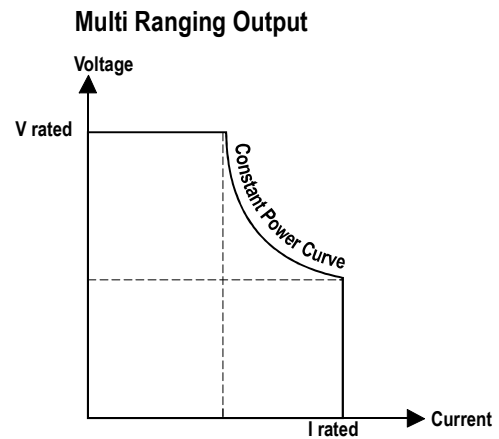


220W Programmable DC Power Supply



Technical Specifications

Model	DCAe10M40	DCAe20M20	DCAe30M14	DCAe60M7	DCAe80M5	DCAe160M2.5
Output Voltage (*1)	10V	20V	30V	60V	80V	160V
Output Profile	Multi Ranging (Parabolic)					
Output Current (*2)	40A	20A	14A	7A	5A	2.5A
Rated Power	220W					
Efficiency 230Vac @ full load	78%	80%	81%		82%	
Constant Voltage Mode						
Load Regulation (*3)	0.01% + 2mV					
Line Regulation (*4)	0.01% + 2mV					
Ripple RMS BW = 300kHz (*5)	5mV	8mV	10mV		20mV	
Ripple & Noise P-P BW = 20MHz (*6)	40mV		50mV		80mV	
Remote Sense Compensation/wire (*7)	1V	2V				
Constant Current Mode						
Load Regulation (*8)	0.01% + 5mA					
Line Regulation (*4)	0.01% + 2mA					
Ripple RMS BW = 20MHz (*9)	50mA	40mA	25mA	20mA	15mA	10mA
Ripple & Noise P-P BW = 20MHz	150mA	120mA	75mA	60mA	50mA	30mA

Model	DCAe10M40	DCAe20M20	DCAe30M14	DCAe60M7	DCAe80M5	DCAe160M2.5	
Programming Speed (*10)							
Rise time (10% ~ 90%) into resistive load							
Time 100% Load	5V : 9ms 10V : 18ms	10V : 18ms 20V : 35ms	15V : 18ms 30V : 40ms	30V : 40ms 60V : 80ms	40V : 40ms 80V : 90ms	80V : 90ms 160V : 200ms	
Time 10% Load	5V : 8ms 10V : 15ms	10V : 15ms 20V : 30ms	15V : 16ms 30V : 15ms	30V : 35ms 60V : 75ms	40V : 38ms 80V : 80ms	80V : 80ms 160V : 190ms	
Fall time (90% ~ 10%) into resistive load							
Time 100% Load	5V : 5ms 10V : 10ms	10V : 10ms 20V : 30ms	15V : 25ms 30V : 30ms	30V : 30ms 60V : 90ms	40V : 28ms 80V : 50ms	80V : 50ms 160V : 150ms	
Time 10% Load	5V : 60ms 10V : 100ms	10V : 100ms 20V : 250ms	15V : 120ms 30V : 250ms	30V : 250ms 60V : 800ms	40V : 265ms 80V : 500ms	80V : 500ms 160V : 1500ms	
Recovery Time (Transient Response Time) (*11)							
Recovery within	50mV		80mV		100mV		
Time @ 50~100% load step	100 μ s						
Max deviation @ 230V mains	5V : 160ms 10V : 160ms	10V : 160ms 20V : 160ms	15V : 150ms 30V : 150ms	30V : 150ms 60V : 150ms	40V : 500ms 80V : 500ms	80V : 500ms 160V : 500ms	
Temperature Coefficients (CV & CC)	100ppm/ $^{\circ}$ C of rated voltage & current after 30 min of warm up time and during 8 hrs.						
Output Stability (CV & CC)	100ppm of rated voltage & current after 30 min of warm up time and during 8 hrs						
Analog Programming (Rear panel 15 pin D connector)							
Programming Input	Voltage	Voltage : 0 ~ 5V, Range : 0 ~ 100% Accuracy : 1% of Vout rated, Input Impedance : 1M Ω					
	Current	Voltage : 0 ~ 5V, Range : 0 ~ 100% Accuracy : 1% of Iout rated, Input Impedance : 1M Ω					
Monitoring Input	Voltage	Voltage : 0 ~ 5V, Accuracy : 1% of Vout rated, Output Impedance : < 2 Ω /0.4mA max					
	Current	Current : 0 ~ 5V, Accuracy : 1% of Iout rated Output Impedance : 2 Ω /0.4mA max					
V Reference	5.1V \pm 10mV						
Status Outputs	Power Supply OK : PS OK = Logic High Any Fault : PS OK = Logic Low						
Remote shutdown	with + 5V or relay contacts						
Front Panel							
Front Panel controls	Mains ON/OFF; Digital Encoders for Voltage and Current setting; Switch setting : Voltage & Current Set, Over voltage & Output ON/OFF						
Indicators	Voltage, Current, CV, CC, Output ON, Over-Voltage Fault						
Display	4 Digit, Voltage and Current Separately						
Accuracy	\pm (0.5% + 2D)						
Scale	Voltage	0 ~ 10V	0 ~ 20V	0 ~ 30V	0 ~ 60V	0 ~ 80V	0 ~ 160V
	Current	0 ~ 40A	0 ~ 20A	0 ~ 14A	0 ~ 7A	0 ~ 5A	0 ~ 2.50A
Resolution	Voltage	0.01V					0.1V
	Current	0.01A					
Output Protections	Over voltage protection (OVP displayed & Output gets switched off), Over current (CC Limit is active), Short Circuit, Over Temperature (OTP displayed & output gets switched off)						
Output Terminals	Bus bar and Remote Sense Terminal						
Parallel Operation	Up to 4 units of same model						
Series operation	2 units of same model						
Mains Input	Universal AC input, Single phase, 90~270V, 50/60 Hz (47~63Hz) Input Connector : IEC320/C14, EN60320/14 Standby Power : 13 Watts @ 230V (V & I zero) Internal Fuse L : 6A Fast, 5 x 20mm ceramic fuse						
Power Factor	0.99 @ full load / 0.98 @ 50% load						
Turn of Delay	600ms after mains switched ON						

