

DSP Series

Programmable High Power DC Power Supply

The DSP Series High Power DC Power Supply using PWM and FPGA technology, has the advantages of reliable quality, stable performance, high power, high current, high voltage, low ripple noise, fast transient response, high precision and high resolution.

The DSP Series can offer output voltage and current is up to 1500V and 1500A respectively. With its high performance, DSP series fits testing requirement of EV motor and compressor, PV inverter, renewable energy, quality burning test, or facility power perfectly.

Features

- Output power up to 150kW per unit, output voltage up to 1500V and output current up to 1500A.
- Using FPGA technology.
- Standard RS232 interface, optional RS485 and GPIB interface.
- CV/CC/CP models to satisfy different kinds of requirement.
- 3 Groups of voltage, current and power for quick memory
- With power-off memory function, remember the last output parameters automatically.
- 16bits high precision A/D converter for high precision voltage and current control and measurement.
- Option remote sense to reduce voltage drop caused by cable length.

Applications

- DC Motor and compressor testing.
- New energy applications.
- Industrial power supply.
- Testing Lab
- Electronics manufacturing industry.
- EMC Chamber.



Specification

20Kw-50Kw

Model	20kW	DSP-500-40	DSP-600-33	DSP-800-25	DSP-1000-20	DSP-1500-13
	30kW	DSP-500-60	DSP-600-50	DSP-800-38	DSP-1000-30	DSP-1500-20
	50kW	DSP-500-100	DSP-600-84	DSP-800-63	DSP-1000-50	DSP-1500-33
Input Specifications						
Voltage		3 ϕ 4W + Ground 380Vac \pm 10%				
Frequency		50/60Hz \pm 5%				
Output Specifications						
Output Voltage		0-500V	0-600V	0-800V	0-1000V	0-1500V
Output Current	20kW	0-40A	0-33A	0-25A	0-20A	0-13A
	30kW	0-60A	0-50A	0-38A	0-30A	0-20A
	50kW	0-100A	0-84A	0-63A	0-50A	0-33A
Output Power		0-100% full range adjustable				
Line Regulation	Voltage	\leq 0.05% F.S.				
	Current	\leq 0.08% F.S.				
Load Regulation	Voltage	\leq 0.2% F.S.				
	Current	\leq 0.3% F.S.				
Ripple& Noise	Vp-p	\leq 2% F.S.				
	Vrms	\leq 0.1% F.S.				
Transient Response		\leq 10ms				
Slew Rate		\leq 100ms (output voltage or current change from 10% to 100% at resistive load)				
Efficiency		\geq 90% (at full load)				
Measurement						
4 digits LED display		Voltage, Current and Power				
Accuracy	Voltage	\pm 0.2% F.S. \pm 6counts				
	Current	\pm 0.5% F.S. \pm 3counts				
	Power	\pm 1% F.S. \pm 3counts				
Resolution	Voltage	0.2V				
	Current	0.1A				
	Power	0.1kW				
Memories		M1, M2, M3 FOR QUICK MEMORY SETTING				
Protection		Over Voltage, Over Current, Over Temperature, Reverse Polarity Protection				
OVP RANGE		0 ~ 110% of rated voltage				
OCP RANGE		0 ~ 110% of rated current				
Interface		RS-485 (OPT. RS-232, GPIB)				
Remote sense(Opt.)		\leq 5V				
General						
Operating Temperature		0° - 50° C				
Relative Humidity		10-90%,non-condensing				
Isolation Strength		Input to Output: 2500VAC, 6mA, 1Min				
Isolation Resistance	Input to Enclosure: 500VDC, \geq 100M Ω					
	Output to Enclosure: 500VDC, \geq 100M Ω					
Dimension (W x H x D)(mm)		432 x 570 x 695/20kW		565 x 1335 x 690/30Kw/50kW		
Weight (Kg)		150Kg/20kW	230Kg/30kW	350Kg/50kW		

