**DM Series** 



# Plastic Single Phase DIN Rail DC Switching Power Supplies

### ULTRA SLIM SIZE AT AN ECONOMICAL PRICE

The DM Series plastic single phase DC power supplies provide optimal switching technology in a compact package. These highly efficient DIN Rail switching power supplies provide maximum uptime in a diverse range of manufacturing environments.

With their narrow profile, the plastic models consume limited space on the DIN Rail, making efficient use of control cabinet real estate. The supply's rugged plastic case and secure mounting clip ensure quick and easy installation on the DIN Rail. High-quality performance, long-life expectancy, and operation under a wide range of temperatures contribute great value to demanding applications.

Plastic single phase units are available in a variety of wattages (15-50) and voltages (5-48).

#### Features/Benefits:

- » Narrow width conserves valuable space on the DIN Rail
- » Universal input 90-264 VAC, 50/60 Hz without voltage gaps for full product application versatility
- » Adjustable output voltage compensates for voltage drop
- » "DC OK" LED indicator identifies local output status
- » Fully enclosed touch-safe enclosure and terminals
- » Certified to UL and CE safety standards for use worldwide
- » UL508 listed for use at full-rated power
- » All models capable of parallel connection to provide redundancy for critical load applications (use w/external diode)
- » Meets SEMI F47-200
- » RoHS compliant
- » 3 year warranty



Full Line Specifications:
Input voltage range 90-264 VAC
Input frequency 47-63 Hz
Inrush current < 25 Amp
Hold-up time ≥ 16 mSec
Line regulation < ± 0.5%
Load regulation drift < ± 1%
Operating temp -10°C to +50°C
Storage temp -25°C to +85°C
Operating humidity 5% to 95% RH, non-condensing
Meets EN61000-3-2 harmonic correction
Meets EMI standards EN55022-B, FCC15B, EN55024
Meets vibration & shock standards IEC68-2-6, IEC68-2-27
All models have internal fuse protection

#### Applications:

» Industrial networks and encoders
» Industrial/Machine control
» Process control
» Conveying equipment
» Material handling

- » Packaging
- » Robotics
- » Vending equipment
- » Instrumentation

When you want superior product performance and reliability, off-the-shelf availability, industry-leading technical support, and customer service that's rated second to none, choose Acme – the first name in power solutions.

