

Chapter 5 Specifications

All the technical specifications are guaranteed when the instrument has been working for more than 30 minutes under the specified operating temperature.

DC Output (0°C to 40°C)		
Model	Voltage/Current Rating	OVP/OCP
DP711	0 V to 30 V/0 A to 5 A	0.01 V to 33 V/0.01 A to 5.5 A
DP712	0 V to 50 V/0 A to 3 A	0.01 V to 55 V/0.01 A to 3.3 A

Load Regulation, ±(% of Output + Offset)	
Voltage	<0.01% + 2 mV
Current	<0.01% + 2 mA

Line Regulation, ±(% of Output + Offset)	
Voltage	<0.01% + 2 mV
Current	<0.01% + 2 mA

Ripple and Noise (20 Hz to 20 MHz)		
Model	Normal Mode Voltage	Normal Mode Current
DP711	<500 μ Vrms/3 mVpp	<2 mArms
DP712	<500 μ Vrms/4 mVpp	

Annual Accuracy ^[1] (25°C ± 5°C), ±(% of Output + Offset)		
Programming	Voltage	0.05% + 20 mV
	Current	0.2% + 10 mA
Readback	Voltage	0.05% + 20 mV
	Current	0.2% + 20 mA

Resolution		
Programming	Voltage	Standard: 10 mV High resolution option installed: 1 mV
	Current	Standard: 10 mA High resolution option installed: 1 mA
Readback	Voltage	Standard: 10 mV High resolution option installed: 1 mV
	Current	Standard: 10 mA High resolution option installed: 1 mA
Display	Voltage	Standard: 10 mV High resolution option installed: 1 mV
	Current	Standard: 10 mA High resolution option installed: 1 mA

Transient Response Time

Less than 50 μ s for output voltage to recover to within 15 mV following a change in output current from full load to half load or from half load to full load.

Command Processing Time^[2]

<100 ms

OVP/OCP

Accuracy, \pm (% of Output + Offset)	0.5% + 0.5 V/0.5% + 0.5 A
OVP Activation Time	<10 ms (OVP>1 V)

Voltage Programming Speed^[3] (within 1% of the total variation range)

Up	Full Load	150 ms
	No Load	100 ms
Down	Full Load	30 ms
	No Load	450 ms

Temperature Coefficient^[4], \pm (% of Output + Offset)

Voltage	0.01% + 2 mV
Current	0.02% + 3 mA

Stability^[5], \pm (% of Output + Offset)

Voltage	0.02% + 2 mV
Current	0.1% + 3 mA

Mechanical

Dimensions	140 mm (W) x 202mm (H) x 332 mm (D)
Weight	Net: 6.9 kg

Power

AC Input Power (50 Hz to 60 Hz)	100 Vac \pm 10%, 120 Vac \pm 10%, 220 Vac \pm 10%, and 240 Vac \pm 10% (max: 253 Vac)
Maximum Input Power	400 VA

Interface

RS232	1 (Male)
-------	----------

Environment

Cooling Method	Fan Cooled
Operating Temperature	0°C to 40°C for full rated output

Maximum Output Floating Voltage to Ground	± 240 Vdc
Storage Temperature	-40°C to 70°C
Humidity	5% to 80% RH
Altitude	Below 2,000 m

Note^[1]: The accuracy parameters are acquired through calibration under 25°C after 1-hour warm-up.

Note^[2]: The maximum time required for the output to begin to change after receiving the APPLy and SOURce commands.

Note^[3]: Exclude the command processing time.

Note^[4]: Maximum change in output/readback per °C after a 30-minute warm-up.

Note^[5]: Following a 30-minute warm-up, change in output over 8 hours under constant load, line, and ambient temperature.