RIGOL
Beyond Measure

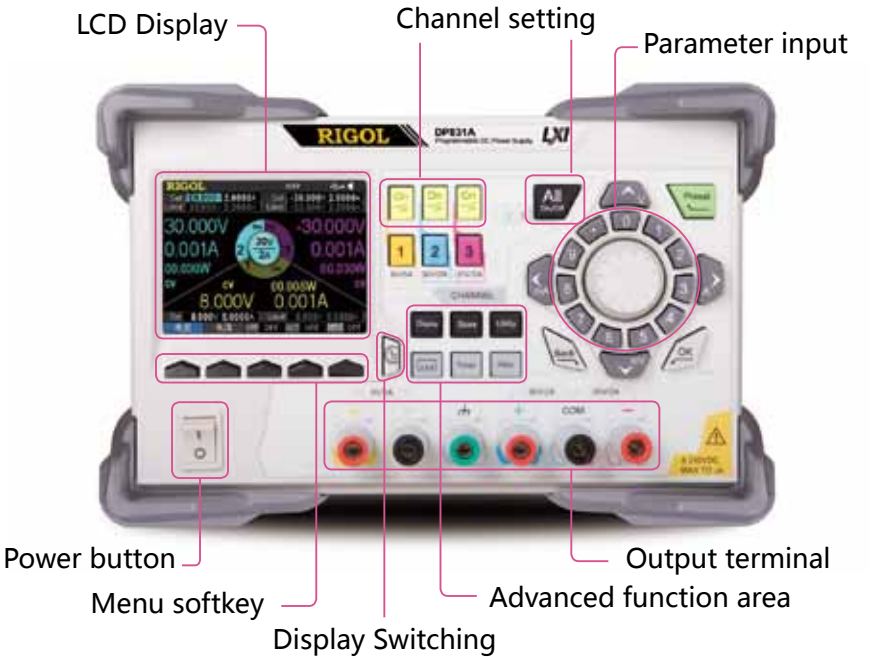
DP800 series
Programmable Linear DC Power Supply

- DP832A/832:3 Outputs, CH1 || CH2,CH3,Total Power up to 195W
- DP831A:3 Outputs, CH1 || CH2,CH3,Total Power up to 160W
- DP811A:1 Output, 40V/5A or 20V/10A, with Remote Sense, Total Power up to 200W
- DP821A:2 Outputs, 60V/1A || 8V/10A, with Remote Sense, Total Power up to 140W
- Low Ripple Noise: <350 uVrms/2mVpp
- Excellent Linear Regulation Rate and Load Regulation Rate
- Fast Transient Response Time: <50us
- Standard OVP/OCP/OTP protection functions
- Standard Timing function
- Built in V,A,W measurements and waveform display
- Support Output Delay, Analysis, Monitor, Preset functions
- Independent control for each channel
- 3.5 Inch TFT Display
- Connectivity: USB Host& Device, LAN, RS232, Digital IO, USB-GPIB(Opt.)

DP800 Series Programmable DC Power Supply

► Larger LCD Display Intuitive User Intinterface

Observable Clean Stable Reliable Affordable



► Complete Connectivity

Product Dimension: Width×Height×Depth=239mm x 157mm x 418mm Weight: 9.75 kg

► Typical Applications

- R&D lab General purpose testing
- Quality Assessment inspection
- Bias power for RF/MW circuits
- Automotive electronic test
- Production testing
- Device or circuit characterization and troubleshooting

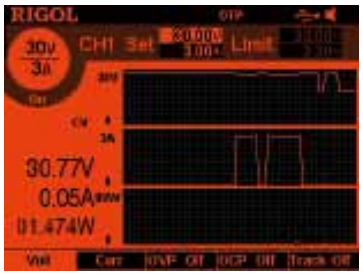
➤ Intuitive User Interface

DP831A GUI

DP832A GUI

DP832 GUI

Timing Output



V/A/W Display

Output Analysis Function

Monitor Setup

Trigger In/Out

Output Delay

LAN Setup

► Specifications

All the specifications are guaranteed when the instrument has been working for more than 30 minutes under the specified operation temperature. Unless otherwise noted, the specifications are applicable to all the channels of the specified model.

