Acme Electric

DM Series

Single Phase

DIN Rail DC Switching Power Supplies

MAXIMUM POWER PERFORMANCE

The DM Series single phase DC power supplies provide optimal switching technology in a compact package. Through industrial design and rugged construction quality, the single phase units provide maximum uptime in a diverse range of manufacturing environments. These highly efficient DIN Rail switching power supplies ensure reliable startup of heavy loads.

The single phase models make efficient use of control cabinet real estate, while their rugged metal 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.

Single phase units are available in a variety of wattages (54-960) and voltages (12-48).



GREEN POWER DESIGN

Features/Benefits:

- Narrow width conserves valuable space on the DIN Rail
- High peak power eliminates the need to oversize your power supply
- Universal input 90-254 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
- Easy, snap-on mounting on DIN Rail
- Fully enclosed touch-safe enclosure and terminals
- Certified to UL, TUV and CE safety standards for use worldwide
- UL508 listed for use at full-rated power
- Most models capable of parallel connection to provide redundancy for critical load applications
- Industrial design
  - -10ºC to +60ºC operation without derating
  - Overload and short circuit protection
  - Rugged metal case
  - Power boosting circuitry
- Meets SEMI F47-200
- RoHS compliant
- 5 year warranty

Full Line Specifications:
Nominal voltage 100-240 VAC
Input frequency 47-63 Hz
Storage temp -40°C to +85°C
Operating humidity 5% to 90% RH, non-condensing
Start-up time <1 second
Line regulation +/- 0.5%
Load regulation drift +/- 1%
Short circuit automatic recovery
Meets EN61000-3-2 harmonic distortion
Meets vibration & shock standards IEC68-2-6, IEC68-2-27
All models have internal fuse protection

Applications:

- Industrial/Machine control
- Process control
- Conveying equipment
- Material handling
- Packaging
- Robotics
- Welding

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.

