800 W Programmable DC Power Supply

Technical Specifications

	DCX20M80	DCX60M26	DCX160M10	DCX600M2.67	DCX1000M1.6
Output Voltage	20V	60V	160V	600V	1000V
	Multi Ranging (Parabolic)				
Output Current	80 A	26.5 A	10 A	2.67 A	1.6A
Rated Power	800 Watts				
Efficiency at 230 V, full load	82%	87%	87%	88%	86%
Constant Voltage Mode					
Load regulation 0 ~ 100%	1 mV	2 mV	5 mV	20 mV	40 mV
Line Regulation	1 mV	1 mV	2 mV	2 mV	10 mV
Ripple: BW=300 kHz	5 mVrms	5 mVrms	8 mVrms	20 mVrms	90 mVrms
Ripple: BW= 5Hz~1MHz	15 mVrms	5 mVrms	8 mVrms	30 mVrms	100 mVrms
Ripple: 20 MHz	20 mVpp	20 mVpp	30 mVpp	50 mVpp	200 mVpp
Constant Current Mode					
Load regulation 0 ~ 100 %	25 mA	7 mA	3 mA	10 mA	10 mA
Line Regulation	2 mA	3.5 mA	2 mA	5 mA	2 mA
Ripple: BW=300 kHz	20 mArms	8 mArms	3 mArms	3 mArms	3 mArms
Ripple: BW=5 Hz ~ 1MHz	25 mArms	10 mArms	5 mArms	5 mArms	5 mArms
Ripple: 20 MHz	100 mApp	25 mApp	15 mApp	20 mApp	20 mApp
Remote sense drop	1 V typically	2 V typically		5 V typically	
Programming Speed					
Rise time (10% to 90%) into resistive load					
Time 100% load	10V : 6.5ms 20V : 12ms	30V : 6ms 60V : 25ms	80V : 30ms 160V : 80ms	300V : 70ms 600V : 225ms	500V : 45ms 1000V:180ms

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Time 10% load	10V : 2.5ms 20V : 5ms	30V : 2.5ms 60V : 10ms	80V : 20ms 160V: 50ms	300V : 20ms 600V : 100ms	500V : 40ms 1000V:160ms
Fall time (90% to 10%) into resistive load					
Time 100% load	10V : 6.5ms 20V : 12ms	30V : 8ms 60V : 25ms	80V : 30ms 160V:100ms	300V : 60ms 600V : 220ms	500V :50ms 1000V:190ms
Time 10% load	10V : 30ms 20V : 120ms	30V : 60ms 60V: 250ms	80V : 250ms 160V:900ms	300V : 600ms 600V : 2.5s	500V : 500ms 1000V : 1.8s
Time No load	10V : 0.8s 20V : 1.2s	30V : 1s 60V : 2.5s	80V : 3s 160V : 6s	300V : 6s 600V : 12s	500V : 10s 1000V :15s
Recovery Time					
Recovery within	80mV	80mV	100mV	0.5V	1V
time @ 50 – 100 % load step	100µs	100µs	100µs	100µs	100µs
max deviation @ 230 V mains	10V : 300mV 20V:160mV	30V : 300 mV 60V : 150 mV	80V : 1V 160V : 500mV	300V : 1V 600V : 1.5V	500V : 1.5V 1000V : 3V
Output Impedance CV, 0-1kHz CV, 1-100kHz	 < 1 mΩ < 30 mΩ	 < 10 mΩ < 30 mΩ	 < 10 mΩ < 30 mΩ	 < 200 mΩ < 2 Ω	 < 400 mΩ < 3 Ω
Temperature Coefficients	CV: 80 ppm/℃, CC: 80 ppm/℃ after 30 min of warm up time and during 8 hrs				
Output Stability	CV:100 ppm, CC:100 ppm after 30 min of warm up time and during 8 hrs				
Analog Programing (Standard) (Rear panel 25 pin D connector)					
Programing	Voltage : 0 ~ 5 V / 0 ~ 10 V (user selectable), Accuracy : ± 0.5 % of Vout rated, Input impedance : 1 MΩ Current : 0 ~ 5 V / 0 ~ 10 V (user selectable), Accuracy : ± 1 % of Iout rated, Input impedance : 1 MΩ				
Monitoring	Voltage : 0 ~ 5 V / 0 ~ 10 V (user selectable), Accuracy : ±1 % of Vout rated, Output impedance : <150 Ω / 4 mA max Current : 0 ~ 5 V / 0 ~ 10 V (user selectable), Accuracy : ±1 % of Iout rated, Output impedance : <150 Ω / 4 mA max				
V reference	5.1 V ± 15 mV				
Resistor Programming	Voltage : 0~100%, 0~5/10 kΩ full scale (user selectable), Accuracy and linearity: ±1 % of Vout rated Current : 0~100%, 0~5/10 kΩ full scale (user selectable), Accuracy and linearity: ± 1.5 % of Iout rated				
Isolated Analog Programing (Optional) (Rear panel 25 pin D connector)					
Voltage Programming	V : 0 ~ 10 V, Accuracy: ± 1 % of Vout rated, Input impedance: 1 MΩ I: 0 ~ 10 V, Accuracy: ± 1 % of Iout rated, Input impedance: 1 MΩ				
Monitoring	V : 0 ~ 10 V, Accuracy : ±1 % of Vout rated, Output impedance: 150 Ω / 4 mA max I : 0 ~ 10 V, Accuracy: ±1 % of Iout rated Output impedance: 150 Ω / 4 mA max				
V reference	5.1 V ± 15 mV				
Status outputs	Power Supply : OK = Logic 1 (High), AC Fail = Logic 0 (Low), DC Fail : Logic 0 (low) for DC fail by ± 5% of set value, CV / CC Status : CV = Logic 0 / CC = Logic 1 Interlock : Short = Power Supply Enabled, Open = Power Supply Disabled				