DP832A/DP832/DP831A Specifications

Model		DP832A	DP832	DP831A
Channels			3	
DC Output (0℃ to 40℃)				
Voltage/current		CH1：0 ~ 30V/0 ~ 3A		CH1：0 ~ 8V/0 ~ 5A
		CH2：0 ~ 30V/0 ~ 3A		CH2：0 ~ +30V/0 ~ 2A
		CH3：0 ~ 5V/0 ~ 3A		CH3：0 ~ −30V/0 ~ 2A
OVP/OCP		CH1：1mV ~ 33V/1mA ~ 3.3A	CH1：10mV ~ 33V/1mA ~ 3.3A	CH1：1mV ~ 8.8V/0.1mA ~ 5.5A
		CH2：1mV ~ 33V/1mA ~ 3.3A	CH2：10mV ~ 33V/1mA ~ 3.3A	CH2：1mV ~ 33V/0.1mA ~ 2.2A
		CH3：1mV ~ 5.5V/1mA ~ 3.3A	CH3：10mV ~ 5.5V/1mA ~ 3.3A	CH3：−1mV ~ −33V/0.1mA ~ 2.2A
Load Regulation Rate ±(Output Percentage + Offset)				
Voltage		<0.01%+2mV		
Current		<0.01%+250μA		
Linear Regulation Rate ±(Output Percentage + Offset)				
Voltage		<0.01%+2mV		
Current		<0.01%+250μA		
Ripples and Noise (20Hz to 20MHz)				
Normal Mode Voltage		<350μVrms/2mVpp		
Normal Mode Current		<2mArms		

Annual Accuracy [1] (25℃ ± 5℃) ±(Output Percentage + Offset)				
Programming	Voltage	CH1：0.05% + 20mV		CH1：0.1%+5mV
		CH2：0.05% + 20mV		CH2：0.05%+20mV
		CH3：0.1% + 5mV		CH3：0.05%+20mV
	Current	CH1：0.2% + 5mA		CH1：0.2%+10mA
		CH2：0.2% + 5mA		CH2：0.2%+5mA
		CH3：0.2% + 5mA		CH3：0.2%+5mA
Readback	Voltage	CH1：0.05% + 10mV		CH1：0.1%+5mV
		CH2：0.05% + 10mV		CH2：0.05%+10mV
		CH3：0.1% + 5mV		CH3：0.05%+10mV
	Current	CH1：0.15%+ 5mA		CH1：0.2%+10mA
		CH2：0.15%+ 5mA		CH2：0.1%+5mA
		CH3：0.15%+ 5mA		CH3：0.1%+5mA
Resolution				
Programming	Voltage	1mV	10mV	1mV
			With high−resolution option: 1mV	
	Current	1mA	1mA	CH1：0.3mA
			10mV	CH2/CH3：0.1mA
Readback	Voltage	0.1mV	With high−resolution option:0.1mV	0.1mV
			1mA	
	Current	0.1mA	With high−resolution option:0.1mA	0.1mA
			10mV	
Display	Voltage	1mV	With high−resolution option:1mV	1mV
			10mA	
	Current	1mA	With high−resolution option:1mA	1mA
Transient Response Time				
Less than 50μs for output to recover to within 15mV following a change in output current from full load to half load or vice versa.				
Command Processing Time [2]				
<100ms				
Temperature Coefficient per℃ (Output Percentage + Offset)				
Voltage		CH1/CH2：0.01%+5mV		0.01%+2mV
		CH3：0.01%+2mV		
Current		0.01%+2mA		0.02%+3mA
Stability [3] ±(Output Percentage + Offset)				
Voltage		CH1/CH2：0.02%+2mV		CH1: 0.03%+1mV
		CH3：0.01%+1mV		CH2/CH3: 0.02% + 2mV
Current		0.05%+2mA		CH1: 0.1%+3mA
				CH2/CH3: 0.05% + 1mA
Voltage Programming Control Speed (1% within the total variation range)				
Rise	Full Load	CH1/CH2：<50ms		CH1: <11ms
		CH3：<11ms		CH2/CH3: <50ms
	No Load	CH1/CH2：<25ms		CH1: <10ms
		CH3：<10ms		CH2/CH3: <25ms

