

DR-45 Series



New Industrial Supplies!!

Low Cost, Industrial 45W, DIN Rail Mount AC/DC Power Supplies

Electrical Specifications

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

Key Features:

- 45W Output Power
- DIN Rail Mountable
- Universal AC Input
- UL 508 Approved
- Safety Approved
- 5, 12, 15 & 24 VDC Outputs
- Cond./Rad. EMI Class B
- >364 kHz MTBF
- **LOW COST!**



RoHS Compliant

MicroPower Direct

232 Tosca Drive
Stoughton, MA 02072
USA

T: (781) 344-8226
F: (781) 344-8481
E: sales@micropowerelect.com
W: www.micropowerelect.com



Input

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Range		85		264	VAC
		120		370	VDC
Input Frequency Range		47		63	Hz
Inrush Current	230 VAC, Cold Start		56		A
	115 VAC, Cold Start		28		
Leakage Current	240 VAC			1.0	mA

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage Tolerance	Note 1		±1.0		%
Voltage Adjustment Range	5 VDC Output	4.75		5.5	VDC
	12 VDC Output	10.8		13.2	
	15 VDC Output	13.5		16.5	
	48 VDC Output	21.6		26.4	
Line Regulation			±1.0		%
Load Regulation	I _{out} = 10% to 100%		±1.0		%
Set Up Time	230 VAC, Full Load		800		mSec
Rise Time	At Full Load		60		mSec
Hold Time	230 VAC, Full Load		100		mSec
Ripple & Noise (Note 2)	5 VDC Output			100	mV Pk-Pk
	12 VDC Output			200	
	15 VDC Output			240	
	24 VDC Output			480	
Output Power Protection	Note 3	105		150	%
Over Voltage Protection (Note 4)	5 VDC Output	5.75		6.75	VDC
	12 VDC Output	13.8		16.2	
	15 VDC Output	17.25		20.25	
	24 VDC Output	27.6		32.4	
Over Temperature Protection	Note 5		135		°C
Temperature Coefficient	0°C to 50°C		±0.03		%/°C
Switching Frequency	Fixed		100		kHz

General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Input - Output	3,000			VAC
	Input - FG (Frame Ground)	1,500			
	Output - FG (Frame Ground)	500			
Isolation Resistance (Note 6)	500 VDC	100			MΩ

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	-10	+25	+50	°C
Storage Temperature Range		-20		+85	°C
Operating Humidity	RH, Non-condensing	20		90	%
Storage Humidity	RH, Non-condensing	10		95	%
Vibration	10 ~ 500 Hz; 2G 10 min./1 Cycle; X, Y, Z axis each 1 hour				

Physical

Case Size	3.66 x 3.05 x 2.64 Inches (93.0 x 78.0 x 67.0 mm)
Case Material	Plastic (UL94-V0)
Connection	Screw Terminal
Weight	11 Oz (0.31 kg)

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	364.6			kHours
Safety Standards					UL 508, UL 60950, EN 60950-1
Safety Approvals					UL, cUL, TÜV
EMI Compliance					Compliance to EN55011, EN55022 (CISPR22) Class B
Harmonic Current Compliance					Compliance to EN6100-3-2,-3
EMS Immunity Compliance	EN6100-4-2,3,4,5,6,8,11; ENV50204;EN6100-6-2(EN50082-2) Heavy Ind. Level, criteria A				

