



# SPD3303X SPD3303X-E

# **Product Overview**

SPD3000X Series Linear Programmable DC Power Supply has a 4.3 inches TFT\_LCD display, Supports Programmability and Real Time Wave Display, bringing a new experience to users. It has three isolated outputs: two adjustable channels and one selectable channel from 2.5v, 3.3V, and 5V. It also has output short and overload protect function, and can be used in production and development.

## **Main Features**

- 3 independent controlled and isolated output, 30V/3.2A×2, 2.5V/3.3V/5V/3.2A×1, total 220W
- 5 digits Voltage, 4digits Current Display, Minimum Resolution: 1mV/1mA
- Supports panel timing output functions
- 4.3 inch true color TFT- LCD 480x272 pixel display
- ∡ 3 kinds of output modes: independent, series, parallel
- 100V/120V/220V/230V compatible design to meet the needs of different power grids.
- Intelligent temperature-controlled fan , effectively reducing noise
- Clear graphical interface, with the waveform display function
- Internal 5 groups of system parameter save/recall, supports data storage space expansion
- Provides PC software: Easypower , supports SCPI , Labview driver







#### **Characteristics**

#### High-resolution and high-precision output

The highest resolution of 1mV/1mA, provides excellent setting and read back accuracy. This ensures accurate output. You can easily simulate the device accurate behavior under testing with small change in voltage or current. This is impossible for a low resolution power supply.

#### Series/parallel/independent mode function

Series and parallel function allows two channels combined into one output with more power output capability, extending the application range. Each of 3 channels power can be turned on or off independently and also can be turned all on or all off.



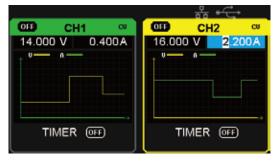


## Panel displays the timing output

Through the panel operation, 5 groups of timing settings and output control can be displayed, which provides users a simple power programming function. Also a connection can be made with Siglent's EasyPower PC software providing a full range of communication and control requirements.



Panel timing output



Real time wave display

#### Save/Recall setting parameters

SPD3000X series programmable power supply can save or recall 5 groups of setting parameter in internal storage, also supports external storage expansion. You can easily obtain the settings you needed.



