

400 / 432 W Programmable DC Power Supply



Technical Specifications

	DCX20M40	DCX60M14	DCX160M5	DCX300M2.6
Output Voltage	20 V	60 V	160 V	300 V
	Multi Ranging (Parabolic)			
Output Current	40 A	14 A	5 A	2.67 A
Rated Power	400 Watts	432 Watts		
Efficiency at 230 V, full load	82 %	85 %	86 %	87 %
Constant Voltage Mode				
Load regulation 0 ~ 100% (mV)	3 mV	5 mV	10 mV	15 mV
Line Regulation (mV)	2 mV	3 mV	5 mV	8 mV
Ripple (mVrms) 5Hz~1MHz	< 5 mVrms	5 mVrms	20 mVrms	30 mVrms
Ripple (mVpp) 20 MHz	40 mVpp	50 mVpp	80 mVpp	130 mVpp
Constant Current Mode				
Load regulation 0 ~ 100 % (mA)	10 mA	7 mA	5 mA	5 mA
Line Regulation (mA)	8 mA	5 mA	3 mA	3 mA
Ripple (mArms) BW=5 Hz ~ 1MHz	<50 mArms	20 mArms	10 mArms	8 mArms

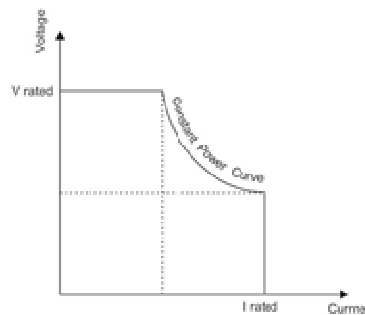
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Remote sense drop	1 V typically	2 V typically	2 V typically	2 V typically
Programming Speed				
Rise time (10% to 90%) into resistive load				
Time 100% load	10V : 6.5 ms 20V : 15 ms	30V : 20ms 60V : 55ms	80V : 50 ms 160V : 170 ms	150V : 100 ms 300V : 240 ms
Fall time (90% to 10%) into resistive load				
Time 100% load	10V : 6.5ms 20V : 25 ms	30V : 6ms 60V : 70 ms	80V : 30ms 160V : 200ms	150V : 60ms 300V : 300ms
Time No load	10V : 150ms 20V : 250ms	30V : 400ms 60V : 700mS	80V : 1.2s 160V : 2.5s	150V : 3s 300V : 5s
Recovery Time				
Recovery within	50 mV	75mV	200mV	350mV
time @ 50 – 100 % load step	100µS	100µS	100µS	100µS
Temperature Coefficients	CV : 50 ppm/°C CC : 100 ppm/°C after 30 min of warm up time			
Output Stability & Long Term Drift	CV : 100 ppm CC : 300 ppm after warm up of 30 min and during 8 hrs			
Analog Programing (Rear panel 15 pin D connector)				
Programing:	Voltage : 0 ~ 5 V, Accuracy : 1 % of Vout rated, Input impedance : 1 MΩ Current : 0 ~ 5 V, Accuracy : ± 1 % of lout rated Input impedance : 1 MΩ			
Monitoring:	Voltage : 0 ~ 5 V, Accuracy : ±1 % of Vout rated Output impedance : <2 Ω / 0.4 mA max Current : 0 ~ 5 V, Accuracy : ±1 % of lout rated Output impedance : 2 Ω / 0.4 mA max			
V reference	5.1 V ± 10 mV			
Resistor Programming	Voltage : 0~100%, 0~5 kOhm full scale , Accuracy and linearity: ±1 % of Vout rated Current : 0~100%, 0~5 kOhm full scale , Accuracy and linearity: ± 1.5 % of lout rated			
Status outputs:	Power Supply : OK = Logic 1 (High), AC Fail = NO / NC Contact DC Fail : NO / NC contacts for DC fail by ± 5% of set value, CV / CC Indication : Logic 1 Remote / Interlock : Dry Contact, once Enabled, DC ON - for short contacts			
Remote shutdown:	with +5V or relay contacts.			
Remote Programming				
RS232 / USB / RS485	ADC : 16 Bits, DAC : 16 Bits			
Voltage Programing	Resolution : Better than 15 bit Accuracy : 0.05% Vout + 0.05% Vrated			
Current Programing	Resolution : Better than 15 bit Accuracy : 0.1% lout + 0.1% Irated			

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Monitor Voltage	Resolution : Better than 15 bit Accuracy : 0.1% Vout + 0.1% Vrated			
Monitor Current	Resolution : Better than 15 bit Accuracy : 0.25% Iout + 0.2% Irated			
OVL & UVL Programming	Resolution : Better than 15 bit Accuracy : 0.05% Vout + 0.05% Vrated			
Front Panel controls:	Mains ON/ OFF, Voltage and Current setting with Encoders, Switch Settings: Set, Over Voltage, Under Voltage, Foldback, Remote & Output			
Indicators:	CV, CC, Over Voltage, Under Voltage, Foldback, Remote & Output ON			
Display	4 digit, voltage and current separately			
Accuracy	± (0.5 % + 2 d)			
Resolution	Better than 15 bit			
Voltage	0 ~ 20.00 V	0 ~ 60.00 V	0 ~ 160.0 V	0 ~ 300.0 V
Current	0 ~ 40.00 A	0 ~ 14.00 A	0 ~ 5.00 A	0 ~ 2.67 A
Protections	Over voltage: Adjustable from 0.5 V ~ 105 % of Vmax, Output shut-down, reset by Output switch.			
	Over current: Max current limited by CC Setting / Output Disable via Foldback			
	Over temperature: Output gets OFF, after preset internal safe temperature			
	Foldback Protection: Selectable from CV to CC mode or CC to CV Mode transition with Programmable Delay for output switched OFF			
Output Terminals	Bus bar and two wires for remote sense / Optional Front Terminals			
Parallel operation	Upto 6 units in Master/Slave Mode			
Serial operation	2 units in series of same model Max 600V to chassis			
Mains Input	Universal AC input, Single phase, 90 ~ 270V, 50 / 60 Hz (47 ~ 63Hz) Input connector: IEC320/C14, EN 60320/14 Standby Power: 13 Watts @ 230V (V & I zero) Internal Fuse L: 6 A Fast, 5 X 20 mm ceramic fuse.			
Power Factor	0.97 @ full load at 230V AC			
Turn On Delay	600 ms after mains switched ON			
Inrush current	<15A			
Hold up Time	20ms			
Environment Conditions				
Operating Temperature	0 ~ +50 °C with 100% load; derated to 75% at 60 °C			
Storage	-40 ~ + 85 °C			
Humidity	max. 95% non condensing at 40 °C max. 75% non condensing at 50 °C			

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Safety	Insulation: Input to Output: 1500Vdc for 1 min Input to case: 1500 Vdc, Output to case: 600 V Insulation resistance: 100 MΩ at 25°C, 70% RH, 500 Vdc			
Dimension	W x D x H: 70 x 421 x 85 mm (2U, 1/6 th 19" Rack size) W x D x H: 70 x 421 x 120 mm (For front output option) excluding connectors, terminals, switches, front and back panel controls, handles etc.			
Weight	3.2 kg (For front output option ≤ 3.5kg)			
Cooling	Forced, temperature controlled variable Fan speed			
Standard Interface	Analog Programing, USB, RS232, RS485			
Optional Interface	LAN			
Accessories Supplied	Mains cable, PC Interface Cable, Manual			

Subject to change without notice

Multi Range Output



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