



PLD-2S DRIVER LOCKS TWO RESONANT OPTICAL SCANNERS IN A MASTER/SLAVE MODE



DESCRIPTION:

The **PLD-2S** driver phase locks two identical resonant scanners of the same frequency, (type SC, except for the subminiature scanners) in a Lissajous pattern to create a circle or an ellipse. The driver also locks two resonant scanners of the same frequency in phase or out of phase. The two identical scanners are **ONE FIXED FREQUENCY each, picked** from the range of 10 Hz to 16 kHz (e.g.: 10 KHz). Scanner "B" is phase locked to scanner "A" in a **MASTER/SLAVE mode**. The **PLD-2S** driver can also lock two resonant scanners of the same frequency to a stable external clock in a **SLAVE/SLAVE mode** in phase or out of phase.

The phase relationship to the master scanner is set by the factory to customer's requirements (0° to 360°) and is front panel adjustable in the range of $\pm 45^\circ$ min. Although the scanners can be used in a large temperature range this driver is not recommended for use in temperature sensitive applications. The system can be a stand alone unit or a portable instrument, or incorporated into a system.

The **PLD-2S-110** or **PLD-2S-220** driver is a boxed driver for 110V or 220V (please specify). The driver has front panel controls for amplitude and phase and internal power supplies. The dimensions of the cased driver are: 12" \times 10" \times 3.8".

The **PLD-2S-110/220** is a boxed driver with a selector switch for operating from a line voltage of 110Vac or 220Vac.

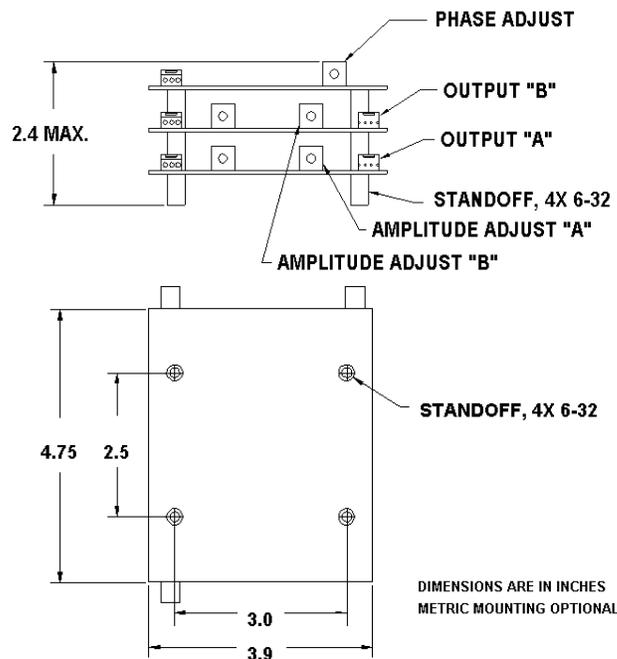
The **PLD-2S-PC** driver is a printed circuit board level driver which requires an external $\pm 15V$ DC power supply.

FRONT PANEL CONTROLS	
POWER	Power switch to turn the drive "ON"
LOCKED MODE	The scanners are phase locked in a master/slave mode
OSCILLATOR MODE	The scanners are self oscillating at their resonant frequency (not locked)
PHASE CONTROL POT	To adjust the phase of the scanners in relationship to each other, $\pm 45^\circ$ min.
POSITION MONITOR	Scanner position output each scanner, BNC connector
AMPLITUDE CONTROL	Scan amplitude adjustment POT for each scanner
OUTPUT	Output connector to interconnect to each scanner

SPECIFICATIONS	
Frequency range	10 Hz to 16 KHz
Position monitor	Analog position output, +/-5V max. 1KOhm max load for each scanner, +/-45°C min.
Phase adjustment range	+/-45° min.
Phase stability	0.01%
Phase relationship	Factory set to customer's specifications
Operating temperature range	Room temperature only
Power input	110V ac or 220V ac, 50-60 Hz, 20W

APPLICATIONS:

The [sub] system provides inexpensive high performance for a multitude of applications. Small size/low cost scanners are used in small instruments for laser inspection. Large aperture scanners are used for robotics positioning, machine vision, and non-invasive research high-resolution display system and machine vision. Many medical, aerospace and military applications are in the IR & UV, some in harsh conditions.



DIMENSIONS ARE IN INCHES

PLD-2S-PC OUTLINE DRAWING

ORDERING INFORMATION:

A) SCANNER INFORMATION:

TYPE [SC-10]; MIRROR SIZE [mm]; ANGLE [P-P Deg. Optical]; FREQUENCY [Hz]

Example: PART NO. SC10-10x10-20-100. This part number specifies the model SC-10 scanner, a 10mm square mirror, a 20° peak to peak optical scan angle and a 100 Hz operating frequency.

Special configurations and elements other than mirrors are available on special order. Consult factory.

Special pricing for OEM applications.

B) DRIVER INFORMATION:

Customer's specifications