Single Phase

	DM 1-12045	DM 1-24025	DM 1-24038	DM 1-2420	DM 1-2440	DM 1-3613	DM 1-480125	DM 1-4810
Total Power	54 W	60 W	92 W (LPS)	480 W	960 W	480 W	60 W	480 W
Input Voltage Range	90-254 VAC	90-254 VAC	90-254 VAC	90-254 VAC	90-264 VAC	90-254 VAC	90-254 VAC	90-254 VAC
Input Current	1.3 - 0.7 Amp	1.3 - 0.7 Amp	2.1 - 1.0 Amp	2.6 - 6.37 Amp	4.5 - 11.0 Amp	2.6 - 6.37 Amp	1.3 - 0.7 Amp	2.6 - 6.37 Amp
DC Input Voltage	—	—	—	—	120-350 VDC	—	—	—
DC Input Current	—	—	—	—	4.5 - 11.0 Amp	—	—	—
Inrush Current	< 25 Amp	< 25 Amp	< 40 Amp	< 30 Amp	< 23 Amp	< 30 Amp	< 25 Amp	< 30 Amp
Power Factor Correction	Conforms to EN61000-3-2	Conforms to EN61000-3-2	> 0.90% Conforms to EN61000-3-2	> 0.95% Conforms to EN61000-3-2	>0.97% Conforms to EN61000-3-2	> 0.95% Conforms to EN61000-3-2	Conforms to EN61000-3-2	> 0.95% Conforms to EN61000-3-2
Efficiency - Typ. (1)	86%	87%	87%	90%	91.5%	90%	89%	90%
Output Voltage	12 VDC	24 VDC	24 VDC	24 VDC	24 VDC	36 VDC	48 VDC	48 VDC
Output Voltage Adj.	10-16 VDC	22-28 VDC	22.5-25.5 VDC	22-28 VDC	22.5-28.5 VDC	34-40 VDC	46-52 VDC	46-52 VDC
Output Current	4.5 - 3.4 Amp	2.5 - 2.1 Amp	3.8 Amp	20.0 - 17.1 Amp	40.0 Amp	13.3 - 12.0 Amp	1.25 - 1.15 Amp	10.0 - 9.2 Amp
Output Peak Power	120% of rated power	120% of rated power	4.2 A max.@ 23.8 V	120% of rated power	112.5% of rated power	120% of rated power	120% of rated power	120% of rated power
Hold-up Time	≥ 20 mSec	≥ 20 mSec	≥ 30 mSec	≥ 20 mSec	≥ 20 mSec	≥ 20 mSec	≥ 20 mSec	≥ 20 mSec
Over/Undershoot	< 500mV from 50%-100% load change @ 0.2A/µSec.	< 500mV from 50%-100% load change @ 0.2A/µSec.	< 700mV from 50%-100% load change @ 0.2A/µSec.	< 500mV from 50%-100% load change @ 0.2A/µSec.	< 500mV from 50%-100% load change @ 0.2A/µSec.	< 500mV from 50%-100% load change @ 0.2A/µSec.	< 500mV from 50%-100% load change @ 0.2A/µSec.	< 500mV from 50%-100% load change @ 0.2A/µSec.
Ripple & Noise	< 100 mV pk-pk	< 100 mV pk-pk	< 100 mV pk-pk	< 100 mV pk-pk	<200 mV (20MHz)	< 100 mV pk-pk	< 100 mV pk-pk	< 100 mV pk-pk
Overvoltage Protection	Continuous Protection & Auto Recovery (110% - 130%)	Continuous Protection & Auto Recovery (110% - 130%)	Continuous Protection & Auto Recovery (105% - 120%)	Continuous Protection & Auto Recovery (110% - 130%)	Continuous Protection & Auto Recovery (110% - 130%)	Continuous Protection & Auto Recovery (110% - 130%)	Continuous Protection & Auto Recovery (110% - 130%)	Continuous Protection & Auto Recovery (110% - 130%)
Overcurrent Protection	Continuous Protection & Auto Recovery (120% - 150%)	Continuous Protection & Auto Recovery (120% - 150%)	Fold forward Auto Recovery (100% - 110%)	Continuous Protection & Auto Recovery (125% - 135%)	Continuous Protection & Auto Recovery (110% - 117%)	Continuous Protection & Auto Recovery (125% - 135%)	Continuous Protection & Auto Recovery (120% - 150%)	Continuous Protection & Auto Recovery (125% - 135%)
Reverse Volt Protection	< 16 V	< 35 V	< 35 V	< 35 V	< 35 V	< 63 V	< 63 V	< 63 V
EMI Standards	EN55022, FCC15B, EN55024	EN55022, FCC15B, EN55024	EN55022, FCC15B	EN55022, FCC15B, EN55024	EN55022, FCC15B, EN55024	EN55022, FCC15B, EN55024	EN55022, FCC15B, EN55024	EN55022, FCC15B, EN55024
Safety Standard	UL508, CE, EN60950-1, UL60950-1	UL508, CE, EN60950-1, UL60950-0	UL508, CE, EN60950-1, UL60950-1	UL508, CE, EN60950-1, UL60950-1	UL508, CE, EN60950-1, UL60950-1	UL508, CE, EN60950-1, UL60950-1	UL508, CE, EN60950-1, UL60950-1	UL508, CE, EN60950-1, UL60950-1
Parallel Operation	Use with external diode	Use with external diode	NO	Use with external diode	Use with external diode	Use with external diode	Use with external diode	Use with external diode
Status Indicators	"DC OK" LED	"DC OK" LED	"DC OK" LED and signal	"DC OK" LED and signal	"DC OK" LED and signal	"DC OK" LED and signal	"DC OK" LED	"DC OK" LED and signal
Connectors	Screw terminal, Input AWG 10-16, Output AWG 10-16	Screw terminal, Input AWG 10-16, Output AWG 10-16	Screw terminal, Input AWG 10-16, Output AWG 10-16	Screw terminal, Input AWG 16- 6, Output AWG 6-16	Screw terminal, Input AWG 20- 6, Output AWG 6-20	Screw terminal, Input AWG 16- 6, Output AWG 6-16	Screw terminal, Input AWG 10-16, Output AWG 10-16	Screw terminal, Input AWG 16- 6, Output AWG 6-16
Weight	1.08 lbs (0.49 Kg)	1.08 lbs (0.49 Kg)	1.76 lbs (0.8 Kg)	4.96 lbs (2.25 Kg)	8.82 lbs (4.00 Kg)	4.96 lbs (2.25 Kg)	1.08 lbs (0.49 Kg)	4.96 lbs (2.25 Kg)
Dimensions H x W x D in. (mm)	4.88 x 1.97 x 4.13 (124 x 50 x 105)	4.88 x 1.97 x 4.13 (124 x 50 x 105)	4.88 x 2.56 x 4.13 (124 x 65 x 105)	5.12 x 6.14 x 4.96 (130 x 156 x 126)	5.12 x 9.29 x 4.96 (130 x 236 x 126)	5.12 x 6.14 x 4.96 (130 x 156 x 126)	4.88 x 1.97 x 4.13 (124 x 50 x 105)	5.12 x 6.14 x 4.96 (130 x 156 x 126)

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

Mounting instructions available on **www.acmedinps.com**

ACME ELECTRIC

4815 West 5th Street, Lumberton, NC 28358 • Toll free: 800-334-5214 • Phone: 910-738-1121 • Fax: 910-739-0024 • www.acmedinps.com

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