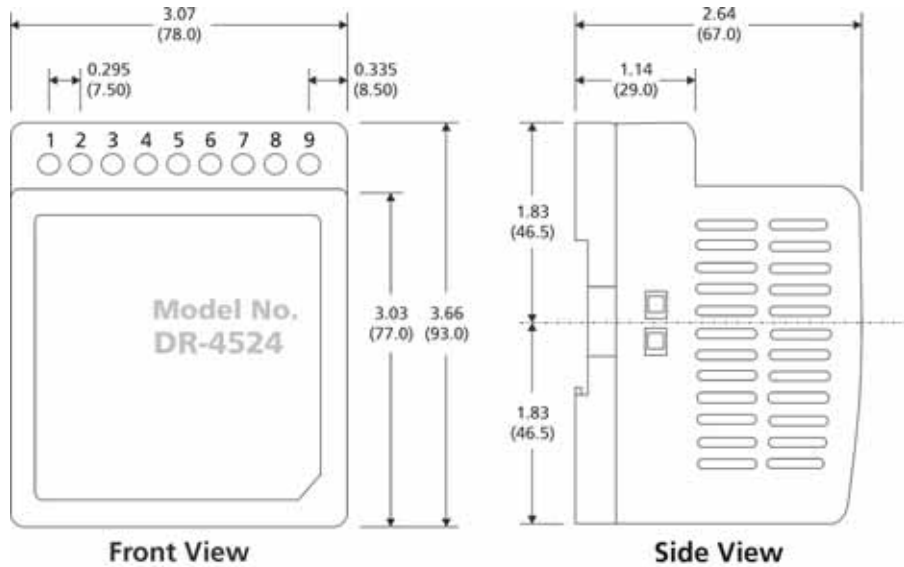
Model Selection Guide

Model Number	Rated Power (W)	Input			Output			Efficiency (% Typ)	Fuse Rating Slow-Blow (A)
		Voltage (VAC)	Current (A)		Voltage (VDC)	Current (A) Max	Current (A) Range		
			Range	115 VAC					
DR-45-05	25	85 - 264	1.5	0.75	5	5.0	0 ~ 5.0	72	5.0
DR-45-12	42	85 - 264	1.5	0.75	12	3.5	0 ~ 3.5	77	5.0
DR-45-15	42	85 - 264	1.5	0.75	15	2.8	0 ~ 2.8	77	5.0
DR-45-24	48	85 - 264	1.5	0.75	24	2.0	0 ~ 2.0	80	5.0

Notes:

- Output voltage tolerance includes set-up tolerance, line regulation and load regulation.
- Ripple & noise is measured using equipment with 20 Mhz of bandwidth. Connection to the unit under test is made with a 12 inch length of "twisted pair" wires terminated with a set of 1.0 μ F & 4.7 μ F capacitors connected in parallel.
- Overload protection is foldback current limiting. The unit recovers automatically when the fault is removed.
- Over voltage protection is a shut down type. The power to the unit must be manually reset to recover.
- Over temperature protection shuts down the output. The unit recovers automatically when the temperature goes down. The thermal detector is mounted on the heat sink of the power semiconductor.
- Isolation resistance is given for Input/Output; Input/FG and Output/FG.
- To mount the unit to the DIN rail, tilt the unit rearwards from the top, fitting the mount over the top of the rail. Press back on the bottom front of the unit until it locks in place on the rail. To remove the unit from the rail, pull the removal clip at the bottom rear of the unit downward with a screw driver. With the clip down, lift up on the unit from the bottom front until it clears the rail. Before installation or removal all wiring should be disconnected and the main power to the system shut off.
- When wiring the supply, all lines should be as thick and short as possible. AWG 14 wire is recommended for the DR-45 series.
- The units should be mounted so they are vertically orientated. Air flow (if it is provided) would optimally flow from the bottom to the top of the unit.
- It is recommended that a fuse be used on the input of a power supply for protection. See the table above for the correct rating.

Mechanical Dimensions



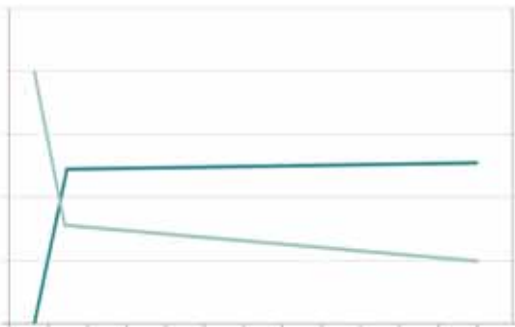
Mechanical Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ± 0.01 (± 0.25)

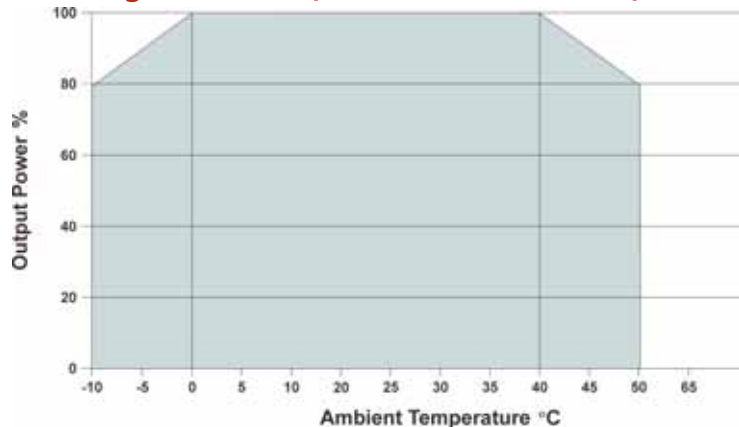
Terminal Connections

Pin	Function	Pin	Function
1	AC/Live (DC-)	6,7	DC Output (+V)
2	AC/Neutral (DC+)	8	LED
3	Frame Ground (FG)	9	+VAdj
4,5	DC Output (-V)		

Static Characteristics (24 Vout)



Derating Curve - Output Power vs Ambient Temp.



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