## **Plastic Single Phase**

	DMP1-504	DMP1-120125	DMP1-12025	DMP1-1204	DMP1-1502
Total Power	20 W	15 W	30 W	50 W	30 W
Input Current	< 0.80 Amp	< 0.42 Amp	< 0.80 Amp	< 1.65 Amp	< 0.80 Amp
Efficiency - Typ. (1)	75%	78%	84%	83%	84%
Output Voltage	5 VDC	12 VDC	12 VDC	12 VDC	15 VDC
Output Voltage Adj.	4.5-5.5 VDC	10-14 VDC	10-14 VDC	10-14 VDC	14-18 VDC
Output Current	4.4 - 3.64 Amp	1.25 - 1.07 Amp	3.0 - 2.14 Amp	5.0 - 3.57 Amp	2.14 - 1.67 Amp
Ripple & Noise	< 1.6%pk-pk 20MHz full load	< 1%pk-pk 20MHz full load	< 1%pk-pk 20MHz full load	< 1%pk-pk 20MHz full load	< 1%pk-pk 20MHz full load
Overvoltage Protection	Continuous Protection & Auto Recovery (105% - 150%)	Continuous Protection & Auto Recovery (120% - 135%)	Continuous Protection & Auto Recovery (105% - 150%)	Continuous Protection & Auto Recovery (105% - 150%)	Continuous Protection & Auto Recovery (105% - 150%)
Overcurrent Protection Short Circuit	Continuous Protection & Auto Recovery (105% - 150%)	Continuous Protection & Auto Recovery (110% - 150%)	Continuous Protection & Auto Recovery (105% - 150%)	Continuous Protection & Auto Recovery (105% - 150%)	Continuous Protection & Auto Recovery (105% - 150%)
Reverse Volt Protection	< 6.3 V	< 25 V	< 25 V	< 25 V	< 25 V
Start-up Time	< 2 Sec	< 1 Sec	< 2 Sec	< 2 Sec	< 2 Sec
Safety Standard	UL508, CE, meets EN60950-1	UL508, CE, meets EN60950-1	UL508, CE, meets EN60950-1	UL508, CE, meets EN60950-1	UL508, CE, meets EN60950-1
Connectors	Screw terminal, Input AWG 14-22, Output AWG 12-14	Screw terminal, Input AWG 14-22, Output AWG 12-14	Screw terminal, Input AWG 14-22, Output AWG 12-14	Screw terminal, Input AWG 14-22, Output AWG 12-14	Screw terminal, Input AWG 14-22, Output AWG 12-14
Weight	0.35 lbs (0.16 Kg)	0.29 lbs (0.13 Kg)	0.35 lbs (0.16 Kg)	0.51 lbs (0.23 Kg)	0.35 lbs (0.16 Kg)
Dimensions H x W x D in. (mm)	3.54 x 0.90 x 4.02 (90 x 22.8 x 102)	3.54 x 0.90 x 4.02 (90 x 22.8 x 102)	3.54 x 0.90 x 4.02 (90 x 22.8 x 102)	3.54 x 1.26 x 4.02 (90 x 32 x 102)	3.54 x 0.90 x 4.02 (90 x 22.8 x 102)
	DMP1-24006	DMP1-240125	DMP1-2402	DMP1-4801	
Total Power	<b>DMP1-24006</b> 15 W	DMP1-240125 30 W	DMP1-2402 50 W	DMP1-4801 50 W	
Total Power Input Current					
	15 W	30 W	50 W	50 W	
Input Current	15 W < 0.42 Amp	30 W < 0.80 Amp	50 W < 1.65 Amp	50 W < 1.65 Amp	
Input Current Efficiency - Typ. (1)	15 W < 0.42 Amp 81%	30 W < 0.80 Amp 85%	50 W < 1.65 Amp 85%	50 W < 1.65 Amp 85%	
Input Current Efficiency - Typ. (1) Output Voltage	15 W < 0.42 Amp 81% 24 VDC	30 W < 0.80 Amp 85% 24 VDC	50 W < 1.65 Amp 85% 24 VDC	50 W < 1.65 Amp 85% 48 VDC	
Input Current Efficiency - Typ. (1) Output Voltage Output Voltage Adj.	15 W < 0.42 Amp 81% 24 VDC 22-28 VDC	30 W < 0.80 Amp 85% 24 VDC 22-28 VDC 1.36 - 1.07 Amp	50 W < 1.65 Amp 85% 24 VDC 22-28 VDC	50 W < 1.65 Amp 85% 48 VDC 46-52 VDC	
Input Current Efficiency - Typ. (1) Output Voltage Output Voltage Adj. Output Current	15 W < 0.42 Amp 81% 24 VDC 22-28 VDC 0.68 - 0.54 Amp	30 W < 0.80 Amp 85% 24 VDC 22-28 VDC 1.36 - 1.07 Amp	50 W < 1.65 Amp 85% 24 VDC 22-28 VDC 2.27 - 1.79 Amp	50 W < 1.65 Amp 85% 48 VDC 46-52 VDC 1.09 - 0.96 Amp	
Input Current Efficiency - Typ. (1) Output Voltage Output Voltage Adj. Output Current Ripple & Noise Overvoltage	15 W < 0.42 Amp 81% 24 VDC 22-28 VDC 0.68 - 0.54 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery	30 W < 0.80 Amp 85% 24 VDC 22-28 VDC 1.36 - 1.07 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery	50 W < 1.65 Amp 85% 24 VDC 22-28 VDC 2.27 - 1.79 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery	50 W < 1.65 Amp 85% 48 VDC 46-52 VDC 1.09 - 0.96 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery	
Input Current Efficiency - Typ. (1) Output Voltage Output Voltage Adj. Output Current Ripple & Noise Overvoltage Protection	15 W < 0.42 Amp 81% 24 VDC 22-28 VDC 0.68 - 0.54 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (120% - 135%) Continuous Protection & Auto Recovery	30 W < 0.80 Amp 85% 24 VDC 22-28 VDC 1.36 - 1.07 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery	50 W < 1.65 Amp 85% 24 VDC 22-28 VDC 2.27 - 1.79 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery	50 W < 1.65 Amp 85% 48 VDC 46-52 VDC 1.09 - 0.96 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery	