Model	DCAe10M40	DCAe20M20	DCAe30M14	DCAe60M7	DCAe80M5	DCAe160M2.5
Inrush Current	<25A					
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 condition at 40°C Max. 75% non condition at 50°C					
Safety	Insulation : Input to Output : 2000Vdc for 1min Input to case 2500Vdc, Output to case : 600Vdc Insulation Resistance : 100MΩ at 25°C, 70%RH, 500Vdc					
Dimension (W X D X H)	70 x 403 x 85mm					
Weight	2.9kg.					
Cooling	Forced, Temperature controlled variable fan speed					
Accessories	Standard	Standards : Mains Cable				
	Optional	<ul style="list-style-type: none"> • Bus bars for series operation : BBS • Bus bars for parallel operation : BBP • Master Slave only for parallel operation, display on individual unit : MSA • Increased output power (voltage by 10%) : IOP10V • Increased output power (current by 10%): IOP10I • Output Cable : OC 	<ul style="list-style-type: none"> • Input Cable (>2mtr) : IC • 19" Rack Mount Kit : RAK • Rack & Integration: RAI • Analog programming connector : CON • Isolated Analog (External): IAE • Polarity Reversal Switch Analog: PRA • Battery Reversal Protection : BRP • Cal. Report NABL Accredited CAL-NA • Cal. Report National Standard : CAL-NS 			

Subject to change

Notes :

Unit warm up time is 30min.

Unless otherwise noted, specifications are warranted over the ambient temperature range of 0°C ~ 50°C

*1 : Minimum output voltage guaranteed to maximum 0.2% of rated output voltage.

*2 : Minimum output current guaranteed to maximum 0.4% of rated output voltage.

*3 : Measured from 0 ~ 100% load at constant input voltage, at the sensing point in local sense.

*4 : Measured from 90 ~ 270Vac, at constant load.

*5 : Measured in DMM

*6 : Measured in DSO with JEITA RC-9131C (1:1) probe

*7 : The maximum voltage on the power supply terminals must not exceed the rated voltage.

*8 : Measured from 0 ~ 100% load at constant input voltage.

*9 : Measured at rated output voltage and rated output current.

*10 : Measured at rated output voltage.

*11 : Measured at local sense, output set point 50 ~ 100%

scientific

Scientific Mes-Technik Pvt. Ltd.

B-14, Industrial Estate, Pologround, Indore 452 015, India

☎ 0731-2422330/31/32/33

✉ sales@scientificindia.com

🌐 www.scientificindia.com



Bengaluru 080-23452635

✉ bangalore@scientificindia.com

Kolkata +919630945856

✉ kolkata@scientificindia.com

Chennai 044-42054180

✉ chennai@scientificindia.com

Mumbai +919850901735

✉ mumbai@scientificindia.com

Gujarat +917567463752

✉ gujarat@scientificindia.com

New Delhi +918770013379

✉ ndelhi@scientificindia.com

Hyderabad +917095228811

✉ hyderabad@scientificindia.com

Pune +919603828884

✉ pune@scientificindia.com

Kanpur +919981329105

✉ up@scientificindia.com