



YAG DRIVE 6KW - 8KW - 10KW SWITCHING POWER SUPPLY

GENERAL DESCRIPTION

The ESKI series of power supplies is designed to power CW pumped solid state lasers. Utilizing 20K HZ pulse-width-modulation technology the ESKI's provide a regulated current with a continuously variable output. Stable output and long lamp life is ensured as the output current is regulated to within 0.1% regardless of line fluctuations. Ripple is a maximum of 0.3% peak-to-peak, and can be further reduced by a factor of 3:1 with optical feedback. The use of insulated gate bi-polar transistors as switching elements provides high reliability, high efficiency, high packaging density and very light weight.

This power supply also provides the boost, or open circuit voltage required for lamp start, and incorporates a high voltage igniter assembly which is either pulsed automatically when the power supply is turned on or by customer control.

The power supply is of the non-line isolated type which reduces cost and weight but does require both lamp terminals to be insulated from ground. All controls, input programming and feedback are line isolated. Supply circuitry is highly isolated from chassis so that leakage currents are within medical application limits.

GENERAL SPECIFICATIONS

- AC INPUT:** 208/220V, 3 phase, 47-63 Hz
22 Amp maximum, no-neutral standard
Optional 208-220V, 1 phase, 47-63 Hz
35 Amp maximum
Other voltages available by special request.
- REGULATION:** Line 0.1% over range of the input
Load 0.1% for a 25% load change
- RIPPLE:** 0.3% peak-to-peak current ripple into a resistive load at full output, 500 Hz and lower. With optical feedback, the light ripple can be reduced further.
- EFFICIENCY:** 92%
- RESPONSE TIME:** Approximately 1 ms for a 50% current programming change.
- STABILITY:** Maximum deviation in output current for an eight hour period is 0.1% under conditions of constant line, load and temperature.
- TEMPERATURE COEFFICIENT:** Output current is 0.05% of rated output current.

- TEMPERATURE:** Operating-continuous duty, performance within specifications in any ambient temperature between 0°C and 50°C with appropriate derating above 50°C. Units may be safely stored at temperatures of -55°C to 85°C.
- COOLING:** Cooling air driven by a long life fan enters the enclosure at the front and exits at the sides and rear.
- ISOLATION:** Non-line isolated power supply circuitry is fully isolated from chassis.
- LEAKAGE:** Per UL 1012 with standard RFI filter.
- CONTROLS:** All ESKI power supplies are provided with U/L listed circuit breaker which combines primary circuit protection with on/off control. Current adjustment is via a single turn potentiometer located on the front panel. Indication of the output current is provided by an ammeter mounted on the front panel. Indication of lamp voltage is provided by a voltmeter mounted on the front panel.
- PROTECTIVE CIRCUITS:** Adjustable over-current kill circuit drops output to zero in case the current regulation goes out of control. Automatic reset over-temperature switch disables power output.
- PROGRAMMING:** All ESKI power supplies may be remotely controlled via a connector for current, power supply enable, current feedback, ignition and interlock functions.
- DIMENSIONS:** 5¼"H x 19"W x 15"D
- WEIGHT:** 45 pounds
- WARRANTY:** 2 years

HOW TO ORDER

ESKI XXX-XX-X-XX-X					
PRODUCT LINE		CURRENT			
VOLTAGE					
AC INPUT VOLTAGE		METERING		IGNITION	
1	208V/220V 50/60HZ 3 Ø (STD)	A	ANALOG AM	A	AUTOMATIC
2	208V/220V 50/60HZ 1 Ø	2A	ANALOG AM-VM	M	MANUAL
3	200V 50/60HZ 1 Ø	D	DIGITAL AM		
4	200V 50/60HZ 3 Ø	2D	DIGITAL AM-VM		
5	380V 50/60HZ 3 Ø (5¼" pkg)	N	NO METERS		
6	220/380V 50/60HZ 3 Ø				
7	200V 1 Ø / 220V 3 Ø				
8	120V 1 Ø				
9	380V 50/60HZ 3 Ø (7" pkg)				

Also available for OEM applications is the YD series in a 4, 6, and 8KW configuration with optional powerfactor correction.



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"Specialists in Power Conversion"

Call: 908-922-9300

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ESKI REV. 4 2.5M 3/93