Input Current Efficiency - Typ. (1) Output Voltage Output Voltage Adj. Output Current Ripple & Noise Overvoltage Protection Short Circuit Reverse Volt	15 W < 0.42 Amp 81% 24 VDC 22-28 VDC 0.68 - 0.54 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (120% - 135%) Continuous Protection & Auto Recovery (110% - 150%)	30 W     < 0.80 Amp     85%     24 VDC     22-28 VDC     1.36 - 1.07 Amp     < 1%pk-pk 20MHz full load     Continuous Protection & Auto Recovery (105% - 150%)     Continuous Protection & Auto Recovery (105% - 150%)	50 W < 1.65 Amp 85% 24 VDC 22-28 VDC 2.27 - 1.79 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%)	50 W < 1.65 Amp 85% 48 VDC 46-52 VDC 1.09 - 0.96 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery (105% - 150%)	
Input Current Efficiency - Typ. (1) Output Voltage Output Voltage Adj. Output Current Ripple & Noise Overvoltage Protection Short Circuit	15 W < 0.42 Amp 81% 24 VDC 22-28 VDC 0.68 - 0.54 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (120% - 135%) Continuous Protection & Auto Recovery (110% - 150%) < 35 V	30 W < 0.80 Amp 85% 24 VDC 22-28 VDC 1.36 - 1.07 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery (105% - 150%) < 35 V	50 W < 1.65 Amp 85% 24 VDC 22-28 VDC 2.27 - 1.79 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery (105% - 150%) < 35 V	50 W < 1.65 Amp 85% 48 VDC 46-52 VDC 1.09 - 0.96 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery (105% - 150%) < 63 V	
Input Current Efficiency - Typ. (1) Output Voltage Output Voltage Adj. Output Current Ripple & Noise Overvoltage Protection Short Circuit Reverse Volt Protection Start-up Time	15 W < 0.42 Amp 81% 24 VDC 22-28 VDC 0.68 - 0.54 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (120% - 135%) Continuous Protection & Auto Recovery (110% - 150%) < 35 V < 1 Sec UL508, CE,	30 W     < 0.80 Amp     85%     24 VDC     22-28 VDC     1.36 - 1.07 Amp     < 1%pk-pk 20MHz full load     Continuous Protection & Auto Recovery (105% - 150%)     Continuous Protection & Auto Recovery (105% - 150%)     < 35 V     < 2 Sec     UL508, CE,	50 W < 1.65 Amp 85% 24 VDC 22-28 VDC 2.27 - 1.79 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery (105% - 150%) < 35 V < 2 Sec UL508, CE,	50 W < 1.65 Amp 85% 48 VDC 46-52 VDC 1.09 - 0.96 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery (105% - 150%) < 63 V < 2 Sec UL508, CE,	
Input Current Efficiency - Typ. (1) Output Voltage Output Voltage Adj. Output Current Ripple & Noise Overvoltage Protection Short Circuit Reverse Volt Protection Start-up Time Safety Standard	15 W < 0.42 Amp 81% 24 VDC 22-28 VDC 0.68 - 0.54 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (120% - 135%) Continuous Protection & Auto Recovery (110% - 150%) < 35 V < 1 Sec UL508, CE, meets EN60950-1 Screw terminal, Input AWG 14-22,	30 W     < 0.80 Amp     85%     24 VDC     22-28 VDC     1.36 - 1.07 Amp     < 1%pk-pk 20MHz full load     Continuous Protection & Auto Recovery (105% - 150%)     Continuous Protection & Auto Recovery (105% - 150%)     Continuous Protection & Auto Recovery     (105% - 150%)     < 2 Sec     UL508, CE, meets EN60950-1     Screw terminal, input AWG 14-22,	50 W     < 1.65 Amp     85%     24 VDC     22-28 VDC     2.27 - 1.79 Amp     < 1%pk-pk 20MHz full load     Continuous Protection & Auto Recovery (105% - 150%)     Continuous Protection & Auto Recovery (105% - 150%)     < 35 V     < 2 Sec     UL508, CE, meets EN60950-1     Screw terminal, input AWG 14-22,	50 W < 1.65 Amp 85% 48 VDC 46-52 VDC 1.09 - 0.96 Amp < 1%pk-pk 20MHz full load Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery (105% - 150%) Continuous Protection & Auto Recovery (105% - 150%) < 63 V < 2 Sec UL508, CE, meets EN60950-1 Screw terminal, Input AWG 14-22,	

1. Depends upon specific model selection, output voltage and/or upon 120 or 240 VAC operation.

Mounting instructions available on  ${\bf www.acmedinps.com}$ 

#### ACME

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