Internal Storage



PC Timer





CH2 output voltage: 10 ~ 32V, output current: 0 ~ 3.2A	Model		SPD3303X-E	SPD3303X		
CH3 output voltage: 2.5/3.3/5.0V, output current: 3.2A	Channel		CH1 output voltage: 0 ~ 32V, output current: 0 ~ 3.2A			
A 3 inch true color TFT-LCD			CH2 output voltage: $0 \sim 32V$ , output current: $0 \sim 3.2A$			
A digits voltage 3 digits current   5 digits voltage 4 digits current   10mV/10mA			CH3 output voltage: 2.5/3.3/5.0V, output current: 3.2A			
Program Accuracy	Display					
Current ± (0.5% of reading+2digits)	Resolution		10mV/10mA	1mV/1mA		
Voltage ± (0.5% of reading+2digits)	Program Accuracy		Voltage ± (0.5% of reading+2digits)	Voltage± (0.03% of reading+10mV)		
Current ± (0.5% of reading+2digits)			Current ± (0.5% of reading+2digits)	Current± (0. 3% of reading+10mA)		
Constant Voltage   Line Regulation   So.01%+3mV   Load Regulation   So.01%+3mV   Sipple&Noise   Simms (SHz ~ 1MHz)	Readback Accuracy		Voltage ± (0.5% of reading+2digits)	Voltage± (0.03% of reading+10mV)		
Load Regulation   S0.01%+3mV     Recovery Time   S0.05 (50% load change, minimum load 0.5A)     Constant Current   Line Regulation   S0.2%+3mA     Ripple&Noise   S3mArms     Parallel Mode   Line Regulation   S0.01%+3mV     Load Regulation   S0.01%+3mV     Load Regulation   S0.01%+3mV     Load Regulation   S0.01%+5mV     Load Regulation   S0.01%+5mV     Load Regulation   S0.001%+5mV     Load Regulation   S0.00mV     CH3			Current ± (0.5% of reading+2digits)	Current± (0. 3% of reading+10mA)		
Load Regulation   S0.01%+3mV     Ripple&Noise   S1mVrms (SHz ~ 1MHz)     Recovery Time   S0.2%+3mA     Load Regulation   S0.2%+3mA     Load Regulation   S0.2%+3mA     Ripple&Noise   S3mArms     Parallel Mode   Line Regulation   S0.01%+3mV     Load Regulation   S0.01%+3mV     Load Regulation   S0.01%+5mV     Load Regulation   S0.01%+5mV     Load Regulation   S0.01%+3mV     Ripple&Noise   S1mVrms (SHz ~ 1MHz)     Locking Key   Yes     Memory Save/Recall   S Sets     Max Output Power   220W     Power Source   AC 100V/120V/220V/230V ±10% 50/60Hz     Standard Configuration Interface   USB Device. LAN     Insulation   Case to Terminal ≥20MΩ (DC 500V)     Case to AC line ≥30MΩ (DC 500V)     Case to Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2     Storage Environment   Environment Temperature: -10~70°C Relative Humidity≤70%	Constant Voltage Mode	Line Regulation	≤0.01%+3mV			
Recovery Time   < 50µs (50% load change, minimum load 0.5A)		Load Regulation	≤0.01%+3mV			
Constant Current Mode       Line Regulation       ≤0.2%+3mA         Aipple&Noise       ≤3mArms         Parallel Mode       Line Regulation       ≤0.01%+3mV         Series Mode       Line Regulation       ≤0.01%+5mV         Load Regulation       ≤300mV         CH3       Output Voltage       (2.5/3.35V) ±8%         Line Regulation       ≤0.01%+3mV         Load Regulation       ≤0.01%+3mV         Load Regulation       ≤0.01%+3mV         Ripple&Noise       ≤1mVrms (5Hz ~ 1MHz)         Memory Save/Recall       5 Sets         Max Output Power       220W         Power Source       AC 100V/120V/220V/230V ±10% 50/60Hz         Standard Configuration Interface       USB Device. LAN         Insulation       Case to Terminal ≥20MΩ (DC 500V)         Operating Environment       Outdoor Usage:		Ripple&Noise	≤1mVrms (5Hz ~ 1MHz)			
