



# DP800 series Programmable DC Power Supply

- 3 Outputs, Max. Power up to 195W
- Low Ripple Noise: <350 uVrms/2mVpp
- Excellent Linear Regulation Rate and Load Regulation Rate
- Fast Transient Response Time: <50us
- Channel isolation: CH1 || CH2,CH3
- 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,Support USB-GPIB(Opt.)

# DP800 Series Programmable DC Power Supply

Observable Clean Stable Reliable Affordable



Product Dimension: Width×Height×Depth=239mm x 157mm x 418mm Weight: 9 kg

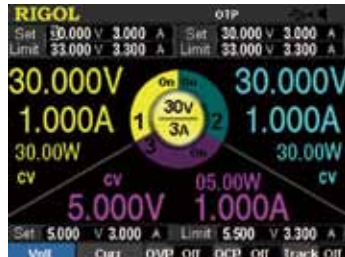
## ▶ Typical Applications

- 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



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.

### DP800 Specifications

| Model   | DP832A   |              | DP832   | DP831A  |
|---|--|--------------|---|---|
| Channels  |  |              | 3   |   |
| DC Output (0°C to 40°C)   |  |              |   |   |
| Voltage/current   | CH1: 0 to 30V/0 to 3A<br>CH2: 0 to 30V/0 to 3A<br>CH3: 0 to 5V/0 to 3A                   |              |   | CH1: 0 to 8V/0 to 5A<br>CH2: 0 to +30V/0 to 2A<br>CH3: 0 to -30V/0 to 2A                          |
| OVP/OCP   | CH1: 1mV to 33V/1mA to 3.3A<br>CH2: 1mV to 33V/1mA to 3.3A<br>CH3: 1mV to 6V/1mA to 3.3A |              | CH1: 10mV~33V/1mA~3.3A<br>CH2: 10mV~33V/1mA~3.3A<br>CH3: 10mV~6V/1mA~3.3A | CH1: 0.1V to 8.8V/0.1A to 5.5A<br>CH2: 0.1V to 33V/0.1A to 2.2A<br>CH3: 0.1V to -33V/0.1A to 2.2A |
| Load Regulation Rate ±(Output Percentage + Offset)  |  |              |   |   |
| Voltage   | <0.01%+2mV   |              |   |   |
| Current   | <0.01%+250uA   |              |   |   |
| Linear Regulation Rate ±(Output Percentage + Offset)  |  |              |   |   |
| Voltage   | <0.01%+2mV   |              |   |   |
| Current   | <0.01%+250uA   |              |   |   |
| Ripples and Noise (20Hz to 20MHz)   |  |              |   |   |
| Normal Mode Voltage   | <350µVrms/2mVpp  |              |   |   |
| Normal Mode Current   | <2mArms  |              |   |   |
| Common Mode Current   | <1.5µArms  |              |   |   |
| Annual Accuracy <sup>[1]</sup> (25°C ±5°C) ±(Output Percentage + Offset)  |  |              |   |   |
| Programming   | Voltage  | 0.05% + 10mV |   | 0.1%+20mV   |
|   | Current  | 0.2% + 10mA  |   | 0.2%+10mA   |
| Readback  | Voltage  | 0.05% + 5mV  |   | 0.1%+20mV   |
|   | Current  | 0.15%+ 5mA   |   | 0.2%+10mA   |
| Resolution  |  |              |   |   |
| Programming   | Voltage  | 1mV          | 10mV<br>With high-resolution option:<br>1mV                               | 1mV   |
|   | Current  | 1mA          | 1mA   | CH1: 0.3mA<br>CH2/CH3: 0.1mA  |
| Readback  | Voltage  | 0.1mV        | 10mV<br>With high-resolution option:<br>0.1mV                             | 0.1mV   |
|   | Current  | 0.1mA        | 1mA<br>With high-resolution option:<br>0.1mA                              | 0.1mA   |
| Display   | Voltage  | 1mV          | 10mV<br>With high-resolution option:<br>1mV                               | 1mV   |
|   | Current  | 1mA          | 10mA<br>With high-resolution option:<br>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 <sup>[2]</sup>  |  |              |   |   |
| <100ms  |  |              |   |   |
| Temperature Coefficient per°C (Output Percentage + Offset)  |  |              |   |   |
| Voltage   | CH1/CH2: 0.01%+5mV<br>CH3: 0.01%+2mV   |              |   | 0.01%+2mV   |
| Current   | 0.01%+2mA  |              |   | 0.02%+3mA   |
| Stability <sup>[3]</sup> ±(Output Percentage + Offset)  |  |              |   |   |
| Voltage   | CH1/CH2: 0.02%+2mV<br>CH3: 0.01%+1mV   |              |   | CH1: 0.03%+1mV<br>CH2/CH3: 0.02% + 2mV  |
| Current   | 0.05%+2mA  |              |   | CH1: 0.1%+3mA<br>CH2/CH3: 0.05% + 1mA   |

### Voltage Programming Control Speed (1% within the total variation range)

|      |           |                                |                                |
|------|-----------|--------------------------------|--------------------------------|
| Rise | Full Load | CH1/CH2: <50ms<br>CH3: <11ms   | CH1: <11ms<br>CH2/CH3: <50ms   |
|      | No Load   | CH1/CH2: <25ms<br>CH3: <10ms   | CH1: <10ms<br>CH2/CH3: <25ms   |
| Fall | Full Load | CH1/CH2: <30ms<br>CH3: <13ms   | CH1: <13ms<br>CH2/CH3: <30ms   |
|      | No Load   | CH1/CH2: <400ms<br>CH3: <200ms | CH1: <200ms<br>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 and OCP)

### Mechanical

Dimensions 239mm(W) x 157mm(H) x 418mm(D)

Weight 9.0kg

### Power

AC Input (50Hz to 60Hz) 100Vac±10%, 115Vac±10%  
220Vac±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 |

### Environment

Working Temperature Full Rated Value Output: 0°C to 40°C  
Under Relatively Higher Temperature: the linearity of the output current reduces to 50% at the highest temperature 55°C

Cooling Method Fan Cooling

### Note:

- [1] The accuracy parameters are acquired via calibration under 25°C 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)                | DP831A         |
|                      | Programmable DC Power (3 Channels)                | DP832A         |
|                      | Programmable DC Power (3 Channels)                | DP832          |
| Standard Accessories | Power cord  | -              |
|                      | USB data cable                                    | CB-USB-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 )        | DP8-HI-RES     |
|                      | 4 Lines Trigger In&Out(DP832 )                    | DP8-DIGITAL-IO |
|                      | On-line Monitoring and analysis ( DP832 )         | DP8-AFK        |
|                      | RS232 and LAN interface ( DP832 )                 | DP8-INTERFACE  |
|                      | USB to GPIB Converter                             | USB-GPIB       |
|                      | Rack Mount Kit                                    | RM-DP-1        |

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