

DLM Series

3000-4000 WATTS PROGRAMMABLE DC SUPPLY

Features

- High power density
- Preview push button
- Remote voltage sense & remote operation
- Calibration without removing covers
- Regulatory compliance
- Parallel or series operation
- IEEE-488.2 and RS-232 interface options



Specifications

INPUT

Input Voltage	3KW:180-264VAC, single or three phase (<200VAC range limited to 40°C maximum) 4KW:180-264VAC, three phase (<200VAC range limited to 40°C maximum)
Frequency	47-63Hz for both single and three phase input
Power Factor	0.95 typical with three phase input 0.98 typical with single phase input

ENVIRONMENTAL

Operating temperature	0°C to 50° (No De-rating)
Storage temperature	-40°C to 65°C
Cooling	Internal fan with over-temperature protection

OUTPUT

Voltage adjustment	Zero to rated output
Current adjustment	Zero to rated output
Ripple & Noise	See table
Regulation (Line or Load)	Voltage: 0.05% of maximum rated output +2mV Current: 0.1% of maximum rated output
Transient response	Typically recovers in 1ms to within 1% of steady-state output voltage (greater than 50% Vmax) for a 70-100% or 100-70% load change
Stability	+/-0.05% of maximum voltage or current over 8 hours after 15 minute warm-up time at fixed line, load and temperature
Temperature coefficient	0.02%/°C of maximum output voltage 0.03%/°C of maximum output current

OPERATING

Efficiency	5-8V Models: 82% typical 16-80V Models: 87% typical 150-600V Models: 85% typical
Remote sense	The maximum allowed sense line drop is 2V for 5V, 8V and 16V models and 5V for all other models
Remote sense protection	Unit will not be damaged due to misconnection of the remote sense leads
Remote programming	Voltage, current (0-100%) and OVP (5-110%) of full scale can be programmed by selectable 0-5VDC, 0-10VDC, or 0-5kΩ
Remote monitoring	Voltage or current can be monitored with user-selectable ranges, 0-5VDC or 0-10VDC
Over-voltage protection	Crowbar type adjustable from 5-110% rated output using front panel control (local or remote program selectable)
Displays and indicators	Two 3.5 digital LED displays indicate output voltage, output current and over-voltage setting. LED indication for power on, shut-down, remote, overvoltage, over-temperature and front panel lockout, constant voltage and constant current modes. IEEE-488.2 indicators include error, SRQ and address
Software	LabVIEW® driver for M9E/M85 (Contact Powerbox)
Built-in protection	Over-voltage (resets by cycling the Enable/standby switch), over-temperature (will automatically reset)
Operational features	Master/slave parallel operation, up to 2 units can be connected in parallel with active current sharing control to within 10% of each supply. Series operation, up to 3 units of the same model type can be connected in series (consult manual). Negative terminal rated at 150Vmax Above ground
Regulatory compliance	CE Mark on all models

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Selection Tables

MODEL	OUTPUT RATING		REGULATION LINE AND LOAD		METER ACCURACY	
	VOLTAGE (VDC)	CURRENT (ADC)	VOLTAGE (0.05% OF VMAX +2mV)	CURRENT (0.1% OF IMAX)	VOLTAGE (0.5% OF VMAX +1 COUNT)	CURRENT (0.75% OF IMAX +1 COUNT)
DLM 5-350E	0-5	0-350	5mV	350mA	0.04V	4A
DLM 5-450E	0-5	0-450	5mV	450mA	0.04V	5A
DLM 8-350E	0-8	0-350	6mV	350mA	0.05V	4A
DLM 8-450E	0-8	0-450	6mV	450mA	0.05V	5A
DLM 16-185E	0-16	0-185	10mV	185mA	0.09V	3A
DLM 16-250E	0-16	0-250	10mV	250mA	0.09V	3A
DLM 32-95E	0-32	0-95	18mV	95mA	0.3V	0.8A
DLM 32-125E	0-32	0-125	18mV	125mA	0.3V	1A
DLM 40-75E	0-40	0-75	22mV	75mA	0.3V	0.7A
DLM 40-100E	0-40	0-100	22mV	100mA	0.3V	0.9A
DLM 60-50E	0-60	0-50	32mV	50mA	0.4V	0.5A
DLM 60-66E	0-60	0-66	32mV	66mA	0.4V	0.6A
DLM 80-37E	0-80	0-37	42mV	37mA	0.5V	0.4A
DLM 80-50E	0-80	0-50	42mV	50mA	0.5V	0.5A
DLM 150-20E	0-150	0-20	77mV	20mA	0.9V	0.3A
DLM 150-26E	0-150	0-26	77mV	26mA	0.9V	0.3A
DLM 300-10E	0-300	0-10	152mV	10mA	1.6V	0.09A
DLM 300-13E	0-300	0-13	152mV	13mA	1.6V	0.11A
DLM 600-5E	0-600	0-5	302mV	5mA	3.1V	0.05A
DLM 600-6.6E	0-600	0-6.6	302mV	7mA	3.1V	0.06A

