

MDR-72S

Compact, 72W DIN Rail Mount AC/DC Power Supply



Key Features:

- 72W Output Power
- Compact, DIN Rail Case
- 165-264 VAC Input
- Low Standby Power
- TS-35/7.5 or TS-35/15 Rails
- Meets EN 55022 B
- High Efficiency
- >250 kHour MTBF

RoHS



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Electrical Specifications

Specifications typical @ +25°C, 230 VAC input voltage & rated output current, unless otherwise noted. Specifications subject to change without notice.

Input

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Range		165		264	VAC
		180		370	VDC
Input Frequency		47		63	Hz
Input Current	See Model Selection Guide				
Inrush Current, See Note 1	230 VAC		50		A Pk
Standby Power Consumption				0.5	W

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage	See Model Selection Guide				
Output Current	See Model Selection Guide				
Output Voltage Accuracy			±3.0		%
Output Voltage Adjust				±5.0	%
Line Regulation	V _{IN} = Min to Max		±0.5		%
Load Regulation	I _{OUT} = 10% to 100%		±2.0		%
Ripple & Noise (20 MHz)				150	mV P-P
Hold-Up Time	230 VAC		60.0		mS
Temperature Coefficient			±0.02		%/°C
Over Voltage Protection	See Note 2		30		VDC
Short Circuit Protection, See Note 3	Continuous (Auto-Recovery)				
Overload Protection, See Note 4	Auto-Recovery	110		150	%I _{OUT}

General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage, 60S	Input to Output	4,000			
	Input to \downarrow	1,500			VAC
	Output to \downarrow	500			
Isolation Resistance		100			MΩ
Switching Frequency			100		kHz

EMI Characteristics, See Note 5

Parameter	Standard	Criteria	Level
Radiated Emissions	EN 55024		Class B
Conducted Emissions	EN 55022		Class B
ESD	EN 61000-4-2	B	±8 kV Air
			±6 kV Contact
RS	EN 61000-4-3	A	10V/m
EFT	EN 61000-4-4	B	±4 kV
Surge	EN 61000-4-5	B	±2 kV/ ±4 kV
CS	EN 61000-4-6	A	10 Vrms
PFM	EN 61000-4-8	A	10A/m
Voltage Dips, Interruptions	EN 61000-4-11	B	0% - 70%

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	-40	+25	+70	°C
Storage Temperature Range		-40		+85	°C
Cooling	Free Air Convection (See Derating Curve on Page 2)				
Humidity	RH, Non-condensing			95	%

Physical

Case Size	See Mechanical Diagram (Page 2)				
Case Material	Heat Resistant Plastic (UL94-V0) and Metal				
Weight	11.53 Oz (340g)				

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	250			kHours
Safety Class	Class I				

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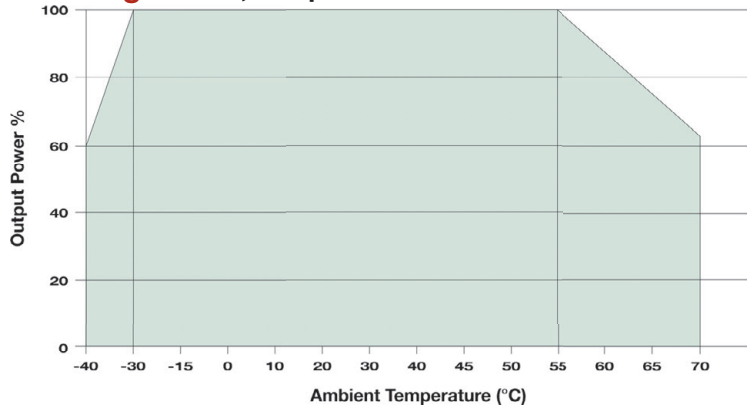
Model Number	Input Current (A Max)	Output			Efficiency (% Typ)	Capacitive Load (µF Max)	Fuse Rating Slow-Blow (A/V)
		Voltage (VDC)	Current (A)				
			Max.	Min.			
MDR-72S-24	1.0	24.0	3.0	0.3	86	2,000	3.15/250

Other outputs may be available
Contact the factory for details at:
sales@micropowerdirect.com

