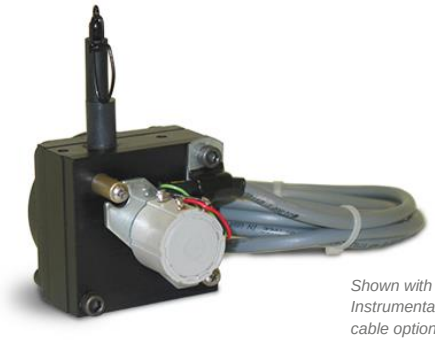
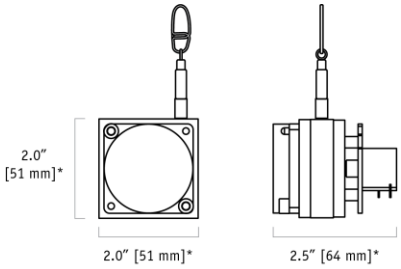


Shown with Instrumentation cable option



**note: 2–40" range shown for illustration, see outline drawing for other ranges.*

PTX101

Cable Actuated Sensor
Instrument Grade • Voltage Divider

Absolute Linear Position to 100 inches (2540 mm)

Compact Design • OEM Applications

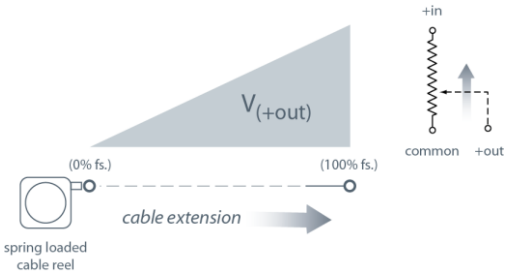
Anodized Aluminum Enclosure

IP50 / NEMA 1 • Automation & Testing Applications

The PTX101 is a low cost, compact and easy-to-use cable-extension transducer. It is available with full-scale measurement ranges from 2 to 100 inches. The PTX101 provides a voltage feedback signal that is proportional to the linear movement of a traveling stainless-steel extension cable.

Simply mount the body of the transducer to a fixed surface and attach the extension cable to the moving object. The PTX101 is recommended for applications where space and money is limited.

Output Signal



General

Full Stroke Range	0-2 to 0-100 inches
Output Signal	voltage divider (potentiometer)
Accuracy	see ordering information
Repeatability	± 0.02% full stroke
Resolution	essentially infinite
Measuring Cable	.019-inch dia. nylon-coated stainless steel rope
Enclosure Material	anodized aluminum
Sensor	plastic-hybrid precision potentiometer
Potentiometer Cycle Life	see ordering information
Maximum Retraction Acceleration	see ordering information
Weight (maximum)	2 lbs. max.

Electrical

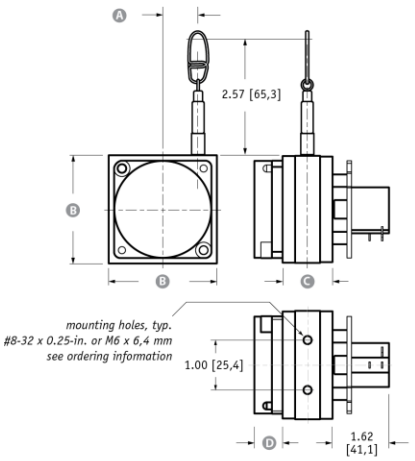
Input Resistance	500, 1K, 5K, 10K or bridge
Maximum Input Voltage	see ordering information
Power Rating	see ordering information
Output Signal Change Over Full Stroke Range	94% ±4% of input voltage

Environmental

Enclosure	IP50, NEMA 1
Temperature Coefficient of Sensing Element	88 PPM/°F
Humidity	100% RH @ 90°F (32° C)
Operating Temperature	-40° to 200°F (-40° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum

