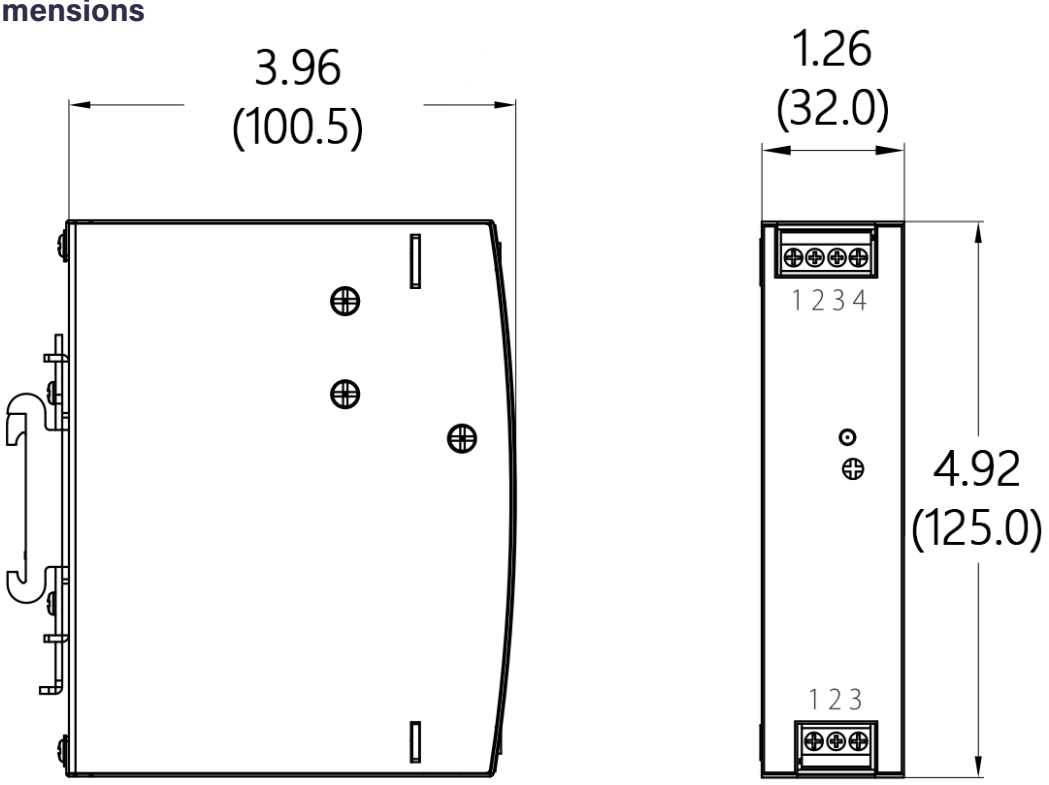
Temperature Derating



Block Diagram



Mechanical Dimensions



Input	
Pin	**Function**
1	GRND
2	AC (N) or DC-
3	AC (L) or DC+

Output	
Pin	**Function**
1, 2	-VOUT
3, 4	+VOUT

Notes:
- All dimensions are typical in inches (mm)
- Weight: 17.99 Oz (510g)

Installation Clearance:
- Top: 40mm
- Bottom: 20mm
- Sides: 5mm, increase space to 10-15mm if adjacent device is heat source

MPD has a very wide range of high performance AC/DC power supplies ranging from 600W UChannel units to 1W units in miniature Single-In-Line (SIP) packages. All are designed and certified to international safety and EMC/EMI standards.
We have AC/DC supplies approved for use in medical equipment, DIN rail supplies, "Green" energy supplies and constant power supplies.
We also offer a wide variety of DC/DC converters, POL regulators and IGBT drivers. All products are available with short lead times. Call today for complete information or product samples. Or go to our website:

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