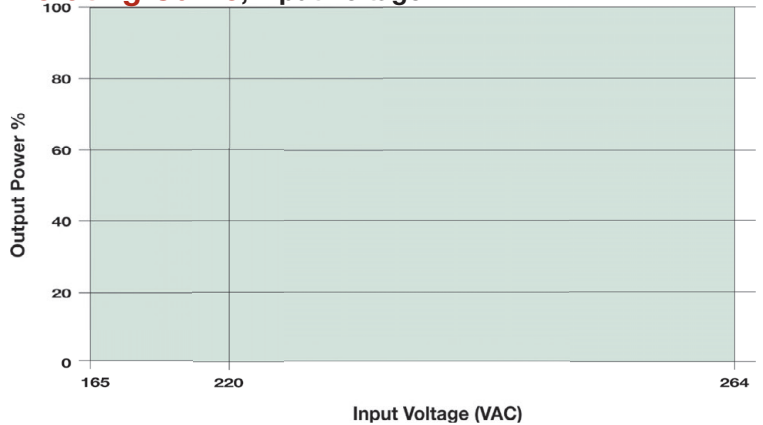
Notes:

1. Inrush current is given for a cold start at 25°C.
2. Over voltage protection is provided by a zener diode clamp.
3. Output short circuit protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
4. Output overload protection is provided by a fold back current limiting circuit with auto-recovery. A long-term overload could damage the unit.
5. EMI characteristics are specified without external components.
6. Operation at no-load will not damage these units. However, they may not meet all specifications.
7. The MDR-72S is designed for mounting on a standard 35 mm DIN rail (TS35).
8. It is recommended that an external slow blow fuse also be used on the input for protection. See the table above for the correct rating.

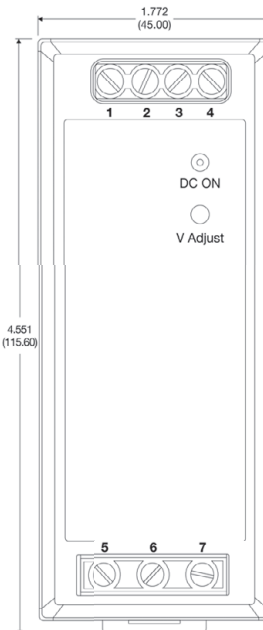
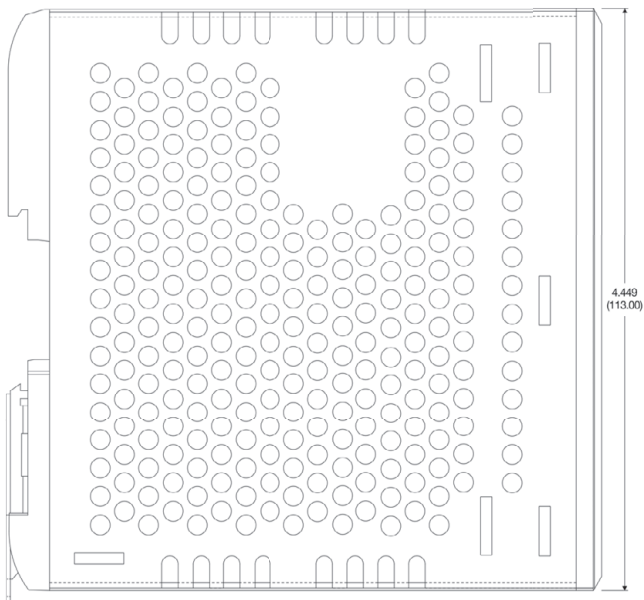
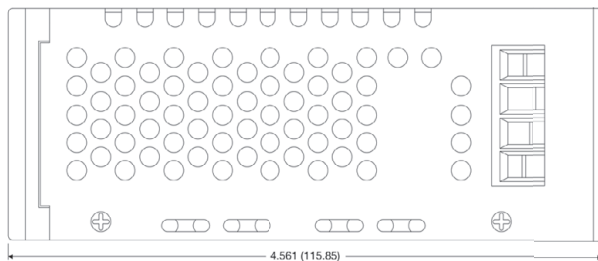
Derating Curve, Temperature



Derating Curve, Input Voltage



Mechanical Dimensions



Wire Connections

Pin	Function
1	+VOUT
2	+VOUT
3	-VOUT
4	-VOUT
5	⊥
6	AC-Neutral
7	AC-Line

Notes:

- All dimensions are typical in inches (mm)
- Wire Range is: 26 - 10 AWG, Strip length is 0.32 (8.0)
- Tolerance x.xx = ±0.02 (±0.5)



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