



an L&J TECHNOLOGIES Company

PRODUCT DATA SHEET

**Linear  
Position Transmitter**  
GPE 31590

**General Description**

GPE Controls Model 31590 Position Transmitter is a heavy-duty assembly packaged for industrial on-line applications.

Electrically, it is a rotary potentiometer, but mechanically it is built withstand rugged environments and translates linear motion into rotary motion.

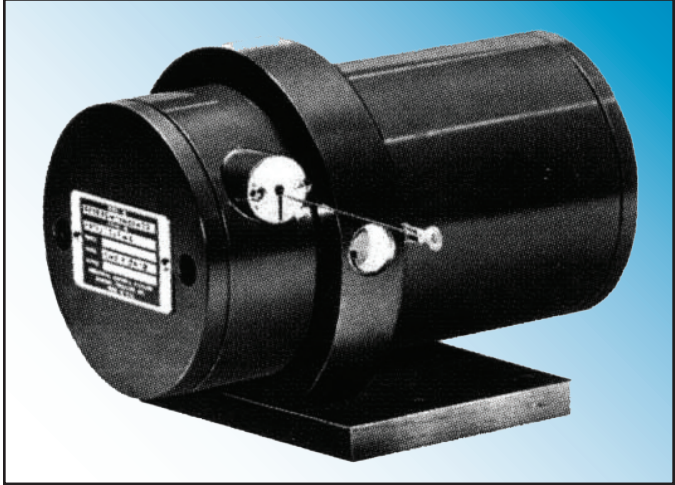
The Model 31590 Linear Position Transmitter is used principally as a feedback for valve actuators. This unit can be used in many applications on moving web processes, such as sensor following feedback and final control element feedback.

A stainless steel cable which moves parallel or perpendicular to the plane of the mounting base is wound on a spring loaded drum. Motion of the cable causes rotation of the drum which is attached to the shaft of the potentiometer by means of a flexible coupling.

A double bearing system is used on the shaft of the drum to minimize side thrust and overloading, thereby providing long life.

Although resistance output is standard, the Model 31590 can be supplied with a separate power supply in a JIC housing, which will provide current or voltage outputs.

- **High Accuracy**  
.5% with resolution as low as one part in three thousand.
- **Rugged**  
Heavy duty construction, yet only low force required for actuation.
- **Long Life**  
Actual life tests to 15 million cycles without failure.
- **Versatile**  
Resistance values other than standard can be supplied as well as power supplies for current or voltage output.



