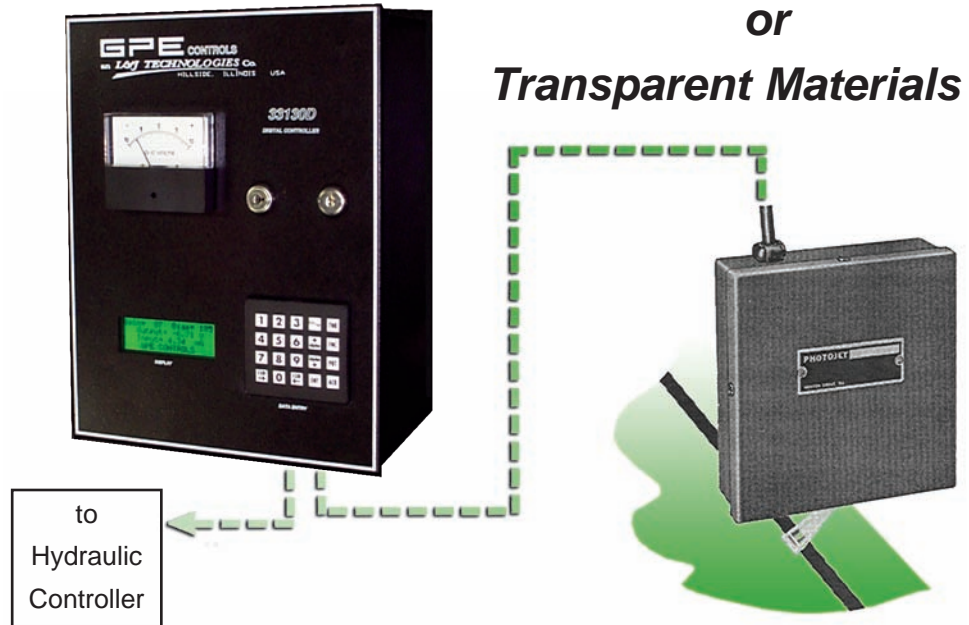


### General Description

The Model 31530 Line Guide Sensor is designed primarily for photoelectrically sensing the lateral position of a line or abrupt color contrast on web material of an opaque or transparent quality. This information is transmitted electrically to a hydraulic controller for final control action.

The Model 31530 is used exclusively with the Dynaguide\* Hydraulic Controller and requires a separate transistorized amplifier, the Model 33130D Digital Controller.



*for Opaque  
or  
Transparent Materials*

### Principle of Operation

The Model 31530 Line Guide Sensor (used with Dynaguide) continuously senses the line position with a reflected light beam. The sensor uses a photoresistive cell whose resistance is determined by the amount of light reflected by the line and web surface to its photoconductive surface. Change in resistance controls the input signal to the transistorized amplifier. The amplifier provides an output (in direct proportion to the lateral position of the web) to the Dynaguide controller, which in turn provides a proportional flow to the final control element.

\*Trademark of GPE Controls.

#### ■ High Sensitivity

Detects better than .0002 inches of lateral web displacement.

#### ■ High Accuracy

Maximum gain over a proportioned range plus high speed response with stability from hydraulic controller, provides the most accurate guiding system available.

#### ■ Simplified Installation

Pre-wired sensor requires only a connection to controller. Compact size allows installation in confined areas.

#### ■ Simple Adjustments

Requires only gain and bias adjustments to match line process requirements.



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# Photoelectric Line Guide Sensor GPE 31530

## PRODUCT DATA SHEET

### Specifications

|                          |  |
|--------------------------|--|
| <b>Power Input</b>       | (Model Option 31530-03)<br>1 amp at 11 volts from Model 33130D Digital Controller.   |
| <b>Input Span</b>        | 1/8" lateral web displacement  |
| <b>Output</b>            | Model 31530-03<br>(Photoresistive) to Model 33130D Digital Controller.   |
| <b>Sensitivity</b>       | Full correction speed with less than 0.002 inches of lateral displacement of a black on white line, when used in a typical GPE Control System. |
| <b>Resolution</b>        | Infinite   |
| <b>Construction</b>      | Aluminum and Steel   |
| <b>Weight</b>            | 1 lb. (approximate)  |
| <b>Temperature Range</b> | +10°F to +130°F<br>(-12°C to -54°C)  |

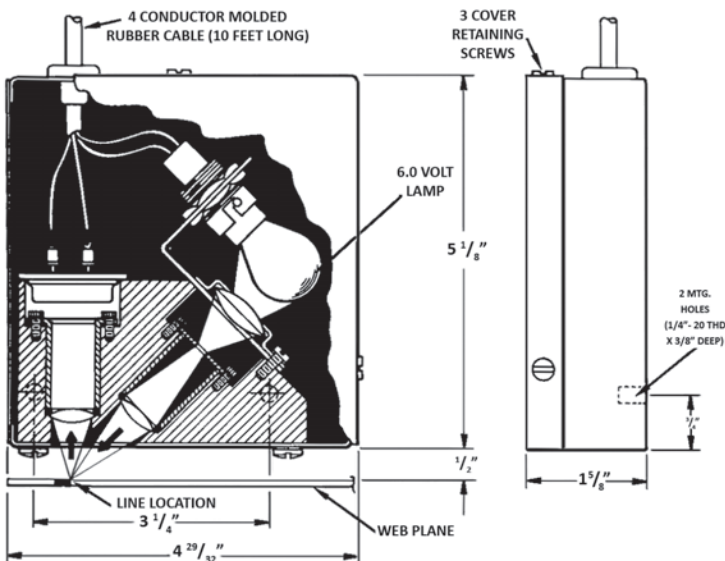
### How to Order

#### Specify:

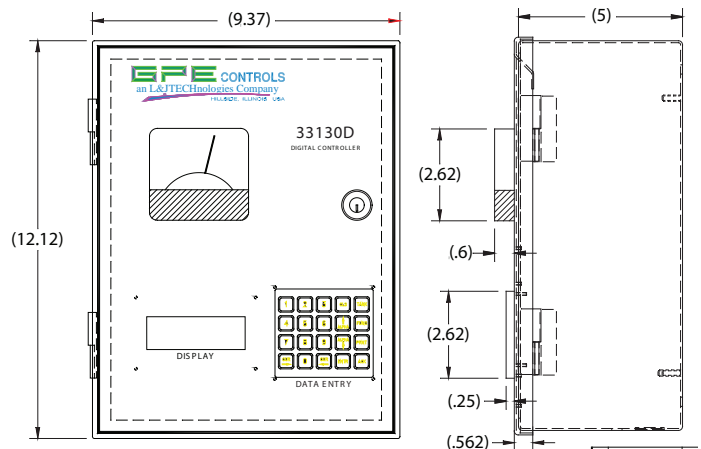
- Model 31530 Line Guide Sensor** Photoresistive sensor option for use with Model 33130D Digital Controller\* only.

\* Digital Controller and related components must be ordered separately. See Product Data Sheets for ordering information.

### Outline Dimensions



Model 31530 Line Guide Sensor



Model 33130D Digital Controller