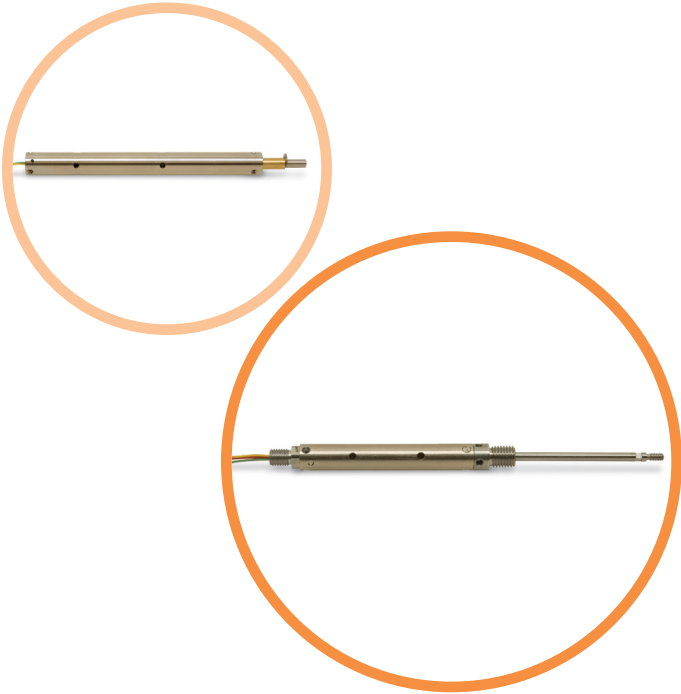




## 700 SERIES

Linear Position Sensor



### Introduction

The 700 Series Linear Position Sensors are designed to operate reliably in extreme environments such as “down hole” oil well applications at temperatures between -40° and over 200°C and pressures of up to 35,000 psi. Containing a conductive plastic resistive element, the 700 Series has a longer operating life and resolution than traditional wire-wound units. Offered in miniature diameters for space-saving advantages, the 700 Series is also designed to meet a wide variety of interface and mounting requirements making it ideal for applications requiring accurate performance in high temperature and high pressure environments with limited space.

### SPECIFICATIONS

#### Electrical

<b>Electrical Travel</b>	1 in. min to 6 in. max
<b>Total Resistance</b>	1.23 K $\Omega$ per inch
<b>Resistance Tolerance</b>	$\pm 25\%$
<b>Accuracy over useable range</b>	(Ind. Lin. See Note 2) STD: $\pm 0.020$ inch Best: $\pm 0.005$ inch
<b>Power Rating @ 175°C</b>	0.25 Watt per inch Derated to 0.10 Watts @ 250°C
<b>Output smoothness</b>	0.1%
<b>Insulation resistance @250 VDC</b>	1000 Megohms
<b>Dielectric strength</b>	250 VRMS
<b>Operating Temperature Range</b>	-40° to +200°C
<b>Storage Temperature Range</b>	-40° to +250°C

#### Mechanical

<b>Mechanical Travel</b>	Elect travel + 0.2 in. min
<b>Actuation Force</b>	2 oz. max
<b>Repeatability</b>	Within 0.001 inch
<b>Life</b>	5 x 10 <sup>5</sup> cycles



# DIMENSIONS

Dimensions are in inches. Tolerance:  $\pm 0.010$

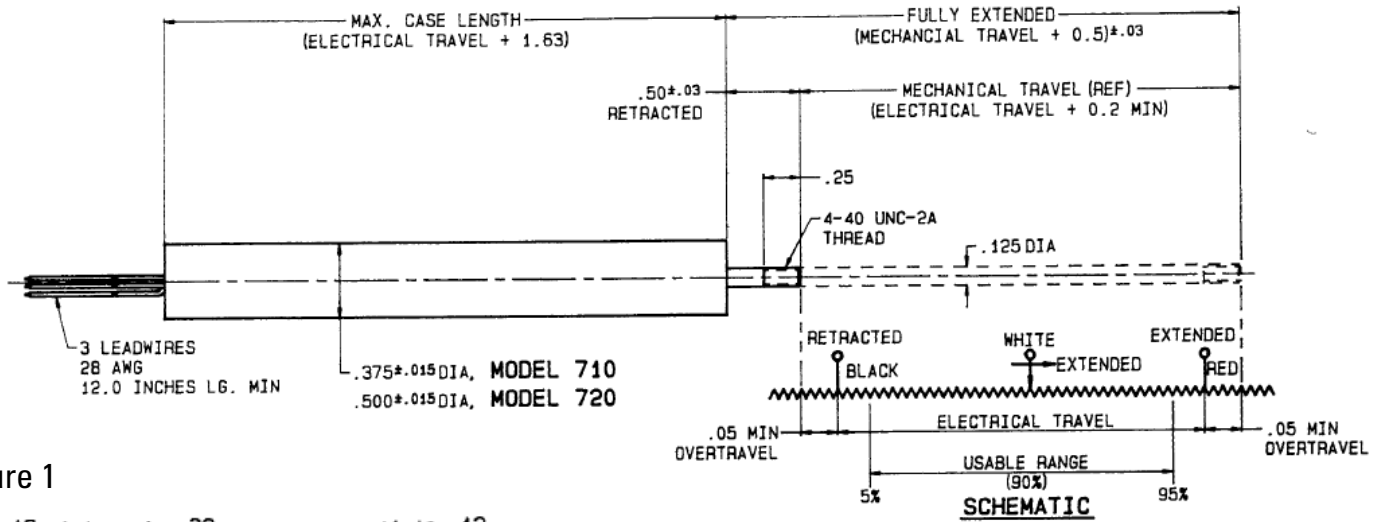
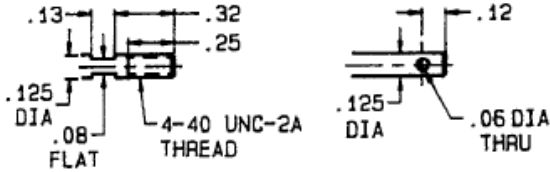


Figure 1



## General Notes

Most specifications may be altered to meet specific requirements.

Special Feature Examples:

- Vent holes for immersion in fluids.
- Mounting: Threaded bushing front/rear.
- Leads: Jacketed/Shielded cable.
- Shaft End Options: (Figure 1)

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