



1100 Series Power Supplies



1100 Series Power Supplies from Excelitas are designed for high energy capacitor discharge service with any guided arc bulb-type flashlamp.

The 1100 Series Power Supplies from Excelitas Technologies are designed to obtain optimum performance from the 1100 Series High-Stability Short Arc Xenon Flashlamps and Lite-Pac® Trigger Modules. These power supplies are well regulated, have low ripple, and are DC input operated. Each power supply contains the circuits to charge the discharge capacitor as well as the trigger switching circuits required to operate the Lite-Pac.

Power supply requirements vary by application and discharge power levels. Excelitas Technologies offers several standard units to operate all Flashlamps and Lite-Pacs.

Key Features

- Compact
- 10 or 20 Watts average power
- Regulated with low ripple
- Programmable output voltage
- Up to 1000 Hz flash rate

Applications

- Absorption analysis
- Immunoassay modules
- Fluorimetry
- Spectroradiometry
- Liquid and gas chromatography
- Colorimetry
- UV-VIS-NIR applications
- Machine vision

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| Electrical Inputs | | | |
|-------------------------------|--|-------------------|-------------------|
| | PS-1105 | PS-1110 | PS-1120 |
| Voltage | 11-14 VDC | 11-28 VDC | 15-28 VDC |
| DC Current | 1.4 Amps @ 12 VDC | 1.3 Amps @ 12 VDC | 1.4 Amps @ 24 VDC |
| Peak Current | 3.5 Amps @ 12 VDC | 3.5 Amps @ 12 VDC | 3.5 Amps @ 24 VDC |
| Trigger | +5V, 20-50mA peak input, 10-100µs pulse width, leading edge trigger. Optically isolated internal series resistor = 150Ω. | | |
| $V_{ref} (V_o/V_{ref} = 100)$ | N/A | 4.5 – 6.0 VDC | 4-10 VDC |
| EMI Suppression | No | Yes ¹ | Yes ² |

¹ Inductor and filter capacitor for power input. All inputs through shielded connector. Internal (shielded) output connector.

² Same as ¹ but with full filtering on power lines. (common-mode inductor; capacitive coupling to ground)

| Electrical Outputs (Discharge) | | | |
|--------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | PS-1105 | PS-1110 | PS-1120 |
| Voltage (V_o) | 600 ± 2% VDC | 450-600 ± 2% VDC | 400-1000 ± 2% VDC |
| Power Output | 10 Watts max. | 10 Watts max. | 20 Watts max. |
| Charge Rate, minimum | 10j/sec (12V input , 600V output) | 10j/sec (12V input , 600V output) | 20j/sec (24V input , 600V output) |
| Line Regulation | ± 1% | | |
| Ripple ¹ | 1% | 0.5% | 0.5% |
| Internal Discharge Capacitor | 0.005µF | 0.1µF | 0.1µF ² |
| Recharge Delay | 200µsec | | |

¹ Peak to peak maximum with standard internal discharge capacitor at maximum output.

² For the PS-1120 standard value is 0.1µF. 0.25µF and 0.5µF available.

| Electrical Outputs (Trigger) | | | |
|------------------------------|--------------|---------|---------|
| | PS-1105 | PS-1110 | PS-1120 |
| Trigger Voltage | 175 ± 15 VDC | | |
| Trigger Capacitor | 0.1 µF | | |
| Trigger Rate, maximum | 300 Hz | 300 Hz | 1000 Hz |

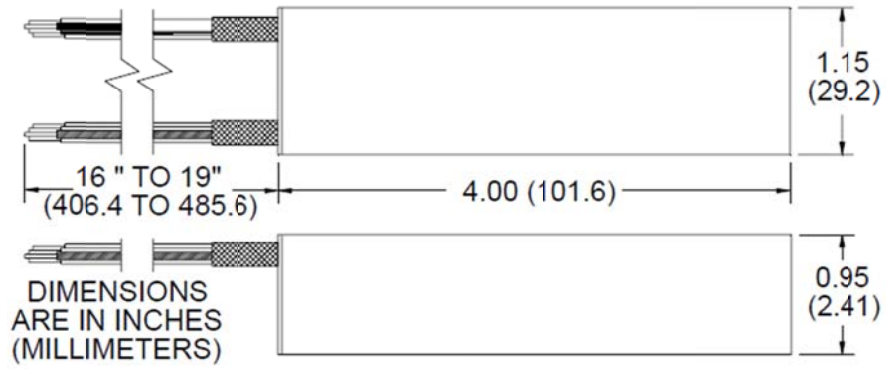
| Mechanical Properties | | | |
|-----------------------|-----------------------|--------------------------|--------------------------|
| | PS-1105 | PS-1110 | PS-1120 |
| Weight | 6.5 oz. (180g) | 14.5 oz. (410g) | 22.5 oz. (635g) |
| Dimensions | 1.15" x 0.95" x 4.05" | 5.75"L x 2.19"W x 1.50"H | 5.85"L x 3.63"W x 1.70"H |
| Input Connector | N/A (Leads) | 9 Pin D-Sub | 9 Pin D-Sub |
| Output Connector | N/A (Leads) | Wago Terminal Strip | Wago Terminal Strip |
| Enclosure | Plastic (Potted) | Metal | Metal |

| Environmental | | | |
|-----------------------|----------------------------------|---------|---------|
| | PS-1105 | PS-1110 | PS-1120 |
| Operating Temperature | +32°F to +104°F (0°C to +40°C) | | |
| Storage Temperature | -40°F to +194°F (-40°C to +90°C) | | |

