



Arc Lamp CW Laser Power Supply

Model 2025



Description

The product is a 19" CW Arc Lamp power supply in size 3U and is designed for operation from USA 208 to 220V 3-ph, 60Hz line supply, for use to output power levels of 10kW.

The unit features 'integrated boost', 'series trigger' and incorporates many safety features.

The unit has been designed as a remote only replacement for 'ESKI 250-40-1' power supplies when used in Quantronix Lamp systems.

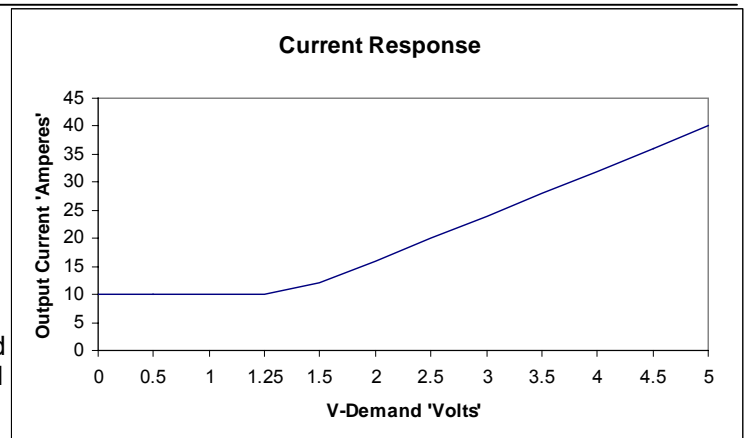
A flexible design approach has produced a unit which has become an industry standard with small laser system integrators or as a replacement product for a refurbished laser system.

Highlights

- 10kW output power
 - 40A Maximum output current
 - Robust Design using IGBT technology
 - Rear panel remote control
 - Fully RoHS compliant
 - After sales engineering support.
 - Ease of maintenance.
 - 2 year warranty
- Compliant with the following safety standards;
 - EN61010-1
 - Compliant with the following EMC standards;
 - EN61000-6-2
 - EN61000-6-4
 - EN61000-3-2
 - EN61000-3-3
 - ENV50204

Electrical Characteristics

Line Input 3-Phase	190 – 255 VAC
AC Supply Tolerance	± 10%
Frequency	47 to 63Hz
Power Factor (Full Load)	≥0.98
Crest Factor (Full Load)	≤1.45
Output Ripple (Full Load)	1% (3% peak to peak)
	1kHz Band Width
Line Regulation	0.1% for ± 10% Line Voltage Change
Output Drift	≤0.1% over 8 hour period (with constant temp, load & Line conditions)
Efficiency	≥90%
Ignition Pulse Voltage	28kV, nominal
Boost Voltage	1000V, nominal, two stage
Output Rating	40A/10kW





Control Functions

- Interlock
- Status (Volt free relay contact)
- Lamp 'ON' Answer Back (Volt free relay contact)
- 'ON/OFF'
- Output Current Demand Voltage 0-5VDC
- Output Current Monitor Voltage (5V=40A)

Rear Panel Connection

The unit is fitted with a 15-way 'D' (female) connector for remote operation.

Connector Pinout

ON/OFF (link=ON)	1	9	ON/OFF (link=ON)
V-monitor -	2	10	Interlock
Interlock	3	11	- V-demand
V-monitor +	4	12	+ Status
Answer Back	5	13	- Status
V-demand +	6	14	Trigger
NC	7	15	Trigger
Chassis earth	8		

Pins 2, 8 & 11 are common to Chassis Earth.

Safety

All control circuitry is low voltage and wiring has full galvanic isolation from the line supply.

The build standards comply with EN61010-1 and conform to the requirements of the Low Voltage Directive 73/23/EEC.

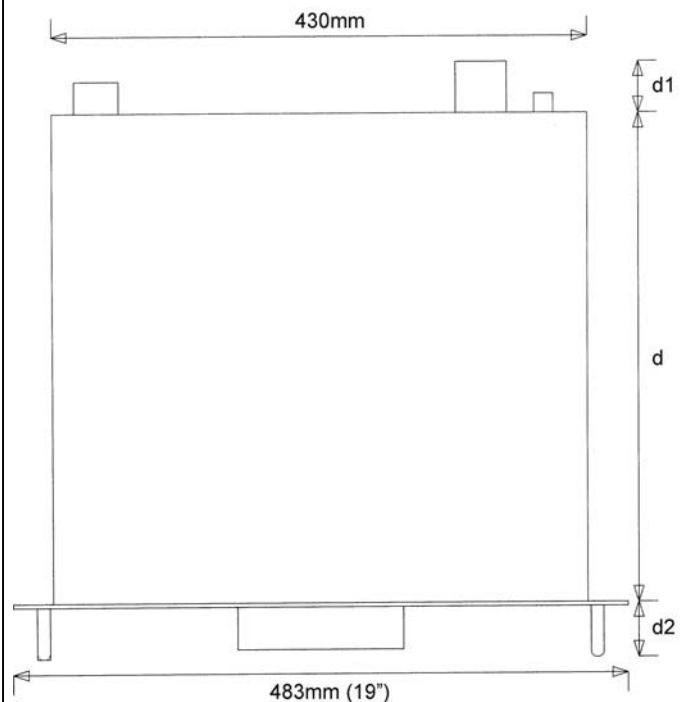
Should the lamp fail to ignite the trigger and boost voltages are removed from the output terminals.

Protection

Protection on the line input is by VDE rated circuit breaker. Output protection is included in the event of a lamp failure or connection to earth. Latching over current limit 'OCL' is included. Thermal protection is included against overload.

Mechanical

Size (mm)	Height	133 (3U)
	Depth d	380
	d1	45
	d2	42
	Weight	30kg



Cooling	Forced air, entering at the front via a Graded filter and exiting at the rear.
Temperature	Continuous in an ambient of 0°C to 60°C with appropriate de-rating above 35°C

Installation Notes

When used to replace ESKI 250-40-1 power supplies in Quantronix systems the 3-phase auto transformer **must be removed** from the system.

CAUTION

If this product is to be used in any other manufacturers system the installer must ensure that the product is suitable for the application. **Care must be taken regarding V-demand and V-monitor scaling.** No responsibility will be taken by D.Green Electronics Ltd.

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We manufacture over thirty Standard and OEM power supplies. Please contact us to discuss your requirements.