MODEL	PREVIEW ACCURACY		OVP ADJUSTMENT RANGE (5% TO 110% OF VMAX)	RIPPLE AND NOISE		STABILITY		TEMP. COEFF.		MAXIMUM TOTAL REMOTE SENSE DROP
	VOLTAGE (0.5% OF VMAX +1 COUNT)	CURRENT (1.0% OF IMAX +1 COUNT)		RIPPLE (RMS)*	NOISE (P-P)	VOLTAGE (0.05% OF VMAX)	CURRENT (0.05% OF IMAX)	VOLTAGE (0.02%/°C OF VMAX)	CURRENT (0.03%/°C OF IMAX)	
DLM 5-350E	0.04V	5A	0.3-5.5V	12mV	100mV	3mV	175mA	1mV	105mA	2V
DLM 5-450E	0.04V	6A	0.3-5.5V	12mV	100mV	3mV	225mA	1mV	135mA	2V
DLM 8-350E	0.05V	5A	0.4-8.8V	12mV	100mV	4mV	175mA	1.6mV	105mA	2V
DLM 8-450E	0.05V	6A	0.4-8.8V	12mV	100mV	4mV	225mA	1.6mV	135mA	2V
DLM 16-185E	0.09V	3A	0.8-17.6V	10mV	100mV	8mV	93mA	3.2mV	55mA	2V
DLM 16-250E	0.09V	4A	0.8-17.6V	10mV	100mV	8mV	125mA	3.2mV	75mA	2V
DLM 32-95E	0.3V	1.1A	1.6-35V	10mV	100mV	16mV	48mA	6mV	30mA	5V
DLM 32-125E	0.3V	1.4A	1.6-35V	10mV	100mV	16mV	63mA	6mV	38mA	5V
DLM 40-75E	0.3V	0.9A	2-44V	10mV	100mV	20mV	38mA	8mV	23mA	5V
DLM 40-100E	0.3V	1.1A	2-44V	10mV	100mV	20mV	50mA	8mV	30mA	5V
DLM 60-50E	0.4V	0.6A	3-66V	15mV	100mV	30mV	25mA	12mV	15mA	5V
DLM 60-66E	0.4V	0.8A	3-66V	15mV	100mV	30mV	33mA	12mV	19.8mA	5V
DLM 80-37E	0.5V	0.5A	4-88V	15mV	120mV	40mV	19mA	16mV	12mA	5V
DLM 80-50E	0.5V	0.6A	4-88V	15mV	120mV	40mV	25mA	16mV	15mA	5V
DLM 150-20E	0.9V	0.3A	7.5-165V	30mV	200mV	75mV	10mA	30mV	6mA	5V
DLM 150-26E	0.9V	0.4A	7.5-165V	30mV	200mV	75mV	13mA	30mV	7.8mA	5V
DLM 300-10E	1.6V	0.11A	15-330V	60mV	300mV	150mV	5mA	60mV	3mA	5V
DLM 300-13E	1.6V	0.14A	15-330V	60mV	300mV	150mV	6.5mA	60mV	3.9mA	5V
DLM 600-5E	3.1V	0.06A	30-660V	100mV	500mV	300mV	2.5mA	120mV	1.5mA	5V
DLM 600-6.6E	3.1V	0.08A	30-660V	100mV	500mV	300mV	3.3mA	120mV	2mA	5V