Specification

20Kw-50Kw

Model	20kW	DSP-500-40	DSP-600-33	DSP-800-25	DSP-1000-20	DSP-1500-13
	30kW	DSP-500-60	DSP-600-50	DSP-800-38	DSP-1000-30	DSP-1500-20
	50kW	DSP-500-100	DSP-600-84	DSP-800-63	DSP-1000-50	DSP-1500-33
Input Specifications						
Voltage		3 ϕ 4W + Ground 380Vac \pm 10%				
Frequency		50/60Hz \pm 5%				
Output Specifications						
Output Voltage		0-500V	0-600V	0-800V	0-1000V	0-1500V
Output Current	20kW	0-40A	0-33A	0-25A	0-20A	0-13A
	30kW	0-60A	0-50A	0-38A	0-30A	0-20A
	50kW	0-100A	0-84A	0-63A	0-50A	0-33A
Output Power		0-100% full range adjustable				
Line Regulation	Voltage	\leq 0.05% F.S.				
	Current	\leq 0.08% F.S.				
Load Regulation	Voltage	\leq 0.2% F.S.				
	Current	\leq 0.3% F.S.				
Ripple& Noise	Vp-p	\leq 2% F.S.				
	Vrms	\leq 0.1% F.S.				
Transient Response		\leq 10ms				
Slew Rate		\leq 100ms (output voltage or current change from 10% to 100% at resistive load)				
Efficiency		\geq 90% (at full load)				
Measurement						
4 digits LED display		Voltage, Current and Power				
Accuracy	Voltage	\pm 0.2% F.S. \pm 6counts				
	Current	\pm 0.5% F.S. \pm 3counts				
	Power	\pm 1% F.S. \pm 3counts				
Resolution	Voltage	0.2V				
	Current	0.1A				
	Power	0.1kW				
Memories		M1, M2, M3 FOR QUICK MEMORY SETTING				
Protection		Over Voltage, Over Current, Over Temperature, Reverse Polarity Protection				
OVP RANGE		0 ~ 110% of rated voltage				
OCP RANGE		0 ~ 110% of rated current				
Interface		RS-485 (OPT. RS-232, GPIB)				
Remote sense(Opt.)		\leq 5V				
General						
Operating Temperature		0° - 50° C				
Relative Humidity		10-90%,non-condensing				
Isolation Strength		Input to Output: 2500VAC, 6mA, 1Min				
Isolation Resistance	Input to Enclosure: 500VDC, \geq 100M Ω					
	Output to Enclosure: 500VDC, \geq 100M Ω					
Dimension (W x H x D)(mm)		432 x 570 x 695/20kW 565 x 1335 x 690/30Kw/50kW				
Weight (Kg)		150Kg/20kW 230Kg/30kW 350Kg/50kW				

Specification

80Kw-150Kw

Model	80kW	DSP-100-800	DSP-250-320	DSP-320-250	DSP-400-200	DSP-500-160
	100kW	DSP-100-1000	DSP-250-400	DSP-320-312	DSP-400-250	DSP-500-200
	150kW	DSP-100-1500	DSP-250-600	DSP-320-468	DSP-400-375	DSP-500-300
Input Specifications						
Voltage		3 ϕ 4W + Ground 380Vac \pm 10%				
Frequency		50/60Hz \pm 5%				
Output Specifications						
Output Voltage		0-100V	0-250V	0-320V	0-400V	0-500V
Output Current	80kW	0-800A	0-320A	0-250A	0-200A	0-160A
	100kW	0-1000A	0-400A	0-312A	0-250A	0-200A
	150kW	0-1500A	0-600A	0-468A	0-375A	0-300A
Output Power		0-100% full range adjustable				
Line Regulation	Voltage	\leq 0.05% F.S.				
	Current	\leq 0.08% F.S.				
Load Regulation	Voltage	\leq 0.2% F.S.				
	Current	\leq 0.3% F.S.				
Ripple& Noise	Vp-p	\leq 2% F.S.				
	Vrms	\leq 0.1% F.S.				
Transient Response		\leq 10ms				
Slew Rate		\leq 100ms (output voltage or current change from 10% to 100% at resistive load)				
Efficiency		\geq 90% (at full load)				
Measurement						
4 digits LED display		Voltage, Current and Power				
Accuracy	Voltage	\pm 0.2% F.S. \pm 6counts				
	Current	\pm 0.5% F.S. \pm 3counts				
	Power	\pm 1% F.S. \pm 3counts				
Resolution	Voltage	0.2V				
	Current	0.1A				
	Power	0.1kW				
Memories		M1, M2, M3 FOR QUICK MEMORY SETTING				
Protection		Over Voltage, Over Current, Over Temperature, Reverse Polarity Protection				
OVP RANGE		0 ~ 110% of rated voltage				
OCP RANGE		0 ~ 110% of rated current				
Interface		RS-485 (OPT. RS-232, GPIB)				
Remote sense(Opt.)		\leq 5V				
General						
Operating Temperature		0° - 50° C				
Relative Humidity		10-90%,non-condensing				
Isolation Strength		Input to Output: 2500VAC, 6mA, 1Min				
Isolation Resistance		Input to Enclosure: 500VDC, \geq 100M Ω				
		Output to Enclosure: 500VDC, \geq 100M Ω				
Dimension (W x H x D)(mm)		750 x 1605 x 900/80kW/100kW 1130 x 1600 x 690/150kW				
Weight (Kg)		550Kg/75kW/100kW 680Kg/150kW				

