Technical Specifications of Programmable DC Supply with PV Array Simulation Software

Technical Specifications I

S.No.	Parameter	Specification	Complied / Not Complied	Reference, Page. No.
1.	Output Voltage & Current	0 – 1000 V, 0 – 4.8 A (Three units of 1000V, 1.6A connected in parallel to achieve 1000V, 4.8A)		
2.	Output Power	4800 W		
3.	Input Supply	Three Phase, 50/ 60Hz		
4.	Power Factor	0.99@ full load		
5.	Efficiency	$\geq$ 87% at full Load		
6.	Load Regulation (at 100% load)	CV mode: $\leq$ 10 mV CC mode: $\leq$ 8 mA		
7.	Line Regulation	CV mode: $\leq$ 3 mV CC mode: $\leq$ 2 mA		
8.	Ripple (BW = 1 MHz)	CV mode: $\leq$ 60 mV rms CC mode: $\leq$ 5 mA rms		
9.	Output Stability (long term during 8hrs)	CV mode: $\leq$ 100 ppm CC mode: $\leq$100 ppm		
10.	Programming Speed (100% load)	Voltage Rise time: $\leq$ 250 ms (10% to 90%) Voltage Fall time: $\leq$ 250 ms (90% to 10%)		
11.	Recovery time	$\leq$ 100 μs to recover within 250mV for 50 -100% load step		
12.	Resistor Programming	0 – 5/ 10 kΩ full scale (User selectable)		
13.	Front Panel controls	Mains ON/ OFF, Voltage and Current setting with encoders Switch Settings: Over Voltage, Under Voltage, Foldback enable, Remote/ Local, Output ON/ OFF		
14.	Front Panel indicators	LEDs for CV mode, CC mode, Foldback enable, Remote & Output ON, display for Over Voltage setting, Under Voltage setting		
15.	Programming Interfaces	Analog, USB, RS232, RS485		
16.	Analog Programming and Monitoring signal	Programming & Monitoring with 0 - 5V/ 0 - 10V (User selectable)		
17.	Digital Programming	Voltage & Current Setting Resolution: min 15 bit		

18.	Display Resolution	4 Digit, Voltage: 1V, Current: 10mA		
19.	Protections	Over Voltage, Over load, Short circuit, Over temperature		
20.	PV Simulation Software: It should test Static & Dynamic performance of Inverters as per EN 50530. Should include following:			
21.		Graphical User Interface Programmable via Digital Interface		
22.		Static and dynamic MPPT efficiency test		
23.		Creation of I-V & P-V curve & setting of parameters like Pmp , Vmp, Imp, Voc , Isc, Irradiance, Temp		
24.		Data Recording of the parameters like Voltage, Current, Power, MPPT, efficiency with logging Interval of 100 ms to 1000 ms		
25.		User definable change in Shadow, Temp & Irradiance.		
26.		User definable Solar Array Size - 1 to 50 in parallel, 1 to 500 in series.		
27.		Simulation of Shadowed I-V Curve with Moving Soft Array Panel, in 8 Directions		
28.	Operating temperature	0 to 50°C		
Terms and Conditions				
23.	Warranty	1 Year Standard Warranty + 2 Years additional Warranty (Optional)		

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the Above points with document proof as required. Failing which bidders will be technically disqualified)