	Full Load	CH1/CH2：<30ms	CH1: <13ms
		CH3：<13ms	CH2/CH3: <30ms
	No Load	CH1/CH2：<400ms	CH1: <200ms
		CH3：<200ms	CH2/CH3: <400ms
OVP/OCP			
Accuracy ±(Output Percentage + Offset)		0.5%+0.5V/0.5%+0.5A	
Activation Time		1.5ms（OVP≥3V）	
		<10ms（OVP<3V和OCP）	
Mechanical			
Dimensions		239mm(W) x 157mm(H) x 418mm(D)	
Weight		10.5kg（DP832A/DP832） 9.75kg（DP831A）	
Power			
AC Input (50Hz to 60Hz)		100Vac+10%，115Vac+10%，230Vac+10%（maximum 250VAC）	
I/O			
USB Device		1	1	1
USB Host		1	1	1
LAN		1	Option	1
RS232		1	Option	1
Digital IO		1	Option	1
USB-GPIB		Option	Option	Option
Environment			
Working Temperature		Full Rated Value Output: 0℃ to 40℃	
		Under Relatively Higher Temperature: the linearity of the output current reducesdecreases linearly to 50% at the highest temperature 55℃	
Cooling Method		Fan Cooling	

Note:
[1] The accuracy parameters are acquired via calibration under 25℃ after 1-hour warm-up.
[2] The maximum time required for the output to change accordingly after receiving the APPLy and SOURce commands.
[3] The variation of the output within 8 hours after 30-minute warm-up when the load circuit and environment temperature are constant.

DP811A Specifications

Model		DP811A	
Channels		1 (2 output scales)	
Output Scale		20V/10A（Low Range）	40V/5A（High Range）
DC Output (0℃ to 40℃)			
Voltage		0～+20V	0～+40V
Current		0～10A	0～5A
OVP		0.1V～22V	0.1V～44V
OCP		0.1A～11A	0.1V～5.5A
Load Regulation Rate ±(Output Percentage + Offset)			
Voltage		<0.01%+2mV	
Current		<0.01%+250μA	
Linear Regulation Rate ±(Output Percentage + Offset)			
Voltage		<0.01%+2mV	
Current		<0.01%+250μA	
Ripples and Noise (20Hz to 20MHz)			
Normal Mode Voltage		<350μVrms/2mVpp	
Normal Mode Current		<2mArms	

Annual Accuracy[1] (25℃±5℃) ±(Output Percentage + Offset)		
Programming	Voltage	0.05%+10mV
	Current	0.1%+10mA
Readback	Voltage	0.05% + 10mV
	Current	0.1% + 10mA
Resolution		
Programming	Voltage	1mV
	Current	0.5mA
Readback	Voltage	0.1mV
	Current	0.1mA
Display	Voltage	1mV
	Current	1mA

Transient Response Time		
Less than 50 μ s for output to recover to within 15mV following a change in output current from full load to half load or vice versa.		
Command Processing Time [2]		
<100ms		
Temperature Coefficient per℃ (Output Percentage + Offset)		
Voltage		0.01%+3mV
Current		0.02%+3mA
Stability [3] ± (Output Percentage + Offset)		
Voltage		0.02% + 1mV
Current		0.1% + 1mA
Voltage Programming Control Speed (1% within the total variation range)		
Rise	Full Load	< 20 ms
	No Load	< 20 ms
Fall	Full Load	<50ms
	No Load	<400ms
OVP/OCP		
Accuracy ± (Output Percentage + Offset)		0.5%+0.5V/0.5%+0.5A
Activation Time		1.5ms（OVP≥ 3V）
Mechanical		<10ms（OVP<3V和OCP）
Dimensions		
Weight		239mm(W) x 157mm(H) x 418mm(D)
Power		10.3kg
AC Input		
(50Hz to 60Hz)		100Vac+10%，115Vac+10%，230Vac+10%（maximum 250VAC）
I/O		
USB Device		1
USB Host		1
LAN		1
RS232		1
Digital IO		1
USB–GPIB		Option
Environment		
Working Temperature		Full Rated Value Output: 0℃ to 40℃
		Under Relatively Higher Temperature: the output current decreases linearly to 50% at the highest temperature 55℃
Cooling Method		Fan Cooling

Note:
[1] The accuracy parameters are acquired via calibration under 25℃ after 1–hour warm–up.
[2] The maximum time required for the output to change accordingly after receiving the APPLy and SOURce commands.
[3] The variation of the output within 8 hours after 30–minute warm–up when the load circuit and environment temperature are constant.