Specification

80Kw-150Kw

Model	80kW	DSP-600-133	DSP-800-100	DSP-1000-80	DSP-1500-53
	100kW	DSP-600-125	DSP-800-125	DSP-1000-100	DSP-1500-66
	150kW	DSP-600-250	DSP-800-187	DSP-1000-150	DSP-1500-100
Input Specifications					
Voltage		3 ϕ 4W + Ground 380Vac \pm 10%			
Frequency		50/60Hz \pm 5%			
Output Specifications					
Output Voltage		0-600V	0-800V	0-1000V	0-1500V
Output Current	80kW	0-133A	0-100A	0-80A	0-53A
	100kW	0-125A	0-125A	0-100A	0-66A
	150kW	0-250A	0-187A	0-150A	0-100A
Output Power		0-100% full range adjustable			
Line Regulation	Voltage	\leq 0.05% F.S.			
	Current	\leq 0.08% F.S.			
Load Regulation	Voltage	\leq 0.2% F.S.			
	Current	\leq 0.3% F.S.			
Ripple& Noise	Vp-p	\leq 2% F.S.			
	Vrms	\leq 0.1% F.S.			
Transient Response		\leq 10ms			
Slew Rate		\leq 100ms (output voltage or current change from 10% to 100% at resistive load)			
Efficiency		\geq 90% (at full load)			
Measurement					
4 digits LED display		Voltage, Current and Power			
Accuracy	Voltage	\pm 0.2% F.S. \pm 6counts			
	Current	\pm 0.5% F.S. \pm 3counts			
	Power	\pm 1% F.S. \pm 3counts			
Resolution	Voltage	0.2V			
	Current	0.1A			
	Power	0.1kW			
Memories		M1, M2, M3 FOR QUICK MEMORY SETTING			
Protection		Over Voltage, Over Current, Over Temperature, Reverse Polarity Protection			
OVP RANGE		0 ~ 110% of rated voltage			
OCP RANGE		0 ~ 110% of rated current			
Interface		RS-485 (OPT. RS-232, GPIB)			
Remote sense(Opt.)		\leq 5V			
General					
Operating Temperature		0° - 50° C			
Relative Humidity		10-90%,non-condensing			
Isolation Strength		Input to Output: 2500VAC, 6mA, 1Min			
Isolation Resistance	Input to Enclosure: 500VDC, \geq 100M Ω				
	Output to Enclosure: 500VDC, \geq 100M Ω				
Dimension (W x H x D)(mm)		750 x 1605 x 900/80kW/100kW 1130 x 1600 x 690/150kW			
Weight (Kg)		550Kg/75kW/100kW 680Kg/150kW			

- Specifications are subject to change without notice.

