

# Cable-Extension Position Transducer

## Incremental Encoder Output

Ranges: 0-30, 0-60 in. • 0-625, 0-1250 mm

Industrial Grade

# PT8150

### Specification Summary:

#### GENERAL

Full Stroke Range Options ..... 0-30 to 0-60 inches  
 Output Signal ..... incremental encoder (quadrature)  
 Accuracy  
 Typical .. the lesser of 0.02% f.s. or 0.04% of measurement  $\pm$  1/2 pulse max.  
 Best ..... not less than 0.001 in. [0,03 mm]  
 Repeatability .....  $\pm$  0.02% full stroke  $\pm$  1/2 pulse max.  
 Resolution Options ..... 20 to 200 pulses per inch  
 Measuring Cable Options ..... nylon-coated stainless steel or thermoplastic  
 Enclosure Material ..... powder-painted aluminum or stainless steel  
 Sensor ..... optical encoder  
 Maximum Retraction Acceleration ..... see ordering information  
 Weight, Aluminum (Stainless Steel) Enclosure ..... 3 lbs. (6 lbs.) max.

#### ELECTRICAL

Input Voltage ..... see ordering information  
 Input Current ..... see ordering information

#### ENVIRONMENTAL

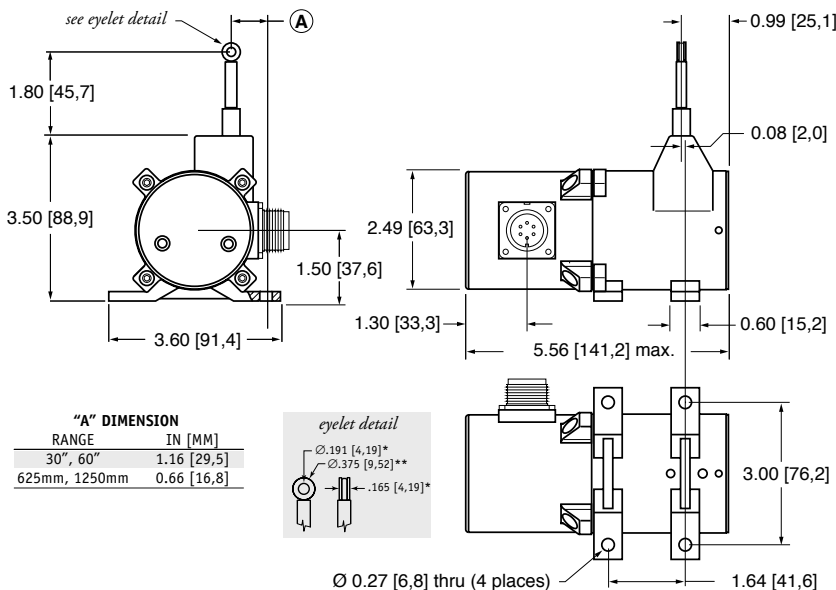
Enclosure ..... NEMA 4/4X/6, IP 67/68  
 Operating Temperature ..... 0° to 160°F (-17° to 71°C)  
 Vibration ..... up to 10 G's to 2000 Hz maximum



With its incremental optical encoder and industrial design, this rugged transducer provides the highest accuracy and longest life of any measurement device of its kind. For measurements up to 60 inches, this model is available in a variety of resolutions and output stages to fit virtually any requirement.

The PT8150 offers numerous advantages over other industrial-grade sensors: It installs in minutes by mounting its body to a fixed surface and attaching its cable to the movable object, fits into areas unsuited for rod-type measurement devices, and works without perfect parallel alignment.

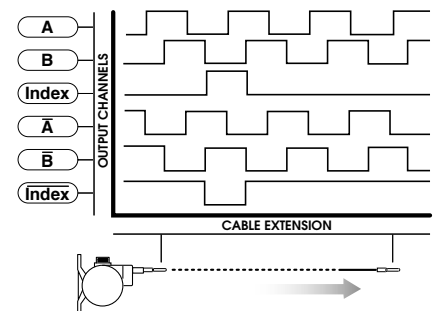
### Outline Drawing



DIMENSIONS ARE IN INCHES [MM]  
 tolerances are  $\pm$ 0.02 in. [ $\pm$ 0,5 mm] unless otherwise noted

\* tolerance = +.005 -.001 [+0.13 -.03]  
 \*\* tolerance = +.005 -.005 [+0.13 -.13]

### Output Signal



**Ordering Information:**

**Model Number:**

**PT8150-** \_\_\_\_\_ **1** - \_\_\_\_\_  
order code:                      R                      A                      B                      C                      D                      E                      F                      G

Sample Model Number:  
**PT8150 - 0030 - 111 - 1110**

- R** range: 30 inches
- A** enclosure/cable tension: aluminum/standard (12 oz.)
- B** measuring cable: .034 nylon-coated stainless
- D** output signal: TTL/CMOS driver
- E** resolution: 200 ±4 pulses per inch
- F** electrical connection: 6-pin plastic connector
- G** cable guide option: standard nylon cable guide

**Full Stroke Range:**

<b>R</b> order code:	<b>0030</b>	<b>0060</b>	<b>0625</b>	<b>1250</b>
full stroke range, min:	30 in.	60 in.	625 mm	1250 mm

**Enclosure Material and Measuring Cable Tension:**

<b>A</b> order code:	<b>1</b>	<b>3</b>	<b>8</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>2</b>	<b>4</b>	<b>9</b>
enclosure:	aluminum	303 stainless	316 stainless	aluminum	303 stainless	316 stainless	aluminum	303 stainless	316 stainless
cable tension (±30%)	standard tension			medium tension			high tension		
30, 60-inch ranges:	16 oz. [6 G max. acceleration]			19 oz. [8 G max. acceleration]			36 oz. [15 G max. acceleration]		
625, 1250-mm ranges:	4,2 N [8 G max. acceleration]			6,7 N [16 G max. acceleration]			12,6 N [30 G max. acceleration]		

**Measuring Cable:**

<b>B</b> order code:	<b>1</b>	<b>2</b>	<b>3</b>
	Ø.034-inch nylon-coated stainless steel <i>available in all ranges</i>	Ø.047-inch stainless steel <i>5, 15, 20, 25, 30-inch ranges only</i>	Ø.062-inch thermoplastic <i>all ranges up to 30 inches only</i>

**Output Signals:**

<b>D</b> order code:	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
output driver:	TTL - CMOS	Open Collector	5 V - Line Driver	Universal Line Driver
	Input voltage (V+): 4.5...13.2 Vdc Sink current: 20 mA max. Input current: 80 mA max.	Input voltage (V+): 10.8...26.4 Vdc Sink current: 20 mA max. Input current: 80 mA max.	Input voltage (V+): 5 Vdc Sink current: 20 mA max. Input current: 150 mA max.	Input voltage (V+): 5...30 VDC Source/Sink: 20 mA max. Input current: 100 mA max, no load

