PLD-2SXY DRIVER LOCKS
TWO RESONANT SCANNERS
TO GENERATE RASTER SCAN SYSTEMS

DESCRIPTION:

PLD-2SXY driver locks two scanners (type SC, except for the subminiature scanners) each of a different frequency in a MASTER/SLAVE phase locked mode to generate a repetative pattern (e.g.: a raster scan or Lissajous patterns). An X,Y raster scan system can be generated by locking two scanners in a master/slave mode. The system consists of scanner "X" (high frequency) and scanner "Y" (low frequency). The two scanners are ONE FIXED FREQUENCY each, picked from the range of 10 Hz to 16 kHz (e.g.: 10 KHz).
Scanner "X" is operating at its resonant frequency (Fx).
Scanner "Y" is phase locked to scanner "X" in a MASTER/SLAVE mode. 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 +/-45° min. The ratio of the frequency of scanner "X" to the frequency of scanner "Y" (Fy) is "n":
$$n = Fx / Fy$$
where "n" is a whole number and is factory set per customer's requirements.

The **PLD-2SXY-110** or **PLD-2SXY-220** driver is a fully integrated 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 X 10 X 3.8"
The **PLD-2SXY-110/220** is a version of the boxed driver with a line switch selector for operating from a line voltage of 110Vac or 220Vac.
The **PLD-2SXY-PC** driver is a printed circuit board level driver, which requires an external +/-15V DC power supply.
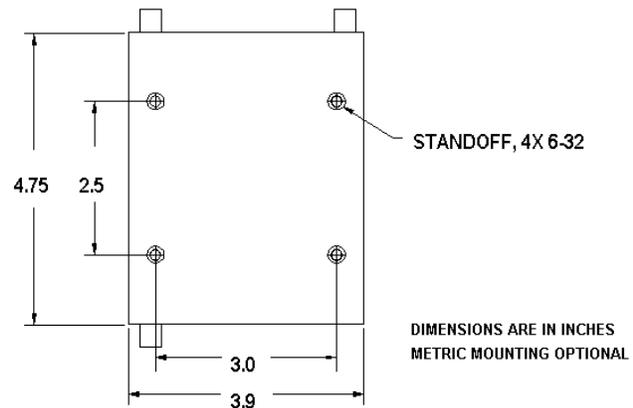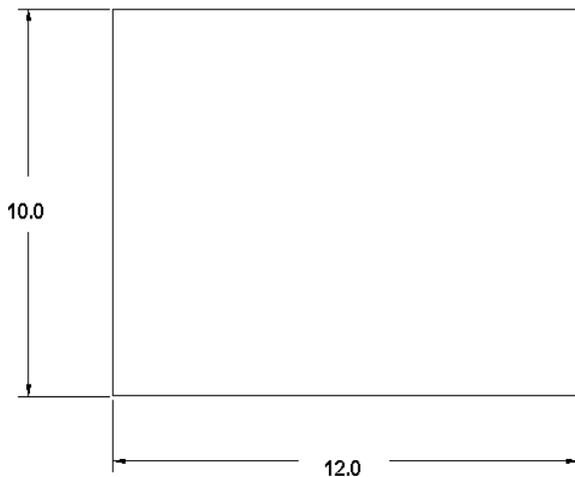
The system can be used as a "stand alone" unit or can be incorporated into an instrument or a system. Although the scanners can be used in a large temperature range this driver is not recommended for use in temperature sensitive applications.
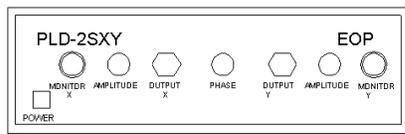
APPLICATIONS:

X,Y scanning systems provide inexpensive high performance for limitless applications involving beam deflection and imaging displays: TV, HDTV, for 2D and 3D scanned objects, for color separation, to generate images stored in computer memory and project them onto a screen, to generate data and/or transfer data directly to production units (CAD/CAM) and for inspection systems to name a few. The scanning systems are used for robotics, medical non-invasive research and testing, transportation, non-impact printing and laser scanning, inspection systems and high speed, high-resolution display system and machine vision. Many aerospace and military applications are in the IR & UV wavelength, high vacuum or cryogenic conditions.

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	Phase adjustment of the scanners in relationship to each other, +/- 45
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
Scanner's amplitude stability	0.01% or better
Position monitor	Analog position output
Scanner's amplitude stability	0.01% or better
Phase adjustment range	+/-45° min.
Phase stability	0.01%
Frequency ratio Fx/Fy	Factory set to customer's specifications
Operating temperature range	Room temperature
Power input	110V ac or 220V ac, 50-60 Hz, 20W

PLD-2SXY-PC OUTLINE DRAWING

PLD-2SXY OUTLINE DRAWING

ORDERING INFORMATION:

A) SCANNERS INFORMATION:

For each scanner please supply the following information:

TYPE [SC-30]; MIRROR SIZE [mm]; ANGLE [P-P Deg. Optical]; FREQUENCY [Hz]

Example: PART NO. SC30-10x10-20-4000. This part number specifies the model SC-30 scanner, a 10mm square mirror, a 20° peak to peak optical scan angle and a 4000 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 spec.