*RMS ripple typical from 20Hz to 300kHz

Dimensions: 2RU or 88mm(H)x482mm(W)x508mm(D) ; Weight: 18.2kg

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OPTIONS & ACCESSORIES

INPUT VOLTAGE OPTIONS

M1	400 VAC input (4 kW only)
M2	480 VAC input (4 kW only)

REMOTE INTERFACE OPTIONS

M9E	IEEE-488.2 and RS 232 Interfaces
M13	Locking shafts (front panel potentiometers)
M51A	Optically Isolated analog programming
M85	Multichannel Slave Interface

PARALLEL CABLE

5361969-01	Paralleling Cable, one cable per slave unit
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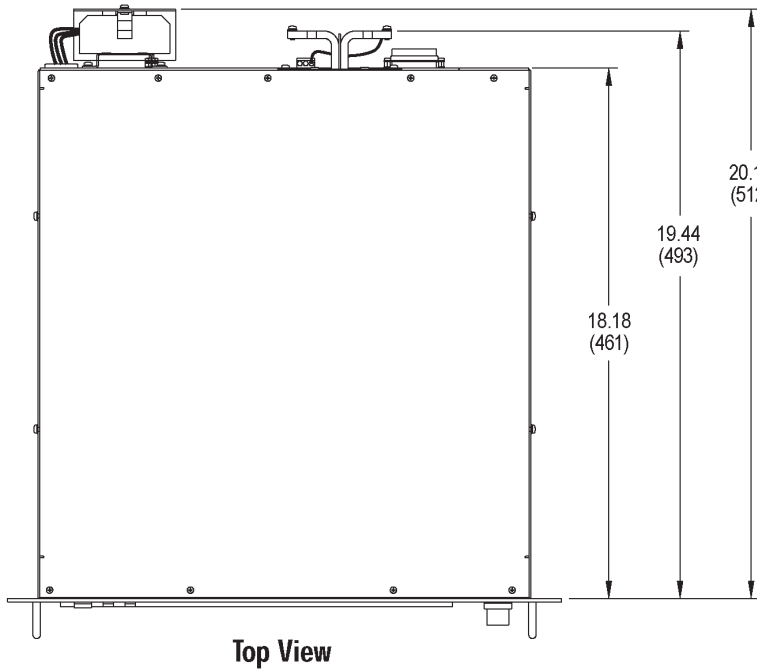
RACK SLIDE KIT

105-330-26	Rack slide kit
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J3 PROGRAM AND SENSE

1	Remote Output Enable	14	Remote Shutdown Input (+), Pos or Neg true logic selection with S1
2	Remote Shutdown Return(-)	15	+5 VDC Auxillary Output
3	Remote OVP Programing Input	16	1 mA Current Source for OVP Programming
4	Remote Programming Indicator	17	OVP Status Indicator
5	Operating Mode Indicator	18	Overtemperature Shutdown Indicator
6	Status Indicator Return (-)	19	DC Voltage Monitor Output
7	Current Monitor Output	20	Remote/Local Voltage Control Select
8	N/C	21	1 mA Current Source for Voltage Programming
9	Voltage Programing Input	22	1 mA Current Source for Current Programming
10	Current Programing Unit	23	Remote/Local Current Control Select
11	N/C	24	N/C
12	Programming/Monitor Return	25	N/C
13	N/C		

Technical Illustration



Input Connections

Compression lug terminals
#6 AWG max wire size

Chassis Ground Connection

#10-32 threaded stud

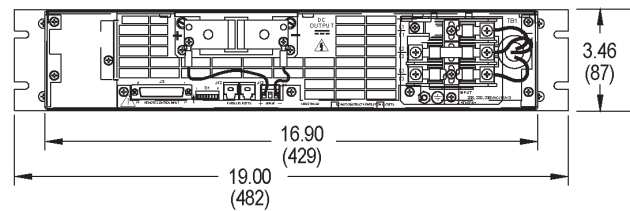
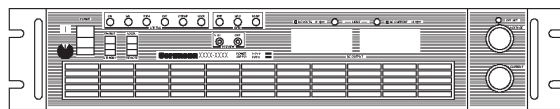
Output Connections

5V to 80V

Copper bus bars, nickel plated
Holes in bus bar 0.312 (7.92)

150V to 600V

Terminal block with #8-32 screws



Dimensions in inches (millimeters)