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		DC ON Status : ON = Logic 1, OFF= Logic 0, OVP Status : Fault = Logic 0, OK = Logic 1, OTP Status : Fault = Logic 0, OK = Logic 1, Remote Status : Remote = Logic 1, Local = Logic 0				
Remote shutdown		+5 V				
Remote Programing						
RS232 / USB / RS485 / LAN		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% Iout + 0.1% Irated				
Monitor Voltage		Resolution : Better than 15 bit Accuracy : 0.1% Vout + 0.1% Vrated				
Monitor Current OVL & UVL Programing		Resolution : Better than 15 bit Accuracy : 0.25% Iout + 0.2% Irated 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		LEDs for : CV, CC, Over Voltage, Under Voltage, Foldback, Remote & Output ON				
Display						
Resolution	Voltage	4 Digit	4 Digit	4 Digit	4 Digit	4 Digit
	Current	4 Digit	4 Digit	4 Digit	3 Digit	3 Digit
Accuracy		Voltage : ± (0.25% + 2D), Current : ± (0.5% + 2D)				
Display scale	Voltage	0 ~ 20.00 V	0 ~ 60.00 V	0 ~ 160.0 V	0 ~ 600.0 V	0 ~ 1000 V
	Current	0 ~ 80.00 A	0 ~ 26.50 A	0 ~ 10.00 A	0 ~ 2.67 A	0 ~ 1.60 A
Protections		Over voltage, Over current, Short Circuit, Fold Back, Over temperature				
Output Terminals		Bus bar with M5 bolts				
Parallel operation		Up to 4 units in Master/Slave mode for parallel operation with equal current sharing.				
Serial operation		max 600 V to chassis			No series operation	
Mains Input		Universal AC input, Single phase, 90 ~ 270V, 50 / 60Hz (47 ~ 63Hz) Input connector: IEC320/C14 , EN 60320/14 Standby Power: 30 Watts @ 230V (Vout max, No load) Internal Fuse L: 20 A Fast, 6.3 x 32 mm ceramic fuse.				
Power Factor		0.99 @ full load / 0.98 @ 50% load				
Turn On Delay		600 ms after mains switched ON				
Inrush current		< 25 A				
Hold up Time		20 ms				
Environment Conditions						
Operating Temperature		0 ~ +50℃; with 100% load; derate 75% at 60℃				

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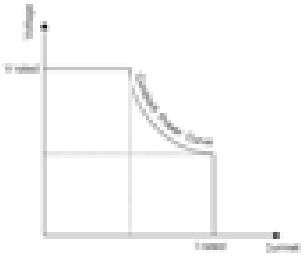
Storage	-40 ~ + 85℃				
Humidity	max. 95% non condensing at 40℃ max. 75% non condensing at 50℃				
Insulation	Insulation: Input to Output: 3750 Vdc for 1 min Input to case: 2500 Vdc, Output to case: 600 V Insulation resistance: 100 MΩ at 25℃, 70% RH, 500 Vdc				
Safety Standard	EN 60950-1 / IEC61010				
EMC Standards	ESD: EN 61000-4-2: 2009, Fast Transients: EN 61000-4-4: 2012 Conducted Immunity: EN 61000-4-6, Radiated Immunity: EN 61000-4-3 Voltage dips & Interruption: EN 61000-4-11 Harmonics: EN 61000-3-2, Flicker: EN 61000-3-3				
Dimension	W x D x H: 443 x 445 x 43.5 mm (1U, 19" Rack size) excluding connectors, terminals, switches, front and back panel controls, handles etc				
Weight	8.9 kg				
Cooling	Forced, variable fan speed				
Standard Interface	Analog Programing, USB, RS232, RS485				
Optional Interface	LAN				
Standard Accessories	Mains Cord, USB Cable, RS232/485 Cable, CD				
Optional Accessories	• Bus bars for series operation: (BBS) • Bus bars for parallel operation: (BBP) • Isolated Analog Built-in: (IAB) • Isolated Analog External: (IAE) • 19" Rack mount kit: (RAK) • Rack & Integration: (RAI) • Analog connector: (CON)		• Polarity Reversal Switch with LAN: (PRD) • Output Cable: (OC) • Input Cable (>2mtr): (IC) • Reverse Battery Protection: (BRP) • External Blocking Diode: (BD) • Datalogging Software: (DLS)		

Subject to change without notice

Multi Range Output



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