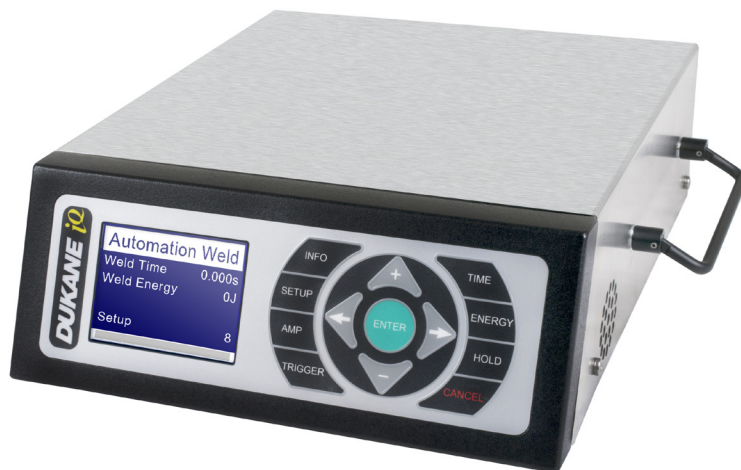


# DUKANE

## *iQ* Series ULTRASONIC POWER SUPPLIES **AL-E**

The *iQ* Series **AL-E** generator's standard configuration includes time and energy control along with patented Trigger by Power. The display is a high-resolution multicolor LCD with large easy-to-read text. One-touch hot keys along with a multilingual menu make programming and operation virtually effortless. Built-in circuit protection and visual fault status readouts ensure reliability even in the toughest work environments.

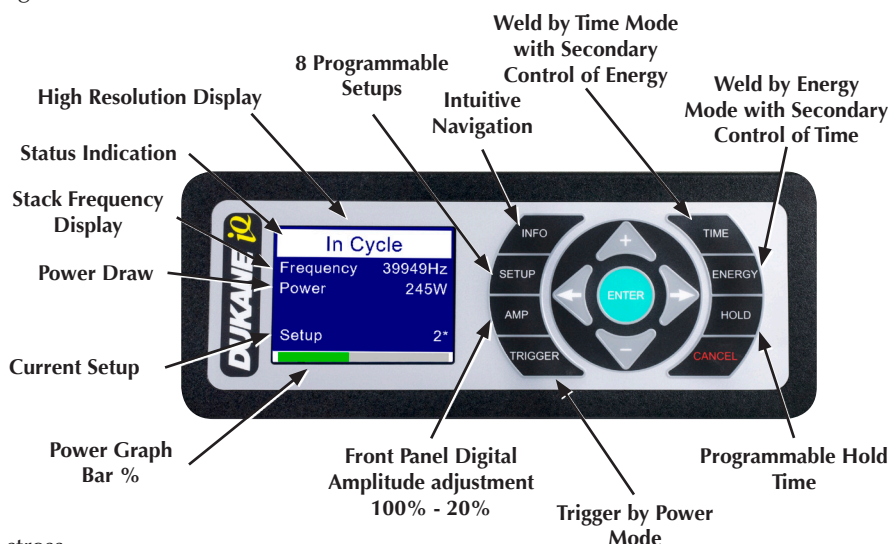
The **AL-E** version of the *iQ* Series power supplies is designed for applications that require 600 watts of power or less. It is an excellent choice for single-station, automated, continuous low-wattage or medium-duty cycle, plunge weld systems that require basic I/O communication. The power supply is compatible with Dukane's superior line of conventional converters and probes, and is also well suited for nontraditional, ultrasonic applications that require rigid-mount, compact, or wide band converters.



Available in: 20, 30, 35, & 40kHz Frequencies  
Power 600 Watts

### FEATURES

- **Trigger by Power** patented feature provides the ability to accurately start the weld process once a programmed force is achieved. Combined with Weld by Energy, this unit delivers the highest level of process repeatability of any probe system available today.
- **Time, energy and manual** weld modes.
- **Amplitude adjustment** in 1% increments from 100% to 20%.
- **Eight programmable setups.**
- **Power bar** graph with last cycle memory.
- **High-resolution multicolor LCD** with a multilingual menu for quick, easy programming.
- **Real time** in cycle menu displays frequency, power, and time.
- **100% digital controls** of all power supply functions and parameters.
- **Digi-Trac** tuning automatically tracks the resonant frequency digitally. It adjusts the output frequency to match the acoustic stack. This is done for every weld cycle and eliminates the need to manually tune the generator.
- **Ultrasonic overload protection**, with fault indication for ease of troubleshooting. The overload power limit is based on true **RMS power output level**.
- **Patented pulse-width modulation** design delivers power more efficiently with substantially less stress on electrical components for superior performance, reliability, and extended life.



## FEATURES continued

- **Linear ramp soft-start** algorithm allows the acoustic stack to be brought to operating amplitude smoothly, minimizing start-up surges and abnormal stress to the stack and power supply.
- **Line voltage regulation** compensates for line fluctuations assuring consistent amplitude.
- **Load regulation** provides constant ultrasound amplitude automatically regardless of power draw. The ultrasonic output amplitude level is held to within 1% to provide weld process consistency.
- **Highest power density** per unit volume. Most power in the smallest package at highest duty cycle.
- **0.5 ms sampling rate** is the fastest in the industry.

## System Input/Output Cable Pinout

PIN	COLOR	DESCRIPTION
1	BLK	ENABLE OUT
2	WHT	ENABLE IN
3	RED	SYSTEM OVERLOAD STATUS OUTPUT
4	GRN	ULTRASOUND ACTIVE STATUS OUTPUT
5	ORN	ANY FAULT STATUS OUTPUT
6	BLU	NO CONNECTION
7	WHT/BLK	STATUS OUTPUT COMMON
8	RED/BLK	SYSTEM READY STATUS OUTPUT
9	GRN/BLK	NO CONNECTION
10	ORN/BLK	NO CONNECTION
11	BLU/BLK	FAULT RESET INPUT
12	BLK/WHT	ULTRASOUND ACTIVATE/CYCLE START INPUT
13	RED/WHT	ISOLATED INPUT COMMON (SOURCING OR SINKING INPUTS)
14	GRN/WHT	NO CONNECTION
15	BLU/WHT	NO CONNECTION

## Generator Models

GENERATOR MODEL #	LINE VOLTAGE	FREQUENCY	WATTAGE
20AL060-1H	100-120 VAC, 50/60 Hz	20 kHz	600 W
20AL060-2H	200-240 VAC, 50/60 Hz	20 kHz	600 W
30AL060-1H	100-120 VAC, 50/60 Hz	30 kHz	600 W
30AL060-2H	200-240 VAC, 50/60 Hz	30 kHz	600 W
35AL060-1H	100-120 VAC, 50/60 Hz	35 kHz	600 W
35AL060-2H	200-240 VAC, 50/60 Hz	35 kHz	600 W
40AL060-1H	100-120 VAC, 50/60 Hz	40 kHz	600 W
40AL060-2H	200-240 VAC, 50/60 Hz	40 kHz	600 W

## Generator Dimensions

