SPL Series Source-Load Integrated Technical Specifications

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

SPL30000-1 Series Technical Specifications

Model		SPL30150-1 (TV)	SPL30300-1 (TV)	SPL30600-1 (TV)
Input	Voltage/Frequency/Current	100-120Vac；50Hz/60Hz；10Arms Max 200-240Vac；50Hz/60Hz；5Arms Max		
DC Power Supply				
Rated Output	Voltage	0-30V		
	Current	0-10A		
	Power	150W		
Voltage Regulation (CV)	Load	≤33mV		
	Mains	≤33mV		
Current Regulation (CC)	Load	≤30mA		
	Mains	≤20mA		
Ripple noise	Voltage (Rms)	≤40mVrms		
	Current (Rms)	≤40mA		
Set resolution	Voltage	10mV		
	Current	10mA		
Readback resolution	Voltage	10mV		
	Current	10mA		
Set Accuracy	Voltage	≤0.2%+0.2%FS		
	Current	≤0.2%+0.2%FS		
Readback Accuracy	Voltage	≤0.2%+0.2%FS		
	Current	≤0.2%+0.2%FS		
Response Time	Transient response (10%~90% rated load)	≤5.0ms		
Protect function	OVP	0~31V		
	OCP	0~11A		
	OTP	80℃		
Output Temperature coefficient	Voltage	100ppm/℃		
	Current	200ppm/℃		
Readback Value Temperature coefficient	Voltage	100ppm/℃		
	Current	200ppm/℃		
Electric Load				
Rated Input	Voltage	0-150V	0-300V	0-600V

Model		SPL30150-1 (TV)		SPL30300-1 (TV)		SPL30600-1 (TV)	
Input	Current	0-10A					
	Power	150W					
Minimum work voltage		0.8V@10A					
CV Mode	Range	0-15V	0-150V	0-30V	0-300V	0-60V	0-600V
	Set resolution	1mV	10mV	1mV	10mV	1mV	10mV
	Readback resolution	1mV	10mV	1mV	10mV	1mV	10mV
	Accuracy	0.05%+0.05%FS					
CC Mode	Range	0-10A		0-10A		0-10A	
	Set resolution	10mA		10mA		10mA	
	Readback resolution	1mA		1mA		1mA	
	Accuracy	0.05%+0.05%FS					
CR Mode	Range	0.05-7.5kΩ					
	Accuracy *1	0.1%+0.01%R					
CP Mode	Range	0-150W					
	Set resolution	10mW					
	Readback resolution	10mW					
	Accuracy *1	0.1%+0.1%FS					
Dynamic Mode (CCD)	T1&T2	0.1ms-50s					
	Rise/Fall slope	0.01A/ms-500A/ms					
	Minimum rise time	40us					
Protect function	OPP	>OPP value, 100 ms protection					
	OVP	>OVP value, 10 ms protection					
	OCP	>OCP value, 10 ms protection					
	OTP	85℃					
Short circuit	CC	>10A					
	CV	0					
	CR	50mΩ					
Test Function		Supports battery charge and discharge test, OCP test and OPP test. This is an optional feature available only for models with suffix T. The ripple test function is optional and available for models with suffix V.					
Temperature coefficient		±(0.04% per degree from 25℃)					
Others							
Communication Interface		Supports RS232, RS485 and USB serial ports, with SCPI / Modbus protocols available.					
Withstand Voltage (DC to Earth)		500VDC/1min		1000VDC/1min		1500VDC/1min	
Working Isolation Voltage		800VDC					
Heat Dissipation		Internal intelligent fan forced air cooling regulation					
Work Temperature		0-40℃					
Display		2.8-inch TFT LCD					
Dimension		82mm(W)× 142mm(H)×226mm(D)					
Weight		Approx. 2.5kg					

SPL30000-3 Series Technical Specifications

Model		SPL30150-3 (TV)		SPL30300-3 (TV)		SPL30600-3 (TV)	
Input	Voltage/Frequency/Current	100-120Vac；50Hz/60Hz；10Arms Max 200-240Vac；50Hz/60Hz；5Arms Max					
DC Power Supply							
Rated Output	Voltage	0-30V					
	Current	0-10A					
	Power	300W					
Voltage Regulation (CV)	Load	≤33mV					
	Mains	≤33mV					
Current Regulation (CC)	Load	≤30mA					
	Mains	≤20mA					
Ripple noise	Voltage (Rms)	≤40mVrms					
	Current (Rms)	≤40mA					
Set resolution	Voltage	10mV					
	Current	10mA					
Readback resolution	Voltage	10mV					
	Current	10mA					
Set Accuracy	Voltage	≤0.2%+0.2%FS					
	Current	≤0.2%+0.2%FS					
Readback Accuracy	Voltage	≤0.2%+0.2%FS					
	Current	≤0.2%+0.2%FS					
Response Time	Transient response (10%~90% rated load)	≤5.0ms					
Protect function	OVP	0~31V					
	OCP	0~11A					
	OTP	80℃					
Output Temperature coefficient	Voltage	100ppm/℃					
	Current	200ppm/℃					
Readback Value Temperature coefficient	Voltage	100ppm/℃					
	Current	200ppm/℃					
Electric Load							
Rated Input	Voltage	0-150V		0-300V		0-600V	
	Current	0-15A					
	Power	150W					
Minimum work voltage		0.8V@15A					
CV Mode	Range	0-15V	0-150V	0-30V	0-300V	0-60V	0-600V
	Set resolution	1mV	10mV	1mV	10mV	1mV	10mV
	Readback resolution	1mV	10mV	1mV	10mV	1mV	10mV

