

SP Series Single Output DC Power Supply Technical Specifications

The instrument must be operated continuously for more than 30 minutes at the specified operating temperature to achieve the following specifications:

		Parameter								Description
		SP3051	SP6053	SP3101	SP3103	SP6101	SP6103	SP8206	SP8207	
Input Parameter	Work Voltage Range	100-120Vac	100-120Vac	100-120Vac	100-120Vac	100-120Vac	100-120Vac	100-240Vac	200-240Vac	110V± 10%
		200-240Vac	200-240Vac	200-240Vac	200-240Vac	200-240Vac	200-240Vac			220V± 10%
	Work Frequency Range	50-60Hz	50-60Hz	50-60Hz	50-60Hz	50-60Hz	50-60Hz	50-60Hz	50-60Hz	
	Efficiency	80%	80%	80%	80%	80%	80%	≥83%	--	110Vac, full load
		85%	85%	85%	85%	85%	85%	≥88%	≥88%	220Vac, full load
	Full load input current	≤2.8A	≤5.6A	≤2.8A	≤5.6A	≤2.8A	≤5.6A	≤6.6A	--	110Vac
		≤1.4A	≤2.8A	≤1.4A	≤2.8A	≤1.4A	≤2.8A	≤3.2A	≤3.8A	220Vac
	No-load input current	≤200mA	≤300mA	≤300mA	≤300mA	≤300mA	≤300mA	≤200mA	--	110Vac
		≤100mA	≤150mA	≤150mA	≤150mA	≤150mA	≤150mA	≤100mA	≤150mA	220Vac
Rated Output (0℃-40℃)	Voltage	0-30V	0-60V	0-30V	0-30V	0-60V	0-60V	0-80V	0-80V	
	Overvoltage Protection	31V	61V	31V	31V	61V	61V	85V	85V	
	Current	0-5A	0-5A	0-10A	0-10A	0-10A	0-10A	0-20A	0-20A	
	Power	150W	300W	150W	300W	150W	300W	600W	700W	

		Parameter								Description
Load Regulation (%of output+offset)	Voltage	≤30mV	≤30mV	≤30mV	≤30mV	≤30mV	≤30mV	≤30mV	≤30mV	0-100%
	Current	≤30mA	≤30mA	≤30mA	≤30mA	≤30mA	≤30mA	≤30mA	≤30mA	90%-10% Rated Voltage
Line Regulation (%of output+offset)	Voltage	≤20mV	≤20mV	≤20mV	≤20mV	≤20mV	≤20mV	≤20mV	≤20mV	
	Current	≤20mA	≤20mA	≤20mA	≤20mA	≤20mA	≤20mA	≤20mA	≤20mA	
Setting Resolution	Voltage	10mV	10mV	10mV	10mV	10mV	10mV	10mV	10mV	
	Current	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	
Readback Resolution	Voltage	10mV	10mV	10mV	10mV	10mV	10mV	10mV	10mV	
	Current	1mA	1mA	1mA	1mA	1mA	1mA	1mA	1mA	
Setting Accuracy (within 12 months) (25°C±5 °C) (%of output+offset)	Voltage	≤0.1%± 20mV	≤0.1%± 20mV	≤0.1%± 20mV	≤0.1%± 20mV	≤0.1%± 30mV	≤0.1%± 30mV	≤0.1%± 20mV	≤0.1%± 20mV	
	Current	≤0.1%± 10mA	≤0.1%± 10mA	≤0.1%± 10mA	≤0.1%± 10mA	≤0.1%± 10mA	≤0.1%± 10mA	≤0.1%± 20mA	≤0.1%± 20mA	
Readback	Voltage	≤0.1%± 20mV	≤0.1%± 20mV	≤0.1%± 20mV	≤0.1%± 20mV	≤0.1%± 30mV	≤0.1%± 30mV	≤0.1%± 20mV	≤0.1%± 20mV	

Accuracy (25°C±5°C) (%of output+offset)	Parameter									Description
	Current	≤0.1%± 10mA	≤0.1%± 10mA	≤0.1%± 10mA	≤0.1%± 10mA	≤0.1%± 10mA	≤0.1%± 10mA	≤0.1%± 20mA	≤0.1%± 20mA	
Ripple and noise (20Hz-20 MHz)	Voltage(Vp-p)	≤30mVp-p	≤30mVp-p	≤30mVp-p	≤30mVp-p	≤50mVp-p	≤50mVp-p	≤50mVp-p	≤50mVp-p	
	Current(rms)	≤3mVrms	≤3mVrms	≤3mVrms	≤3mVrms	≤5mVrms	≤5mVrms	≤20mVrms	≤20mVrms	
	Current	≤30mA _{p-p}	≤30mA _{p-p}	≤30mA _{p-p}	≤30mA _{p-p}	≤30mA _{p-p}	≤30mA _{p-p}	≤20mA _{rms}	≤20mA _{rms}	
Output temperature coefficient (0°C-40°C) (%of output+offset)	Voltage	≤0.3%± 20mV	≤0.3%± 10mV	≤0.3%± 10mV	≤0.3%± 10mV	≤0.3%± 20mV	≤0.3%± 20mV	100ppm/°C		
	Current	≤0.3%± 10mA	≤0.3%± 20mA	≤0.3%± 20mA	≤0.3%± 20mA	≤0.3%± 20mA	≤0.3%± 20mA	200ppm/°C		
Readback temperature coefficient (%of output+offset)	Voltage	≤0.3%± 20mV	≤0.3%± 10mV	≤0.3%± 10mV	≤0.3%± 10mV	≤0.3%± 20mV	≤0.3%± 20mV	100ppm/°C		
	Current	≤0.3%± 10mA	≤0.3%± 20mA	≤0.3%± 20mA	≤0.3%± 20mA	≤0.3%± 20mA	≤0.3%± 20mA	200ppm/°C		
Transient	Time	≤1.0ms	≤1.0ms	≤1.0ms	≤1.0ms	≤1.0ms	≤1.0ms	≤5.0ms	≤5.0ms	(50%-100%)

		Parameter								Description
response time										Rated Load) (SP8206/SP8207 model: 10%-90% Rated Load)

General Specifications

Display

Characteristics	Description
Display Type	3.7 inches color LCD
Resolution	480 × 320 pixels
Color	65536 color, TFT

Power Supply

Characteristics	Description								
Power Supply	110 VAC ± 10% or 220 VAC ± 10% power supply according to the label on the left side of the power input socket on the rear panel of the instrument); AC input 50/60 Hz								
Fuse	Parameter	SP3051	SP6053	SP3101	SP3103	SP6101	SP6103	SP8206	SP8207
	110 V	250 V, F5A	250 V, F10A	250 V, F5A	250 V, F10A	250 V, F5A	250 V, F10A	250 V, F10A	--
	220 V	250 V, F3A	250 V, F5A	250 V, F3A	250 V, F5A	250 V, F3A	250 V, F5A	250 V, F10A	250 V, F10A

Environment

Characteristics	Description
Temperature	Working temperature: 0℃～40℃ Storage temperature: -20℃～60℃
Relative Humidity	≤90%
Height	Operation: 3,000 meters Non-operation: 15,000 meters
Cooling	Fan cooling

Mechanical Specifications

Characteristics	Description	
Dimension	290mm(D)× 117mm(W)× 194mm(H)	
Weight	SP3051/SP6053/SP3101/SP3103/SP6101/SP6103	Approx. 3.0kg
	SP8206/SP8207	Approx. 2.0kg

Safety Specifications

Characteristics	Description
Withstand Voltage (Output to Ground)	500VDC



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