DP821A Specifications

Model	DP821A	
Channels	2	
	8V/10A	60V/1A
DC Output (0℃ to 40℃)		
Voltage	0 ~ +8V	0 ~ +60V
Current	0 ~ 10A	0 ~ 1A
OVP	0.1V ~ 8.8V	0.1V ~ 66V
OCP	0.1A ~ 10.5A	0.1A ~ 1.1A
Load Regulation Rate ± (Output Percentage + Offset)		
Voltage	<0.01%+2mV	
Current	<0.01%+250 μ A	
Linear Regulation Rate ± (Output Percentage + Offset)		
Voltage	<0.01%+2mV	
Current	<0.01%+250 μ A	
Ripples and Noise (20Hz to 20MHz)		
Normal Mode Voltage	<350 μ Vrms/2mVpp	
Normal Mode Current	<2mArms	

Annual Accuracy [1] (25℃ ± 5℃) ± (Output Percentage + Offset)		
Programming	Voltage	8V/10A：<0.05%+10mV
		60V/1A：<0.1%+25mV
	Current	0.2%+10mA
Readback	Voltage	8V/10A：0.05%+5mV
		60V/1A：<0.1%+25mV
	Current	0.15%+10mA
Resolution		
Programming	Voltage	8V/10A：1mV
		60V/1A：10mV
	Current	8V/10A：1mA
Readback		60V/1A：0.1mA
	Voltage	60V/1A：1mV
		8V/10A：1mV
	Current	60V/1A：0.1mA
Display		8V/10A：1mA
	Voltage	60V/1A：10mV
		8V/10A：1mV
	Current	60V/1A：0.1mA
		8V/10A：1mA
Transient Response Time		
Less than 50 μ s for output to recover to within 15mV following a change in output current from full load to half load or vice versa.		
Command Processing Time [2]		
<100ms		
Temperature Coefficient per℃ (Output Percentage + Offset)		
Voltage		0.01%+3mV
Current		0.02%+3mA
Stability [3] ± (Output Percentage + Offset)		
Voltage		0.02% + 1mV
Current		0.1% + 1mA
Voltage Programming Control Speed (1% within the total variation range)		
Rise	Full Load	CH1:<800ms
	No Load	CH2:<50ms
		<30ms
Fall	Full Load	<50ms
		CH1:<800ms
	No Load	CH2:<400ms
OVP/OCP		
Accuracy ± (Output		0.5%+0.5V/0.5%+0.5A
Percentage + Offset)		
Activation Time		1.5ms（OVP≥ 3V）
		<10ms（OVP<3V和OCP）
Mechanical		
Dimensions		239mm(W) x 157mm(H) x 418mm(D)
Weight		10kg
Power		
AC Input		100Vac+10%，115Vac+10%，230Vac+10%（maximum 250VAC）
(50Hz to 60Hz)		
I/O		1
USB Device		1
USB Host		1
LAN		1
RS232		1
Environment		
Working Temperature		Full Rated Value Output: 0℃ to 40℃
		Under Relatively Higher Temperature: the output current decreases linearly to 50% at the
Cooling Method		highest temperature 55℃ or the input fuse is broken.
		Fan Cooling

Note:
[1] The accuracy parameters are acquired via calibration under 25℃ after 1−hour warm−up.
[2] The maximum time required for the output to change accordingly after receiving the APPLy and SOURce commands.
[3] The variation of the output within 8 hours after 30−minute warm−up when the load circuit and environment temperature are constant.

➤ Ordering Information

	Description	Order Number
Model	Programmable DC Power (3 Channels)	DP832A
	Programmable DC Power (3 Channels)	DP832
	Programmable DC Power (3 Channels)	DP831A
	Programmable DC Power (2 Channels)	DP821A
	Programmable DC Power (1 Channel)	DP811A
Standard Accessories	Power cord	-
	USB data cable	CB-USBA-USBB-FF-150
	One shorted device	-
	CD (including User's Guide and Programming Guide)	-
	One fuse(50T-025H 250V 2.5A)	-
	Quick Guide	-
Optional Accessories	1mV & 1mA High resolution option(DP832)	HIRES-DP800
	4 Lines Trigger In&Out(DP832)	DIGITALIO-DP800
	On-line Monitoring and analysis(DP832)	AFK-DP800
	RS232 and LAN interface(DP832)	INTERFACE-DP800
	USB to GPIB Converter	USB-GPIB
	2 Units Rack Mount Kit	RM-2-DP800

Warranty

Three –year warranty, excluding accessories.

RIGOL

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