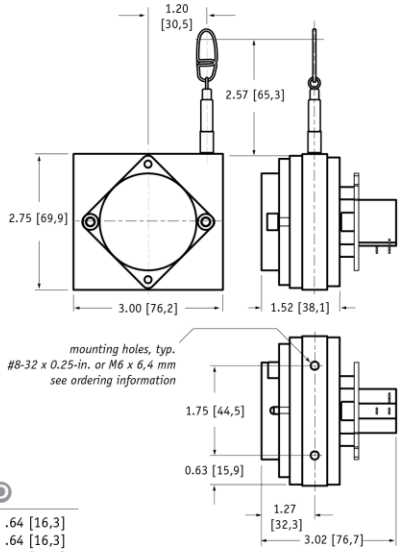
Outline Drawing

2 to 60-inch Ranges

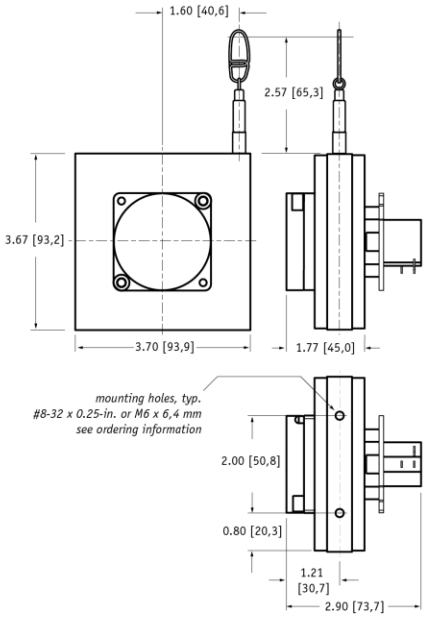


Range	A	B	C	D	
2", 10", 20"	.34 [8.6]	2.00 [50,8]	.50 [12,7]	.39 [9,9]	.64 [16,3]
5", 25", 50"	.83 [21,1]	2.00 [50,8]	.50 [12,7]	.39 [9,9]	.64 [16,3]
15", 30"	.56 [14,2]	2.00 [50,8]	.50 [12,7]	.39 [9,9]	.64 [16,3]
40"	.64 [16,2]	2.00 [50,8]	.50 [12,7]	.39 [9,9]	.64 [16,3]
60"	.97 [24,6]	2.50 [63,5]	.75 [19,1]	.39 [9,9]	.64 [16,3]
				std. tension	high tension

75-inch Range



100-inch Range



All Dimensions are in INCHES [MM] tolerances are ±0.03 in. [0,8 mm]

Ordering Information

Model Number:

PTX101 - ____ - ____ **1** ____ - ____ **1** ____ **0** ____
order code: ® Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ

Sample Model Number:

PTX101 - 0025 - 111 - 1110

®	range:	25 inches
Ⓐ	measuring cable tension:	standard - 5 oz.
Ⓒ	mounting holes:	8-32 x .25 in. threaded
Ⓓ	sensing circuit:	500 ohms
Ⓕ	electrical connection:	solder terminals

Full Stroke Range:

® *order code:*	0002	0005	0010	0015	0020	0025	0030	0040	0050	0060	0075	0100
full stroke range, min:	2 in.	5 in.	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.	60 in.	75 in.	100 in.
accuracy (% of f.s.):	0.25%	0.25%	0.15%	0.15%	0.10%	0.15%	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%
potentiometer cycle life*:	2.5×10^6	2.5×10^6	5×10^5	5×10^5	5×10^5	5×10^5	5×10^5	2.5×10^5	2.5×10^5	2.5×10^5	2.5×10^5	2.5×10^5

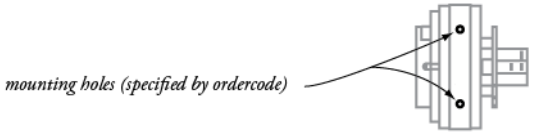
**–1 cycle is defined as the travel of the measuring cable from full retraction to full extension and back to full retraction*

Measuring Cable Tension:

Ⓐ *order code:*	1			H		
	standard tension			high tension		
	tension, ±20%		*max acceleration*	*tension, ±40%*		*max acceleration*
2, 10, 20 inch range:	12 oz.	•	11 g	65 oz.	•	53 g
5, 25, 50 inch range:	5 oz.	•	2 g	26 oz.	•	11 g
15, 30 inch range:	8 oz.	•	3 g	43 oz.	•	23 g
40 inch range:	6 oz.	•	4 g	33 oz.	•	16 g
60 inch range:	13 oz.	•	4 g	22 oz.	•	8 g
75 inch range:	10 oz.	•	3 g	31 oz.	•	12 g
100 inch range:	13 oz.	•	5 g	52 oz.	•	20 g

Mounting Holes:

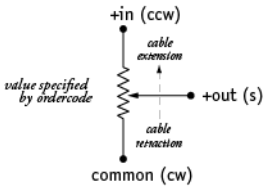
C order code:	1	2
	#8-32 x 0.25-in. threaded holes	M6 x 6,4 mm threaded holes



Sensing Circuit:

D order code:	1	2	3	4
	500 ohm*	1000 ohm*	5000 ohm*	10,000 ohm*

sensing circuit



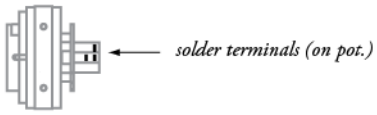
max. input voltage and power rating

	2-inch, 5-inch range	*10-inch to 100-inch range*
500-ohms:	20 V AC/DC (1 W)	30 V AC/DC (2 W)
1K to 10K-ohms:	30 V AC/DC (1 W)	30 V AC/DC (2 W)

**tolerance = ±10%*

Electrical Connection:

F order code:	0	1
	solder terminals	10-ft. instrumentation cable shielded, 24 AWG



terminal	signal
CCW	+in
CW	common
S	+out

color code	terminal	signal
RED	CCW	+ in
BLACK	CW	common
GREEN	S	+ out

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PTX101 12/01/2015

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