Models

20kW	Output Voltage	Output Current
DSP-60-333	0 ~ 60V	0 ~ 333A
DSP-100-200	0 ~ 100V	0 ~ 200A
DSP-250-80	0 ~ 250V	0 ~ 80A
DSP-320-62	0 ~ 320V	0 ~ 94A
DSP-400-50	0 ~ 400V	0 ~ 50A
DSP-500-40	0 ~ 500V	0 ~ 40A
DSP-600-33	0 ~ 600V	0 ~ 33A
DSP-800-25	0 ~ 800V	0 ~ 25A
DSP-1000-20	0 ~ 1000V	0 ~ 20A
DSP-1500-13	0 ~ 1500V	0 ~ 13A

30kW	Output Voltage	Output Current
DSP-60-500	0 ~ 60V	0 ~ 500A
DSP-100-300	0 ~ 100V	0 ~ 300A
DSP-250-120	0 ~ 250V	0 ~ 120A
DSP-320-94	0 ~ 320V	0 ~ 94A
DSP-400-75	0 ~ 400V	0 ~ 75A
DSP-500-60	0 ~ 500V	0 ~ 60A
DSP-600-50	0 ~ 600V	0 ~ 50A
DSP-800-38	0 ~ 800V	0 ~ 38A
DSP-1000-30	0 ~ 1000V	0 ~ 30A
DSP-1500-20	0 ~ 1500V	0 ~ 20A

50kW	Output Voltage	Output Current
DSP-60-834	0 ~ 60V	0 ~ 834A
DSP-100-500	0 ~ 100V	0 ~ 500A
DSP-250-200	0 ~ 250V	0 ~ 200A
DSP-320-156	0 ~ 320V	0 ~ 156A
DSP-400-125	0 ~ 400V	0 ~ 125A
DSP-500-100	0 ~ 500V	0 ~ 100A
DSP-600-84	0 ~ 600V	0 ~ 84A
DSP-800-63	0 ~ 800V	0 ~ 63A
DSP-1000-50	0 ~ 1000V	0 ~ 50A
DSP-1500-33	0 ~ 1500V	0 ~ 33A

80kW	Output Voltage	Output Current
DSP-100-800	0 ~ 100V	0 ~ 800A
DSP-250-320	0 ~ 250V	0 ~ 320A
DSP-320-250	0 ~ 320V	0 ~ 250A
DSP-400-200	0 ~ 400V	0 ~ 200A
DSP-500-160	0 ~ 500V	0 ~ 160A
DSP-600-133	0 ~ 600V	0 ~ 133A
DSP-800-100	0 ~ 800V	0 ~ 100A
DSP-1000-80	0 ~ 1000V	0 ~ 80A
DSP-1500-53	0 ~ 1500V	0 ~ 53A

100kW	Output Voltage	Output Current
DSP-100-1000	0 ~ 100V	0 ~ 1000A
DSP-250-500	0 ~ 250V	0 ~ 400A
DSP-320-312	0 ~ 320V	0 ~ 312A
DSP-400-250	0 ~ 400V	0 ~ 250A
DSP-500-200	0 ~ 500V	0 ~ 200A
DSP-600-166	0 ~ 600V	0 ~ 166A
DSP-800-125	0 ~ 800V	0 ~ 125A
DSP-1000-100	0 ~ 1000V	0 ~ 100A
DSP-1500-66	0 ~ 1500V	0 ~ 66A

150kW	Output Voltage	Output Current
DSP-100-1500	0 ~ 100V	0 ~ 1500A
DSP-250-600	0 ~ 250V	0 ~ 600A
DSP-320-468	0 ~ 320V	0 ~ 468A
DSP-400-375	0 ~ 400V	0 ~ 375A
DSP-500-300	0 ~ 500V	0 ~ 300A
DSP-600-250	0 ~ 600V	0 ~ 250A
DSP-800-187	0 ~ 800V	0 ~ 187A
DSP-1000-150	0 ~ 1000V	0 ~ 150A
DSP-1500-100	0 ~ 1500V	0 ~ 100A