

General Description

The Model 31570 Dynaguide Centerguide Sensor includes two 6-inch Photojet centerguide sensors. These sensing heads consist of a light source and photo-conductive cells. The light source is a 6-watt tubular fluorescent lamp that operates on 115 volts AC, 50/60 Hz.

The photoconductive cell is a cadmium sulfide strip 6 inches long. Its resistance varies with the amount of light falling on it. A pair of adjustable shutters in each photocell housing provides for electrically balancing the sensing heads on each side of the web.

The sensors are used with the Model 33130D Digital Amplifier, in which the sensors resistive web position signals are converted to a voltage signal to operate the moving coil of an electrohydraulic controller. The sensors photocells are supplied with a low-level (15V) DC voltage, this insures a long service life. The amplifier also contains an output voltmeter to aid in initial set-up and for continuous monitoring of sensors during operation.

Power input to the amplifier is 115 volts AC ($\pm 10\%$), 50/60 Hz, 70 VA.

Principle of Operation

Resistance of the photoconductive cell varies, depending on the amount of light falling on it. The cells are placed in opposite legs of a bridge circuit with the input of the amplifier so connected to the bridge to act as a null detector.

When the web is centered, the resistance to both photocells is equal, therefore, the input voltage signal to the amplifier from the bridge is zero and no output to the moving coil. Lateral movement of web causes resistance of one cell to increase and thereby unbalancing the bridge. This produces



voltage to the amplifier. The output of the amplifier is proportional to the input voltage, this will cause the electrohydraulic controller to initiate the corrective movement to correct the deviation.

■ No Operator Adjustments

Sensors scan ± 6 inches lateral displacement, web density has no effect on control.

■ Reliability

No transistors or vacuum tubes ensure longer life.

■ High Accuracy

Detects and guides web better than plus or minus 1/8" from center where extreme mean centerline accuracy is required.

■ Simplified Installation

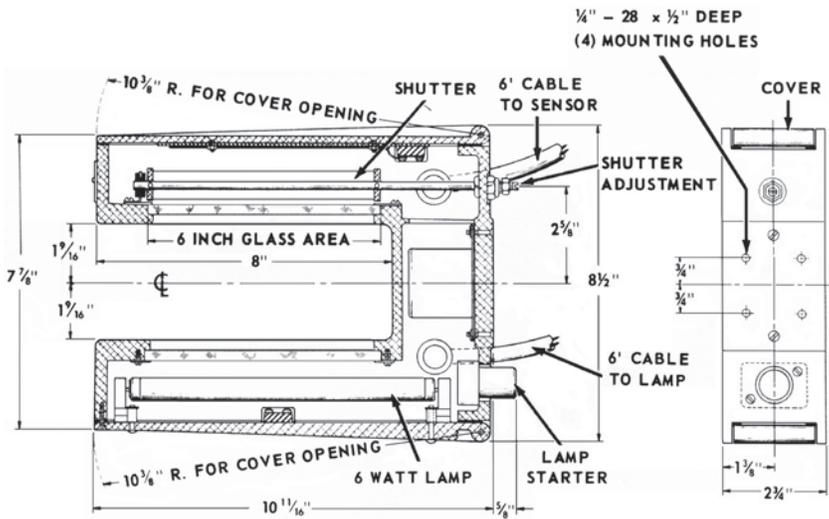
Sensor is pre-wired with covered cable which can be connected to the amplifier. The amplifier mounts to wall or floor.

■ Rugged Construction

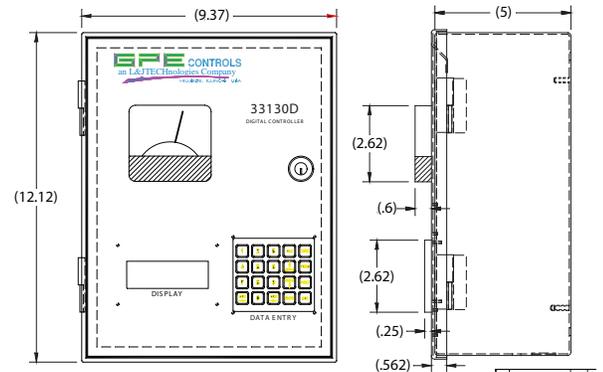
Construction of sensor housing is heavy cast aluminum with easy access to light source and photoconductive cells. The amplifier is enclosed in a heavy gauge steel weatherproof enclosure.

Outline Dimensions

Model 31570 Centerguide Sensor



Model 33130D Digital Controller



Specifications

Accuracy	Better than $\pm 1/8$ inches when incorporated in a Dynaguide system and installed in accordance with standard specifications.
Sensitivity	Full correction speed with .005 inches of lateral displacement of an opaque material. .
Power	Sensor Input - 115 VAC ($\pm 10\%$) 60 Hz. 2 amps per sensor Amplifier Output - Zero to plus and minus 10 VDC, into 320 ohm moving coil load.
Temperature Range	+10°F to 130°F
Construction	Aluminum
Weight	5 Lbs.

How to Order

Specify:

1. One Model 31570 Photojet Centerguide Sensor (includes two sensing heads).
2. Sensor for use with Model 33130D Digital Controller (or Model 33130 Analog Webguide Controller) *
3. For other Dynaguide components, see Product Data Sheet on Controllers, Pump Supply Units, and Hydraulic Cylinders.

* Model 33130D Digital Controller and related components must be ordered separately. Model 33130 Webguide Controller is no longer manufactured.

CDS Centerguide, 6" Span.

Includes
2 Sensors and
2 115 VAC 60 hz Light Sources.