Model		SPL30150-3 (TV)	SPL30300-3 (TV)	SPL30600-3 (TV)
	Accuracy	0.05%+0.05%FS		
CC Mode	Range	0-15A	0-15A	0-15A
	Set resolution	10mA	10mA	10mA
	Readback resolution	1mA	1mA	1mA
	Accuracy	0.05%+0.05%FS		
CR Mode	Range	0.05-7.5kΩ		
	Accuracy *1	0.1%+0.01%R		
CP Mode	Range	0-150W		
	Set resolution	10mW		
	Readback resolution	10mW		
	Accuracy *1	0.1%+0.1%FS		
Dynamic Mode (CCD)	T1&T2	0.1ms-50s		
	Rise/Fall slope	0.01A/ms-500A/ms		
	Minimum rise time	40us		
Protect function	OPP	>OPP value, 100 ms protection		
	OVP	>OVP value, 10 ms protection		
	OCP	>OCP value, 10 ms protection		
	OTP	85℃		
Short circuit	CC	>15A		
	CV	0		
	CR	50mΩ		
Test Function		Supports battery charge and discharge test, OCP test and OPP test. This is an optional feature available only for models with suffix T. The ripple test function is optional and available for models with suffix V.		
Temperature coefficient		±(0.04% per degree from 25℃)		
Others				
Communication Interface		Supports RS232, RS485 and USB serial ports, with SCPI / Modbus protocols available.		
Withstand Voltage (DC to Earth)		500VDC/1min	1000VDC/1min	1500VDC/1min
Working Isolation Voltage		800VDC		
Heat Dissipation		Internal intelligent fan forced air cooling regulation		
Work Temperature		0-40℃		
Display		2.8-inch TFT LCD		
Dimension		82mm(W)× 142mm(H)×226mm(D)		
Weight		Approx. 2.5kg		

SPL60000-1 Series Technical Specifications

Model		SPL60150-1 (TV)	SPL60300-1 (TV)	SPL60600-1 (TV)
Input	Voltage/Frequency/Current	100-120Vac；50Hz/60Hz；10Arms Max 200-240Vac；50Hz/60Hz；5Arms Max		
DC Power Supply				

Model		SPL60150-1 (TV)	SPL60300-1 (TV)	SPL60600-1 (TV)
Rated Output	Voltage	0-60V		
	Current	0-10A		
	Power	150W		
Voltage Regulation (CV)	Load	≤33mV		
	Mains	≤33mV		
Current Regulation (CC)	Load	≤30mA		
	Mains	≤20mA		
Ripple noise	Voltage (Rms)	≤60mVrms		
	Current (Rms)	≤40mA		
Set resolution	Voltage	10mV		
	Current	10mA		
Readback resolution	Voltage	10mV		
	Current	10mA		
Set Accuracy	Voltage	≤0.2%+0.2%FS		
	Current	≤0.2%+0.2%FS		
Readback Accuracy	Voltage	≤0.2%+0.2%FS		
	Current	≤0.2%+0.2%FS		
Response Time	Transient response (10%~90% rated load)	≤5.0ms		
Protect function	OVP	0~61V		
	OCP	0~11A		
	OTP	80℃		
Output Temperature coefficient	Voltage	100ppm/℃		
	Current	200ppm/℃		
Readback Value Temperature coefficient	Voltage	100ppm/℃		
	Current	200ppm/℃		
Electric Load				
Rated Input	Voltage	0-150V	0-300V	0-600V
	Current	0-10A		
	Power	150W		
Minimum work voltage		0.8V@10A		
CV Mode	Range	0-15V / 0-150V	0-30V / 0-300V	0-60V / 0-600V
	Set resolution	1mV / 10mV	1mV / 10mV	1mV / 10mV
	Readback resolution	1mV / 10mV	1mV / 10mV	1mV / 10mV
	Accuracy	0.05%+0.05%FS		
CC Mode	Range	0-10A	0-10A	0-10A
	Set resolution	10mA	10mA	10mA
	Readback resolution	1mA	1mA	1mA