Mode Load Regulation ≤0.2%+3mA Ripple&Noise ≤3mArms  Parallel Mode Line Regulation ≤0.01%+3mV  Load Regulation ≤0.01%+3mV  Series Mode Line Regulation ≤0.01%+5mV  Load Regulation ≤300mV  CH3 Output Voltage (2.5/3.3/5V) ±8% Line Regulation ≤0.01%+3mV  Load Regulation ≤0.01%+3mV  Load Regulation ≤0.01%+3mV  Load Regulation ≤0.01%+3mV  Ripple&Noise ≤1mVrms (5Hz ~ 1MHz)  Locking Key Yes  Memory Save/Recall 5 Sets  Max Output Power 220W  Power Source AC 100V/120V/220V/230V ±10% 50/60Hz  Standard Configuration Interface USB Device. LAN  Line Insulation Case to Terminal ≥20MΩ (DC 500V)  Case to AC line ≥30MΩ (DC 500V)  Operating Environment Clear Control Environment Temperature 0~40°C Relative Humidity≤80%  Installation Level: II Pollution Level: 2  Storage Environment Environment Temperature: -10~70°C Relative Humidity≤70%  Dimension 225(W)×143(H)×278(D) mm		Recovery Time	< 50µs (50% load change, minimum load 0.5A)			
Load Regulation   ≤0.2%+3mA     Ripple&Noise   ≤3mArms     Line Regulation   ≤0.01%+3mV     Load Regulation   ≤0.01%+5mV     Load Regulation   ≤300mV     CH3   Output Voltage   (2.5/3.3/5V) ±8%     Line Regulation   ≤0.01%+3mV     Load Regulation   ≤0.01%+3mV     Load Regulation   ≤0.01%+3mV     Load Regulation   ≤0.01%+3mV     Load Regulation   ≤0.01%+3mV     Ripple&Noise   ≤1mVrms (5Hz ~ 1MHz)     Locking Key   Yes     Memory Save/Recall   5 Sets     Max Output Power   220W     Power Source   AC 100V/120V/220V/230V ±10% 50/60Hz     Standard Configuration Interface   USB Device. LAN     Insulation   Case to Terminal ≥20MΩ (DC 500V)     Case to AC line ≥30MΩ (DC 500V)     Operating Environment   Case to Terminal ≥200m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2   Storage Environment   Environment Temperature: -10~70°C Relative Humidity≤70%     Dimension   225(W)×143(H)×278(D) mm	Constant Current Mode	Line Regulation	≤0.2%+3mA			
Parallel Mode Line Regulation ≤0.01%+3mV  Series Mode Line Regulation ≤0.01%+5mV  Load Regulation ≤300mV  CH3 Output Voltage (2.5/3.3/5V) ±8% Line Regulation ≤0.01%+3mV  Load Regulation ≤0.01%+3mV  Load Regulation ≤0.01%+3mV  Ripple&Noise ≤1mVrms (5Hz ~ 1MHz)  Locking Key Yes  Memory Save/Recall 5 Sets  Max Output Power 220W  Power Source Standard Configuration Interface USB Device, LAN  Insulation Case to Terminal ≥20MΩ (DC 500V)  Case to AC line ≥30MΩ (DC 500V)  Operating Environment Clease: Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: Il Pollution Level: 2  Storage Environment Environment Temperature: -10~70°C Relative Humidity≤70%  Dimension 225(W)×143(H)×278(D) mm		Load Regulation	≤0.2%+3mA			
Load Regulation       ≤0.01%+3mV         Series Mode       Line Regulation       ≤0.01%+5mV         Load Regulation       ≤300mV         CH3       Output Voltage       (2.5/3.3/5V) ±8%         Line Regulation       ≤0.01%+3mV         Load Regulation       ≤0.01%+3mV         Ripple&Noise       ≤1mVrms (5Hz ~ 1MHz)         Locking Key       Yes         Memory Save/Recall       5 Sets         Max Output Power       220W         Power Source       AC 100V/120V/220V/230V ±10% 50/60Hz         Standard Configuration Interface       USB Device. LAN         Insulation       Case to Terminal ≥20MΩ (DC 500V)         Operating Environment       Outdoor Usage: Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2         Storage Environment       Environment Temperature: -10~70°C Relative Humidity≤70%         Dimension       225(W)×143(H)×278(D) mm		Ripple&Noise	≤3mArms			
Series Mode       Line Regulation       ≤0.01%+5mV         Load Regulation       ≤300mV         CH3       Output Voltage       (2.5/3.3/5V) ±8%         Line Regulation       ≤0.01%+3mV         Load Regulation       ≤0.01%+3mV         Ripple&Noise       ≤1mVrms (5Hz ~ 1MHz)         Locking Key       Yes         Memory Save/Recall       5 Sets         Max Output Power       220W         Power Source       AC 100V/120V/220V/230V ±10% 50/60Hz         Standard Configuration Interface       USB Device. LAN         Insulation       Case to Terminal ≥20MΩ (DC 500V)         Operating Environment       Outdoor Usage: Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2         Storage Environment       Environment Temperature: -10~70°C Relative Humidity≤70%         Dimension       225(W)×143(H)×278(D) mm	Parallel Mode	Line Regulation	≤0.01%+3mV			
