



Power Supplies

60 and 120 Watt Capacitor Charger with Trigger Circuits



Capacitor-charging power supplies from Excelitas are designed to operate high-power short arc and linear type Xenon flashlamps.

These capacitor-charging power supplies from Excelitas Technologies are designed to operate the high power short arc and linear type Xenon flashlamps. They are well regulated and have low ripple output characteristics. The wide range of output voltages make these power supplies ideal for applications requiring several levels of flashlamp discharge energy.

Each power supply contains the circuits to charge the discharge capacitor as well as the trigger switching circuits. When coupled with an Excelitas Technologies Trigger Transformer and Flashlamp, the power supplies provide an efficient and reliable source of pulsed power.

All models have opto-isolated trigger initiation inputs and the output voltage may be adjusted either manually or by a low voltage DC reference source. Other characteristics include KHz discharge capability and rugged Lightweight construction. The PS-500AC is “CE” certified to “safety” and “EMC” directives.



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Electrical Inputs			
	PS-450 DC	PS-500 AC	PS-550 AC
Voltage	15-28 VDC	11-28 VDC	15-28 VDC
Current	4 Amps avg. @ 24 VDC	1.3 Amps RMS max. @ 115VAC	2.5 Amps RMS max. @ 115 VAC
Trigger	+5V, 20-50mA peak input, 10-100µs pulse width, leading edge trigger. Optically isolated internal series resistor = 150Ω.		
Reference Voltage (V _{ref})	2-10 VDC	3-10 VDC	3-10 VDC
EMI Suppression	Yes ¹	Yes ²	Yes ³

¹ Inductor and filter capacitor at (+) input.

² CE Certified to "EMC" and "safety" directives

³ Common mode choke/capacitor filtering on AC input lines

Electrical Outputs (Discharge)			
	PS-450 DC	PS-500 AC	PS-550 AC
Maximum Power	60 Watts	60 Watts	120 Watts
Low Range Voltage ¹	100-500 VDC	225-750 VDC	225-750 VDC
High Range Voltage ¹	200-1000 VDC	450-1500 VDC	450-1500 VDC
Line Regulation	±1%		
Ripple (Peak-to-Peak)	0.5% @ 600V, 1µF	0.5% @ 1000V, 1µF	1.0% @ 1000V, 1µF
Internal Discharge Capacitor	0.05 µF		
Recharge Delay	150 µsec typ.	200 µsec typ. ²	500 µsec typ. ²
Internal Output Bleeder	1.35 MΩ	6.0 MΩ	6.0 MΩ
Charge Rate - Minimum	75 J/sec @ 1KV, 24V	60 J/sec @ 1KV	120 J/sec @ 1KV

¹ Output voltage to reference voltage ratio. PS-450 DC: 50:1 ± 3% low range, 100:1 ± 3% high range. PS-500 AC/550 AC: 75:1 ± 3% low range, 150:1 ± 3% high range

² Internal adjustment. Delay range to approximately 3 msec.

Electrical Outputs (Trigger)					
	PS-450 DC	PS-450 DC-1	PS-500 AC	PS-500 AC-1	PS-550 AC
Trigger Voltage	175 ± 15 VDC	165 ± 15 VDC	175 ± 15 VDC	165 ± 15 VDC	175 ± 15 VDC
Trigger Capacitor	0.47 µF	0.22 µF	0.47 µF	0.22 µF	0.47 µF
Trigger Rate -Maximum	1000 Hz	1000 Hz	1000 Hz	1000 Hz	2000 Hz
Flashlamp Type	Linear	Short-arc	Linear	Short-arc	Linear

Mechanical Properties			
	PS-450 DC	PS-500 AC	PS-550 AC
Weight	1.3 lbs (0.59 Kg)	3.4 lbs (1.6 Kg)	3.1 lbs (1.4 Kg)
Input Connector	Wago Terminal Strip	IED AC Inlet/Filtered D-Sub	Wago Terminal Strip
Output Connector	Wago Terminal Strip	Wago Terminal Strip	Wago Terminal Strip
Enclosure	Metal		

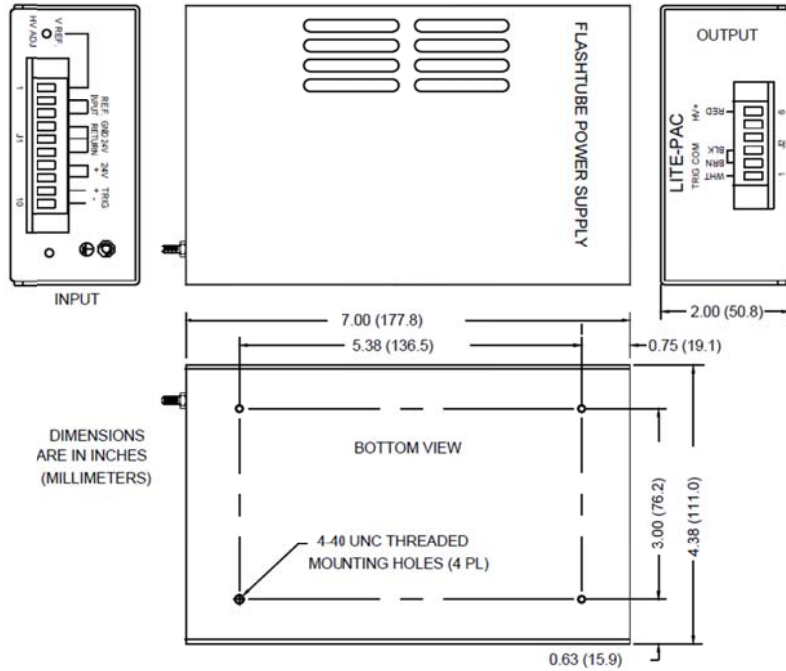
Environmental			
	PS-450 DC	PS-500 AC	PS-550 AC
Operating Temperature	+32°F to +104°F (0°C to +40°C)		
Storage Temperature	-40°F to +194°F (-40°C to +90°C)		