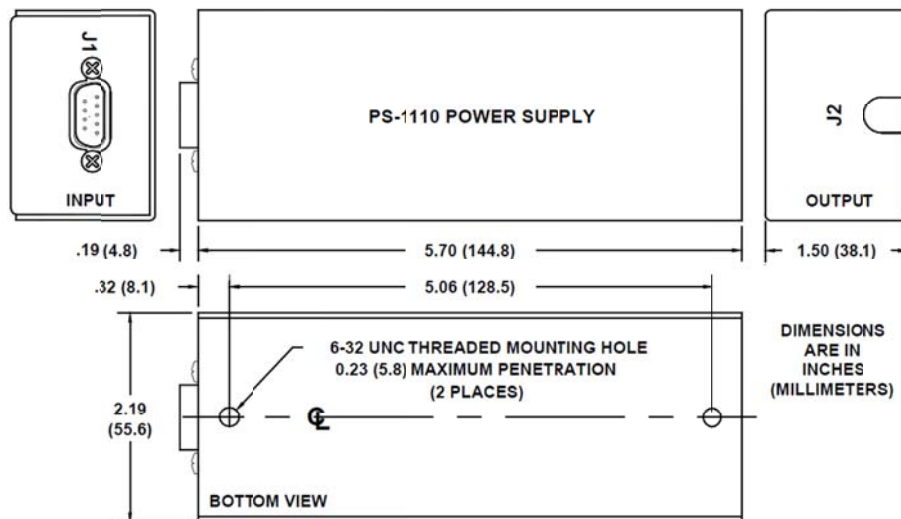
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Mechanical Dimensions

PS-1105 Outline

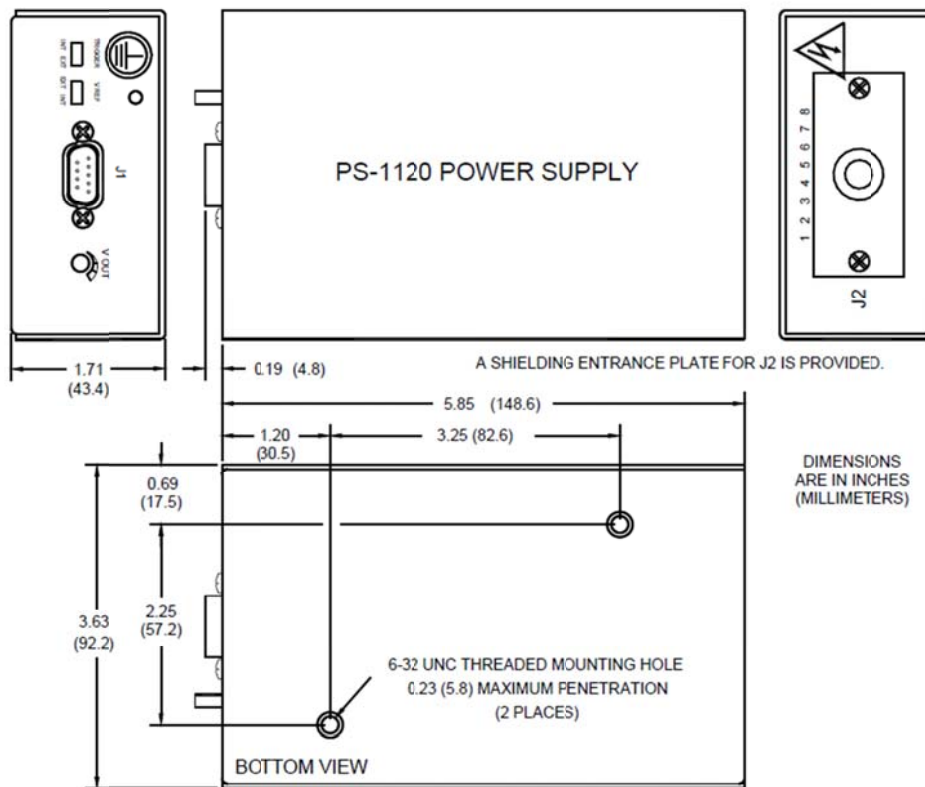


PS-1110 Outline



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PS-1120 Outline



About Excelitas Technologies

Excelitas Technologies is a global technology leader focused on delivering innovative, customized solutions to meet the lighting, detection and other high-performance technology needs of OEM customers.

From medical lighting to analytical instrumentation, clinical diagnostics, industrial, safety and security, and aerospace and defense applications, Excelitas Technologies is committed to enabling our customers' success in their specialty end-markets. Excelitas Technologies has approximately 3,000 employees in North America, Europe and Asia, serving customers across the world.

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