# Sorensen XEL Series

## 90W Linear Benchtop Supply with V-Span

- Ideal for engineering lab use
- Digital features with analog controls
- Remote control for bench & system application
- S-Lock: Set and lock the voltage
- V-Span: user-defined voltage limits
- Small benchtop footprint


**48–180 W**

**6–250 V**

**370 mA–6 A**

| | ~ | 115 | 230 |
|---|---|---|---|

LXI USB GPIB RS232

The Sorensen XEL benchtop power supply is as easy to use as simple analog power supplies but offers the flexibility of advanced digital features. The user interface allows easy control with single-turn knobs including a fine control knob for voltage.

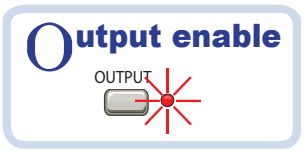
This easy-to-use interface is complemented by V-Span, S-lock and Output Enable functions. V-Span allows the user to set a maximum and minimum value over which the knob control operates. This provides more precise control over the voltage as the knob operates over a narrow range as well as protecting devices under test by limiting the maximum voltage. S-Lock provides an easy method to output a regulated fixed voltage. Output Enable lets the user setup the desired voltage and current levels prior to actually turning on the output. All of these features in a laboratory bench supply are only found in the XEL series.

At 4.2x11.3 inches (108mm x 287mm), the XEL series occupies the least bench top space of any programmable power supply. The dual output model offers 90W per channel, also in a compact 8.4x11.3 inches (216mm x 287mm)

The dual output XEL30-3D is two 30V/3A power supplies in one unit. All of the features of the single output version are also in the dual output. The outputs are fully independent and isolated. Plus, the outputs can be operated in 4 modes: isolated, tracking, ratio tracking and true parallel. In addition, the outputs can be enable (on/off) independently or synchronously.

The programming "P" option includes LXI Class C Ethernet, USB, RS-232 and analog remote control. The option "PG" inlcudes GPIB programming plus all of the interface methods included in the "P" option described above.



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# XEL Series : Product Specifications

| Output Ratings | | | | | | | |
|---|---|---|---|---|---|---|---|
| Model | XEL 6-8 | XEL 15-5 | XEL 30-3 | XEL 60-1.5 | XEL 30-3D | XEL 120-0.75 | XEL 250-0.37 |
| Voltage (VDC) | 0-6 | 0-15 | 0-30 | 0-60 | 0-30 | 0-120 | 0-250 |
| Current (ADC) | 0.1 mA - 8 A | 0.1 mA - 5 A | 0.1 mA - 3 A | 0.1 mA - 1.5 A | 0.1 mA - 3 / 6 A | 0.01 mA - 750 mA | 0.01 mA - 375 mA |
| Power (W) | 48 | 75 | 90 | 90 | 90/180 | 90 | 90 |

| Output Performance[1] | | |
|---|---|---|
| Voltage Meter | 4-digit meter | |
| Accuracy, Resolution | 0.1% + 10mV, 10mV | 0.1% + 100mV, 100mV |
| Current Meter | 4-digit meter | |
| Accuracy | ± (0.3% + 0.005A) to 3A, ± (0.5% + 0.005A) to 6A, ± (0.3% + 0.5mA) on 500mA range | ± (0.3% + 0.1mA), ± (0.3% + 0.01mA) on 75mA range |
| Resolution | 1mA (0.1mA on 500mA range) | 0.1mA (0.01mA on 75mA range) |
| Low Current | < 500mA | < 75mA |
| Accuracy, Resolution | 0.3% + 0.3mA, 0.1mA | 0.3% + 0.03mA, 0.01mA |
| Voltage Ripple (20MHz bandwidth) | 0.4 mVRMS | 2mV |
| Voltage Noise (20MHz bandwidth) | 2 mVpp | 10mVpp |
| Current Ripple | < 0.2 μARMS (< 40 μARMS on 500mA range) | < 10 μARMS (< 1 μARMS on 75mA range) |
| **Digital Programming Performance Option** | | |
| Voltage Accuracy, Resolution | ± (0.05% + 10mV), 1mV | ± (0.05% + 50mV), 10mV |
| Current Accuracy | ± (0.3% + 0.005A) to 3A, ± (0.5% + 0.005A) to 6A, ± (0.3% + 0.5mA) on 500mA range | ± (0.3% + 0.1mA), ± (0.3% + 0.01mA) on 75mA range |
| Current Resolution | 0.1mA (0.01mA on 500mA range) | 0.1mA (0.01mA on 75mA range) |
| **Load Regulation** | | |
| Voltage | 0.01% + 4.5mV with remote sense up to 0.5V line drop | |
| Current | 0.01% + 500μA Specification applies for line resistance <0.5ohms when remote sense is used | |
| **Line Regulation (10% line change)** | | |
| Voltage | 0.01% + 2.0mV | 0.01% + 10mV |
| Current | 0.01% + 250μA | 0.01% + 50μA |
| Transient Response | < 250μs to within 50mV of setting (90% load change) | |

[1] 120V & 250V models have a slightly modified performance specification. See data sheet or manual on web site for complete specifications

| Common | |
|---|---|
| AC Input | 115 VAC ± 10%, 50/60Hz ( 230VAC available as option MHV ) (100VAC available as option MJV) |
| Power | 280VA maximum |
| Operating Temperature | 5-40 °C, 20-80% RH |
| Storage Temperature | -40 to +70 °C |
| Weight | 9.9 lbs. / 4.5 kgs, XEL30-3D: 18.8 lbs. / 9 kgs |
| Size (WxHxD) | 4.2x5.2x11.3 inches / 107x131x288 mm, XEL30-3D: 8.4x5.2x11.3 inches / 214x131x288 mm |

| Options | |
|---|---|
| MHV | Configured for 230VAC input |
| MJV | Configured for 100VAC input |
| Programming "P" | LXI Class C Ethernet, USB, RS-232 and remote analog ** |
| Programming "PG" | GPIB 488.2, LXI Class C Ethernet, USB, RS-232 and remote analog ** |
| RM - XPDG-3 | Rackmount Kit |

| Model Numbers | |
|---|---|
| XEL6-8 | 6 V, 8 A |
| XEL15-5 | 15 V, 5 A |
| XEL30-3 | 30 V, 3 A |
| XEL60-1.5 | 60 V, 1.5 A |
| XEL30-3D | 30 V, 3 A Dual Output. The outputs are fully independent and isolated. |
| XEL120-0.75 | 120V, 0.75A |
| XEL250-0.37 | 250V, 0.37A |

* Current accuracy in parallel mode = 0.5% + 3mA ** Remote Analog not available on dual "D" ouput option