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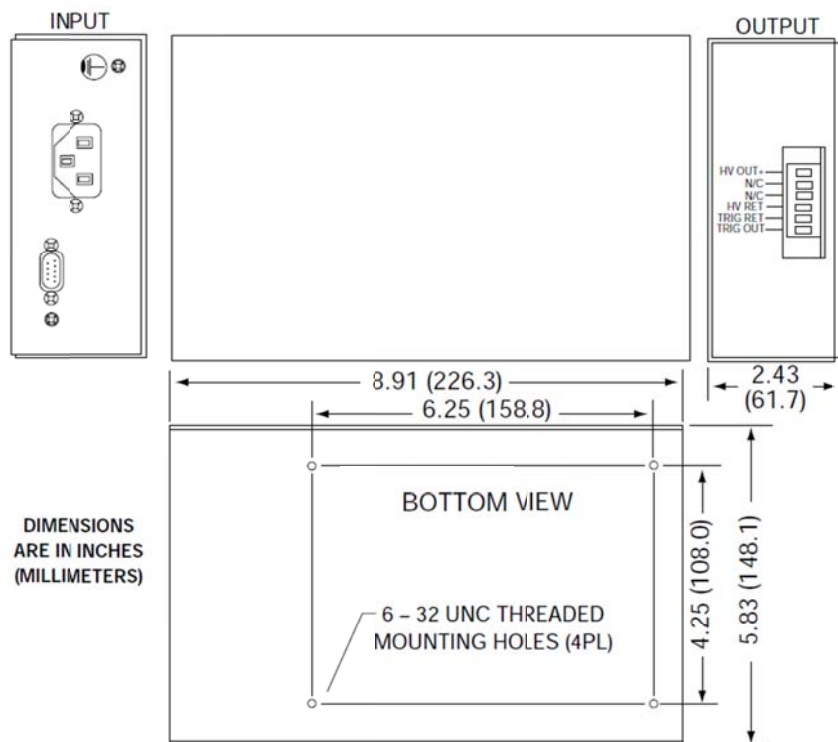
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Mechanical Dimensions

PS-450 DC Outline



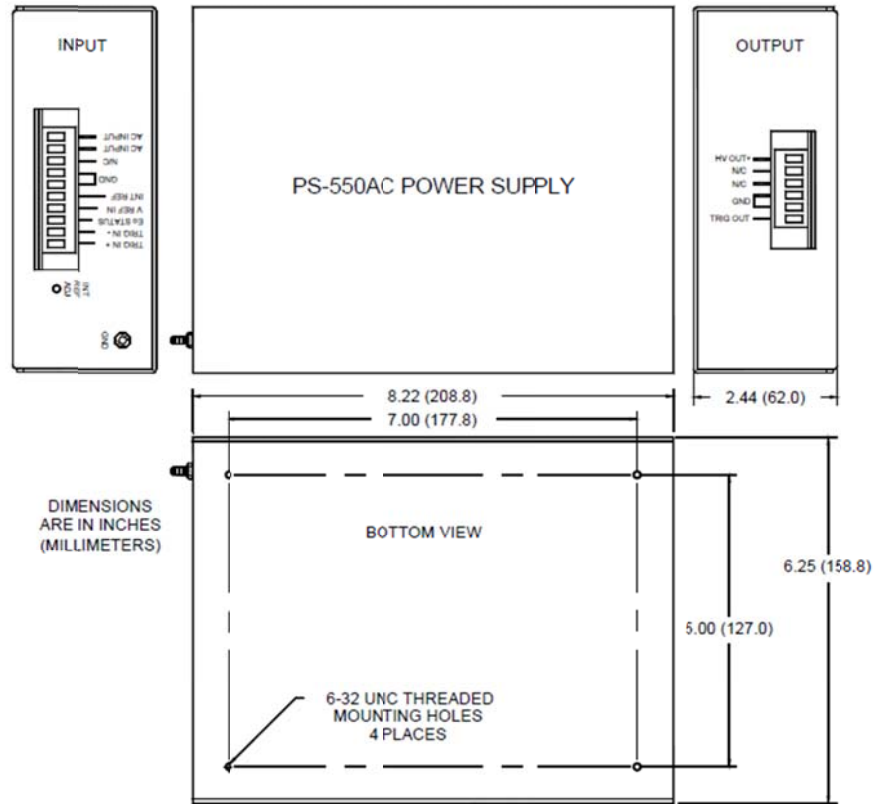
PS-500 AC Outline



Power Supplies

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PS-550 AC 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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