Model		SPL60150-1 (TV)	SPL60300-1 (TV)	SPL60600-1 (TV)
	Accuracy	0.05%+0.05%FS		
CR Mode	Range	0.05-7.5kΩ		
	Accuracy *1	0.1%+0.01%R		
CP Mode	Range	0-150W		
	Set resolution	10mW		
	Readback resolution	10mW		
	Accuracy *1	0.1%+0.1%FS		
Dynamic Mode (CCD)	T1&T2	0.1ms-50s		
	Rise/Fall slope	0.01A/ms-500A/ms		
	Minimum rise time	40us		
Protect function	OPP	>OPP value, 100 ms protection		
	OVP	>OVP value, 10 ms protection		
	OCP	>OCP value, 10 ms protection		
	OTP	85℃		
Short circuit	CC	>10A		
	CV	0		
	CR	50mΩ		
Test Function		Supports battery charge and discharge test, OCP test and OPP test. This is an optional feature available only for models with suffix T. The ripple test function is optional and available for models with suffix V.		
Temperature coefficient		±(0.04% per degree from 25℃)		
Others				
Communication Interface		Supports RS232, RS485 and USB serial ports, with SCPI / Modbus protocols available.		
Withstand Voltage (DC to Earth)		500VDC/1min	1000VDC/1min	1500VDC/1min
Working Isolation Voltage		800VDC		
Heat Dissipation		Internal intelligent fan forced air cooling regulation		
Work Temperature		0-40℃		
Display		2.8-inch TFT LCD		
Dimension		82mm(W)× 142mm(H)×226mm(D)		
Weight		Approx. 2.5kg		

SPL60000-3 Series Technical Specifications

Model		SPL60150-3 (TV)	SPL60300-3 (TV)	SPL60600-3 (TV)
Input	Voltage/Frequency/Current	100-120Vac；50Hz/60Hz；10Arms Max 200-240Vac；50Hz/60Hz；5Arms Max		
DC Power Supply				
Rated Output	Voltage	0-60V		
	Current	0-10A		
	Power	300W		
Voltage	Load	≤33mV		

Model		SPL60150-3 (TV)		SPL60300-3 (TV)		SPL60600-3 (TV)	
Regulation (CV)	Mains	≤33mV					
Current Regulation (CC)	Load	≤30mA					
	Mains	≤20mA					
Ripple noise	Voltage (Rms)	≤60mVrms					
	Current (Rms)	≤40mA					
Set resolution	Voltage	10mV					
	Current	10mA					
Readback resolution	Voltage	10mV					
	Current	10mA					
Set Accuracy	Voltage	≤0.2%+0.2%FS					
	Current	≤0.2%+0.2%FS					
Readback Accuracy	Voltage	≤0.2%+0.2%FS					
	Current	≤0.2%+0.2%FS					
Response Time	Transient response (10%~90% rated load)	≤5.0ms					
Protect function	OVP	0~61V					
	OCP	0~11A					
	OTP	80℃					
Output Temperature coefficient	Voltage	100ppm/℃					
	Current	200ppm/℃					
Readback Value Temperature coefficient	Voltage	100ppm/℃					
	Current	200ppm/℃					
Electric Load							
Rated Input	Voltage	0-150V		0-300V		0-600V	
	Current	0-15A					
	Power	150W					
Minimum work voltage		0.8V@15A					
CV Mode	Range	0-15V	0-150V	0-30V	0-300V	0-60V	0-600V
	Set resolution	1mV	10mV	1mV	10mV	1mV	10mV
	Readback resolution	1mV	10mV	1mV	10mV	1mV	10mV
	Accuracy	0.05%+0.05%FS					
CC Mode	Range	0-15A		0-15A		0-15A	
	Set resolution	10mA		10mA		10mA	
	Readback resolution	1mA		1mA		1mA	
	Accuracy	0.05%+0.05%FS					
CR Mode	Range	0.05-7.5kΩ					
	Accuracy *1	0.1%+0.01%R					
CP Mode	Range	0-150W					

Model		SPL60150-3 (TV)	SPL60300-3 (TV)	SPL60600-3 (TV)
	Set resolution	10mW		
	Readback resolution	10mW		
	Accuracy *1	0.1%+0.1%FS		
Dynamic Mode (CCD)	T1&T2	0.1ms-50s		
	Rise/Fall slope	0.01A/ms-500A/ms		
	Minimum rise time	40us		
Protect function	OPP	>OPP value, 100 ms protection		
	OVP	>OVP value, 10 ms protection		
	OCP	>OCP value, 10 ms protection		
	OTP	85℃		
Short circuit	CC	>15A		
	CV	0		
	CR	50mΩ		
Test Function		Supports battery charge and discharge test, OCP test and OPP test. This is an optional feature available only for models with suffix T. The ripple test function is optional and available for models with suffix V.		
Temperature coefficient		±(0.04% per degree from 25℃)		
Others				
Communication Interface		Supports RS232, RS485 and USB serial ports, with SCPI / Modbus protocols available.		
Withstand Voltage (DC to Earth)		500VDC/1min	1000VDC/1min	1500VDC/1min
Working Isolation Voltage		800VDC		
Heat Dissipation		Internal intelligent fan forced air cooling regulation		
Work Temperature		0-40℃		
Display		2.8-inch TFT LCD		
Dimension		82mm(W)× 142mm(H)×226mm(D)		
Weight		Approx. 2.5kg		

* 1 Accuracy: Voltage and current input value ⩾10%FS

Specifications are subject to change without prior notice. Please refer to the latest update on the website.

Interval Period of Adjustment:

One year is recommended for the calibration interval period.

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V1.0.0