Load Regulation ≤300mV  CH3  Output Voltage (2.5/3.3/5V) ±8%  Line Regulation ≤0.01%+3mV  Load Regulation ≤0.01%+3mV  Ripple&Noise ≤1mVrms (5Hz ~ 1MHz)  Locking Key Yes  Memory Save/Recall 5 Sets  Max Output Power 220W  Power Source AC 100V/120V/220V/230V ±10% 50/60Hz  Standard Configuration Interface USB Device. LAN  Insulation Case to Terminal ≥20MΩ (DC 500V)  Case to AC line ≥30MΩ (DC 500V)  Operating Environment Cusage:  Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80%  Installation Level: II Pollution Level: 2  Storage Environment Environment Temperature: -10~70°C Relative Humidity≤70%  Dimension 225(W)×143(H)×278(D) mm		Load Regulation	≤0.01%+3mV			
CH3  Output Voltage Line Regulation $\leq 0.01\%+3$ mV  Load Regulation Ripple&Noise $\leq 1$ mVrms (5Hz $\sim 1$ MHz)  Locking Key  Memory Save/Recall Max Output Power Power Source AC $100V/120V/220V/230V \pm 10\%$ $50/60$ Hz  Standard Configuration Interface USB Device. LAN  Insulation Case to Terminal $\geq 20$ M $\Omega$ (DC $500V$ ) Case to AC line $\geq 30$ M $\Omega$ (DC $500V$ ) Operating Environment Outdoor Usage: Elevation: $\leq 2000$ m Environment Temperature $0\sim40^{\circ}$ C Relative Humidity $\leq 80\%$ Installation Level: II Pollution Level: 2  Storage Environment Environment Temperature: $-10\sim70^{\circ}$ C Relative Humidity $\leq 70\%$ Dimension $\geq 225(W)\times143(H)\times278(D)$ mm	Series Mode	Line Regulation	≤0.01%+5mV			
Line Regulation ≤0.01%+3mV  Load Regulation ≤0.01%+3mV  Ripple&Noise ≤1mVrms (5Hz ~ 1MHz)  Locking Key Yes  Memory Save/Recall 5 Sets  Max Output Power 220W  Power Source AC 100V/120V/220V/230V ±10% 50/60Hz  Standard Configuration Interface USB Device. LAN  Insulation Case to Terminal ≥20MΩ (DC 500V)  Case to AC line ≥30MΩ (DC 500V)  Operating Environment Outdoor Usage: Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2  Storage Environment Environment Temperature: -10~70°C Relative Humidity≤70%  Dimension 225(W)×143(H)×278(D) mm		Load Regulation	≤300mV			
Load Regulation ≤0.01%+3mV	CH3	Output Voltage	(2.5/3.3/5V) ±8%			
Ripple&Noise $\le 1 \text{mVrms} (5 \text{Hz} \sim 1 \text{MHz})$ Locking Key Yes  Memory Save/Recall 5 Sets  Max Output Power 220W  Power Source AC $100V/120V/220V/230V \pm 10\% 50/60 \text{Hz}$ Standard Configuration Interface USB Device. LAN  Insulation Case to Terminal $\ge 20 \text{M}\Omega$ (DC $500V$ )  Case to AC line $\ge 30 \text{M}\Omega$ (DC $500V$ )  Operating Environment Outdoor Usage: Elevation: $\le 2000 \text{m}$ Environment Temperature $0 \sim 40^{\circ}\text{C}$ Relative Humidity $\le 80\%$ Installation Level: II Pollution Level: 2  Storage Environment Environment Temperature: $-10 \sim 70^{\circ}\text{C}$ Relative Humidity $\le 70\%$ Dimension $225(\text{W}) \times 143(\text{H}) \times 278(\text{D}) \text{ mm}$		Line Regulation	≤0.01%+3mV			
Locking Key Yes   Memory Save/Recall 5 Sets   Max Output Power 220W   Power Source AC 100V/120V/220V/230V ±10% 50/60Hz   Standard Configuration Interface USB Device. LAN   Insulation Case to Terminal ≥20MΩ (DC 500V) Case to AC line ≥30MΩ (DC 500V)   Operating Environment Outdoor Usage: Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2   Storage Environment Environment Temperature: -10~70°C Relative Humidity≤70%   Dimension 225(W)×143(H)×278(D) mm		Load Regulation	≤0.01%+3mV			