**Specifications**

**Input**.....Stroke length of 5½", 16¾", or 28"

**Output**.....0 to 2000 ohms for full stroke, 3 watts

**Accuracy**..... ±.5% of full stroke

**Linearity**.....0.25% (0.1 Available)

**Resolution**

1/1000 for 5½" stroke

1/2000 for 16¾" stroke

1/3000 for 28" stroke

**Housing**.....Weatherproof (General Purpose)

**Potentiometer**.....General Purpose

**Resistive Force**.....1½ lbs.

**Stop Load**.....6 lbs.

**Ambient Temperature**..... -30°F to 150°F

**Operations Positions**

*Horizontal* — Right

*Horizontal* — Left

*Vertical* — Down

*Vertical* — Up\*

**Physical Characteristics**

*Cable*.....Stainless Steel

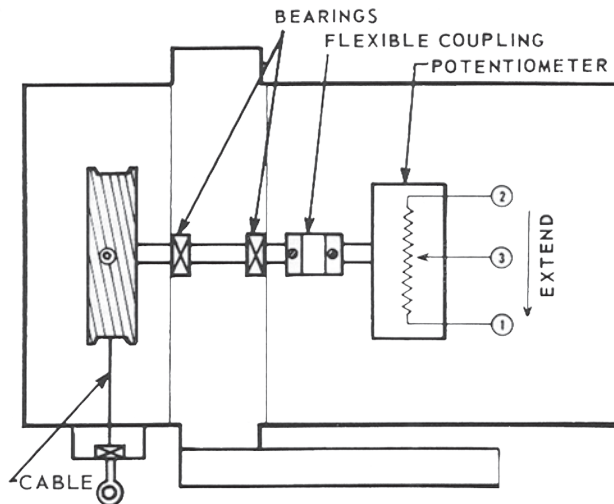
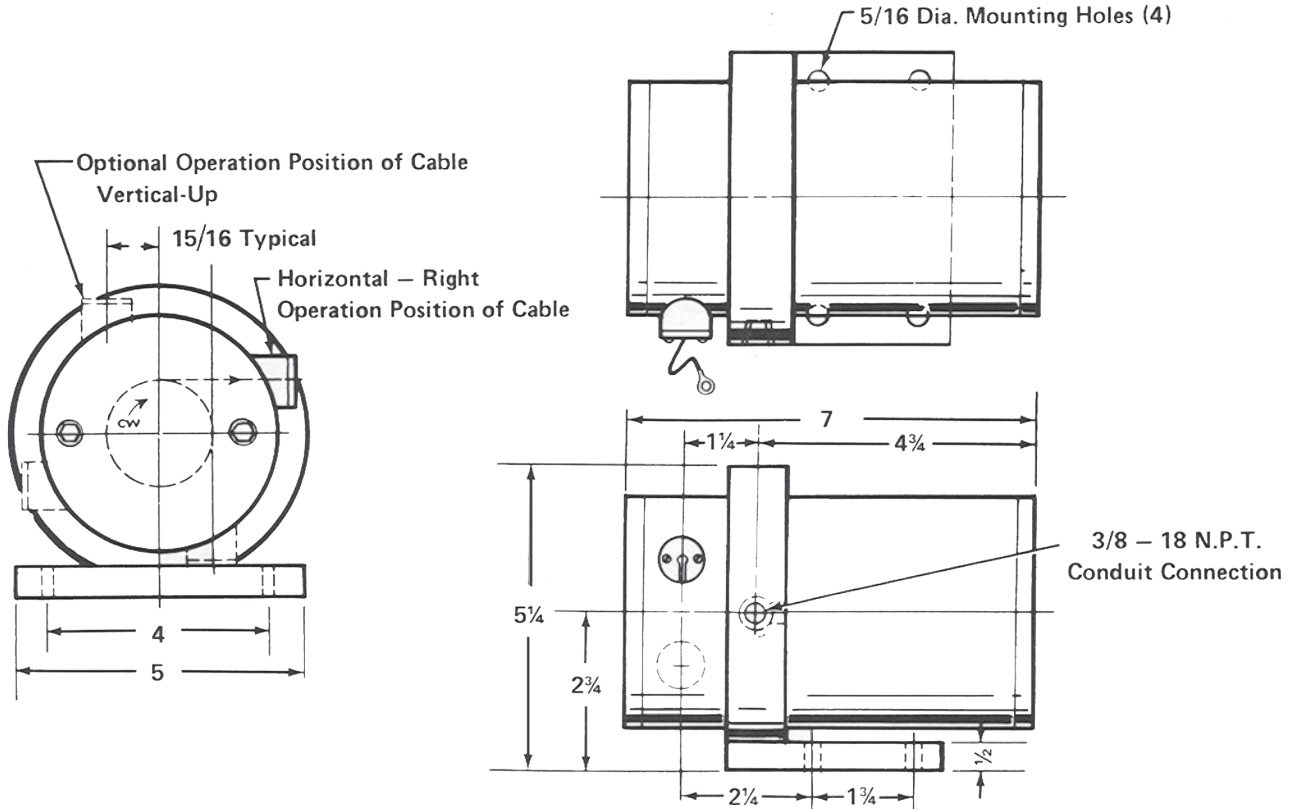
*Case*.....Carbon Steel

*Finish*.....Light Gray

*Weight*.....Approximately 15 lbs.

\* Not weatherproof in this position

### Outline Dimensions and Schematics



SCHEMATIC OF MODEL 31590  
POSITION TRANSMITTER