

## Appendix A: Specifications

Tables 2 through 5 list the specifications of the PS2520, PS2520G, PS2521, and PS2521G Programmable Power Supplies.

**Table 2: Operating Characteristics**

Name	Characteristic
Independent Output Ratings	PS2520 and PS2520G: two outputs 0 to 36 V, 0 to 1.5 A and one output 0 to 6 V, 3 A  PS2521 and PS2521G: two outputs 0 to 20 V, 0 to 2.5 A one output 0 to 6 V, 0 to 5 A
Series Tracking Output Rating	PS2520 and PS2520G: 0 to 72 V, 0 to 1.5 A PS2521 and PS2521G: 0 to 40 V, 0 to 2.5 A
Parallel Tracking Output Rating	PS2520 and PS2520G: 0 to 36 V, 0 to 3 A PS2521 and PS2521G: 0 to 20 V, 0 to 5 A
Maximum OVP	PS2520 and PS2520G: 38.5 V on 36 V outputs 7.0 V on 6 V output  PS2521 and PS2521G: 22.5 V on 20 V outputs 7.0 V on 6 V output
Load Effect	Voltage: $\leq 3$ mV, rear output; $\leq 6$ mV, front output Current: $\leq 3$ mA ( $\leq 6$ mA if rating current $> 3.5$ A)
Source Effect	Voltage: $\leq 3$ mV Current: $\leq 3$ mA
Resolution	Voltage: 10 mV (20 mV if rating voltage $> 36$ V) Current: 1 mA (2 mA if rating current $> 3.5$ A) OVP: 10 mV (20 mV if rating voltage $> 36$ V)

**Table 2: Operating Characteristics (Cont.)**

<b>Name</b>	<b>Characteristic</b>
Program Accuracy (25 ± 5° C)	Voltage: ≤ 0.05% + 25 mV (+50 mV if rating voltage > 36 V) Current: ≤ 0.2% + 10 mA OVP: ≤ 2% + 0.6 V
Ripple and Noise 20 Hz to 20 MHz	Voltage Ripple: 1 mV <sub>RMS</sub> /3 mV <sub>p-p</sub> Voltage Noise: 2 mV <sub>RMS</sub> /30 mV <sub>p-p</sub> Current: ≤ 3 mA <sub>RMS</sub> (≤ 5 mA <sub>RMS</sub> if rating current > 3.5 A)
Temperature Coefficient (0° C to 40° C)	Voltage: ≤ 100 ppm + 3 mV Current: ≤ 150 ppm + 3 mA
Readback Resolution	Voltage: 10 mV (20 mV if rating voltage > 36 V) Current: 1 mA (2 mA if rating current > 3.5 A)
Readback Accuracy (25 ± 5° C)	Voltage: ≤ 0.05% + 25 mV (+50 mV if rating voltage > 36 V) Current: ≤ 0.2% + 10 mA
Response Time	10% to 90% (up): ≤ 100 ms 90% to 10% (down): ≤ 100 ms (≥ 10% rating load)
Readback Temperature Coefficient	Voltage: ≤ 100 ppm + 10 mV (+20 mV if rating voltage > 36 V) Current: ≤ 150 ppm + 10 mA
Drift <sup>1</sup>	Voltage: ≤ 0.03% + 6 mV Current: ≤ 0.1% + 6 mA
Series Tracking	
tracking error	Voltage: ≤ 0.1% + 50 mV
load effect	Voltage: ≤ 50 mV
source effect	Voltage: ≤ 3 mV

**Table 2: Operating Characteristics (Cont.)**

<b>Name</b>	<b>Characteristic</b>
Parallel Tracking	
program accuracy (25 ± 5° C)	Voltage: ≤ 0.05% + 25 mV (+50 mV if rating voltage > 36 V)  Current: ≤ 0.2% + 20 mA OVP: ≤ 2% + 0.6 V
load effect	Voltage: ≤ 3 mV rear output (≤ 6 mV front output)  Current: ≤ 6 mA (≤ 12 mA if rating current > 3.5 A)
source effect	Voltage: ≤ 3 mV  Current: ≤ 6 mA
GPIB Capability IEEE-488.2 (optional)	SH1, AH1, T6, L4, SR1, RL1, PP0, DC1, DT0, C0, E1
Memory Locations (Store and Recall)	00 – 49 (50 locations)
Timer	Setting Time: 1 to 65535 seconds  Resolution: 1 second

<sup>1</sup> **Change in output over an 8-hour interval under constant line, load, and ambient temperature following a 30-minute warmup.**

**Table 3: Electrical Characteristics**

<b>Name</b>	<b>Description</b>
Power Source	100, 120, and 220 VAC, ± 10% 50 – 60 Hz 240 VAC -10% + 4.2% 50 – 60 Hz
Safety	ETL listed to UL 1244 Certified to CSA-C22.2 No 231-M89

**Table 4: Environmental Characteristics**

<b>Name</b>	<b>Description</b>
Storage Temperature	-10° C to +70° C (+14° F to +158° F)
Operating Temperature	0° C to +40° C (+32° F to +104° F)

**Table 5: Physical Characteristics**

<b>Name</b>	<b>Description</b>
Overall Dimensions	Width: 255 mm (10.0 in) Height: 145 mm (5.7 in) Depth: 346 mm (13.6 in)
Weight	10 kg (22 lbs)