Memory Save/Recall       5 Sets         Max Output Power       220W         Power Source       AC 100V/120V/220V/230V ±10% 50/60Hz         Standard Configuration Interface       USB Device. LAN         Insulation       Case to Terminal ≥20MΩ (DC 500V)         Case to AC line ≥30MΩ (DC 500V)         Operating Environment       Outdoor Usage: Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2         Storage Environment       Environment Temperature: -10~70°C Relative Humidity≤70%         Dimension       225(W)×143(H)×278(D) mm		Ripple&Noise	≤1mVrms (5Hz ~ 1MHz)			
Max Output Power       220W         Power Source       AC 100V/120V/220V/230V ±10% 50/60Hz         Standard Configuration Interface       USB Device、LAN         Insulation       Case to Terminal ≥20MΩ (DC 500V)         Case to AC line ≥30MΩ (DC 500V)         Operating Environment       Outdoor Usage: Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2         Storage Environment       Environment Temperature: -10~70°C Relative Humidity≤70%         Dimension       225(W)×143(H)×278(D) mm	Locking Key		Yes			
Power Source       AC 100V/120V/220V/230V ±10% 50/60Hz         Standard Configuration Interface       USB Device. LAN         Insulation       Case to Terminal ≥20MΩ (DC 500V)         Case to AC line ≥30MΩ (DC 500V)         Operating Environment       Outdoor Usage: Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2         Storage Environment       Environment Temperature: -10~70°C Relative Humidity≤70%         Dimension       225(W)×143(H)×278(D) mm	Memory Save/Recall		5 Sets			
Standard Configuration Interface       USB Device、LAN         Insulation       Case to Terminal ≥20MΩ (DC 500V)         Case to AC line ≥30MΩ (DC 500V)         Operating Environment       Outdoor Usage: Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2         Storage Environment       Environment Temperature: -10~70°C Relative Humidity≤70%         Dimension       225(W)×143(H)×278(D) mm	Max Output Power		220W			
Insulation       Case to Terminal ≥20MΩ (DC 500V)         Case to AC line ≥30MΩ (DC 500V)         Operating Environment       Outdoor Usage: Elevation: ≤2000m Environment Temperature $0\sim40^{\circ}$ C Relative Humidity≤80% Installation Level: II Pollution Level: 2         Storage Environment       Environment Temperature: -10 $\sim$ 70°C Relative Humidity≤70%         Dimension       225(W)×143(H)×278(D) mm	Power Source		AC 100V/120V/220V/230V ±10% 50/60Hz			
Case to AC line ≥30MΩ (DC 500V)  Operating Environment  Outdoor Usage: Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2  Storage Environment  Environment Temperature: -10~70°C Relative Humidity≤70%  Dimension  225(W)×143(H)×278(D) mm	Standard Configuration Interface		USB Device、LAN			
Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80% Installation Level: II Pollution Level: 2  Storage Environment Environment Temperature: -10~70°C Relative Humidity≤70%  Dimension  225(W)×143(H)×278(D) mm	Insulation					
Dimension 225(W)×143(H)×278(D) mm	Operating Environment		Elevation: ≤2000m Environment Temperature 0~40°C Relative Humidity≤80%			
	Storage Environment		Environment Temperature: -10~70°C Relative Humidity≤70%	Environment Temperature: -10~70°C Relative Humidity≤70%		
Weight ≈ 8.0kg	Dimension		225(W)×143(H)×278(D) mm	225(W)×143(H)×278(D) mm		
	Weight		≈ 8.0kg			

# **Ordering information**

Product description	Product No			
3 channels independent output, min resolution 10mV/10mA, USB Device & LAN, 4.3 inch LCD display	SPD3303X-E			
3 channels independent output, min resolution 1mV/1mA, USB Device & LAN, 4.3 inch LCD display	SPD3303X			
Standard Accessories				
USB Cable -1				
Quick Start -1				
Product Certificate -1				
Calibration Certificate -1				
Power cord -1				
Resources CD(product document and software )-1				
Output Test Cord -2 Sets				