Cable-Extension Position Transducer

Precision Potentiometric Output
Ranges: 0-2 to 0-60 inches
Industrial Grade

PT8101

CE

Specification Summary:

GENERAL

Full Stroke Range Options	0-2 to 0-60 inches
Output Signal Options	voltage divider (potentiometer)
Accuracy	± 0.25% to ±0.10% full stroke see ordering information
Repeatability	± 0.02% full stroke
Resolution	essentially infinite
Measuring Cable Options	stainless steel or thermoplastic
Enclosure Material	powder-painted aluminum or stainless steel
Sensor	plastic-hybrid precision potentiometer
Potentiometer Cycle Life	see ordering information
Maximum Retraction Acceleration	see ordering information
Weight, Aluminum (Stainless Steel) Enclosure	3 lbs. (6 lbs.) max.

ELECTRICAL

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

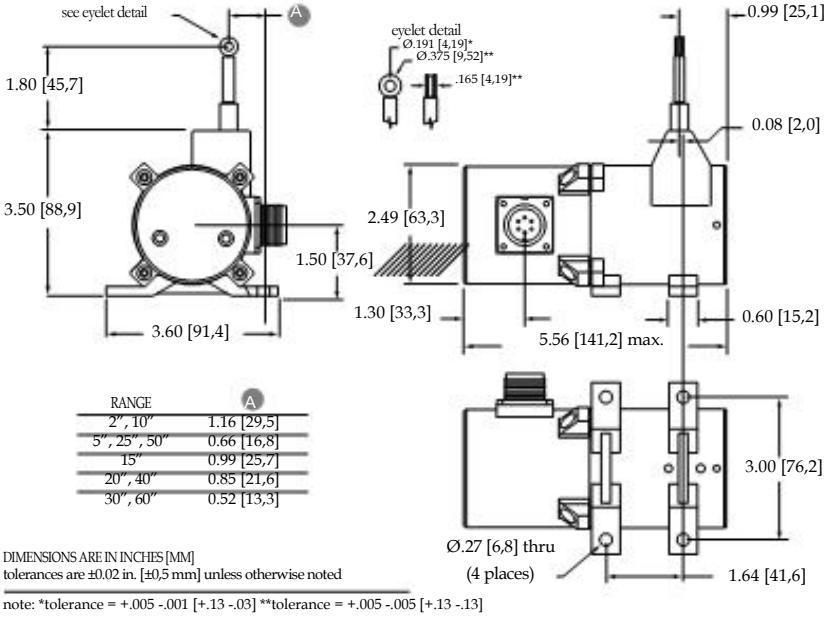
ENVIRONMENTAL

Enclosure	NEMA 4/4X/6, IP 67/68
Operating Temperature	-40º to 200ºF (-40º to 90ºC)
Vibration	up to 10 G's to 2000 Hz maximum

The PT8101, using a high cycle plastic-hybrid potentiometer, operates with any basic panel meter or programmable controller in factories and harsh environments requiring linear position measurements in ranges up to 60".

As a member of innovative family of NEMA 4 rated cable-extension transducers, the PT8101: installs in minutes by mounting it's body to a fixed surface and attaching it's cable to the movable object, works without perfect parallel alignment, and when it's stainless-steel cable is retracted, it measures only 5".

Outline Drawing

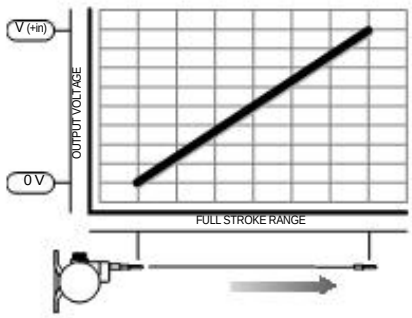


RANGE	A
2", 10"	1.16 [29,5]
5", 25", 50"	0.66 [16,8]
15"	0.99 [25,7]
20", 40"	0.85 [21,6]
30", 60"	0.52 [13,3]

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

note: *tolerance = +.005 -.001 [+.13 -.03] **tolerance = +.005 -.005 [+.13 -.13]

Output Signal



1-888-832-7568 Toll free 305 914 5083 - 305-207-0076 Tel 1-775-637-6825 Fax email: sales@latin-tech.net web: www.lt-automation.com

Ordering Information:

Model Number:

PT8101- ____ (R) - __ (A) __ (B) 1 (C) - __ (D) 1 (E) __ (F) __ (G)

order code:

Sample Model Number:

PT8101 - 0030 - 111 - 1110

(R)	range:	30 inches
(A)	enclosure/cable tension:	aluminum/standard (13 oz.)
(B)	measuring cable:	.034 nylon-coated stainless
(D)	output signal:	500 ohm potentiometer
(F)	electrical connection:	6-pin plastic connector
(G)	cable guide option:	standard nylon cable guide

Full Stroke Range:

(R) order code:	0002	0005	0010	0015	0020	0025	0030	0040	0050	0060
full stroke range, min:	2 in.	5 in.	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50	60
accuracy (% of f.s.):	0.25%	0.25%	0.15%	0.15%	0.15%	0.15%	0.15%	0.10%	0.10%	0.10%
potentiometer cycle life*:	2.5 x 106	2.5 x 106	5 x 105	5 x 105	5 x 105	5 x 105	5 x 105	2.5 x 105	2.5 x 105	2.5 x 105

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

Enclosure Material and Measuring Cable Tension:

(A) order code:	1	5	2	3	6	4	8	7	9
enclosure:	aluminum			303 stainless			316 stainless		
cable tension:	standard	medium	high	standard	medium	high	standard	medium	high
max. acceleration:	15 G	25 G	40 G	6 G	12 G	18 G	6 G	12 G	18 G

cable tension option specifications

Range:	2 in.	5 in.	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.	60 in.
Standard:	39 oz.	16 oz.	39 oz.	26 oz.	20 oz.	16 oz.	13 oz.	20 oz.	16 oz.	13 oz.
Medium:	65 oz.	26 oz.	65 oz.	43 oz.	33 oz.	26 oz.	22 oz.	33 oz.	26 oz.	22 oz.
High:	116 oz.	47 oz.	116 oz.	77 oz.	60 oz.	47 oz.	40 oz.	60 oz.	47 oz.	40 oz.

tension tolerance: ± 30%

Measuring Cable:

(B) order code:	1	2	3	4
	Ø.034-inch nylon-coated stainless steel	Ø.047-inch non-coated stainless steel	Ø.062-inch thermoplastic	Ø.031-inch non-coated stainless steel
	available in all ranges	5, 15, 20, 25, 30-inch ranges only	all ranges up to 30 inches only	40, 50, 60-inch ranges only

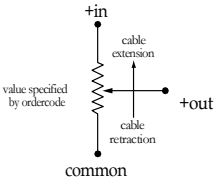
Output Signals:

(D) order code:	1	2	3	4	5	6
	500 ohm*	1000 ohm*	5000 ohm*	10,000 ohm*	fixed bridge (2 mV/V)	adjustable bridge (0...30 mV/V)
				*tolerance = ±10%		

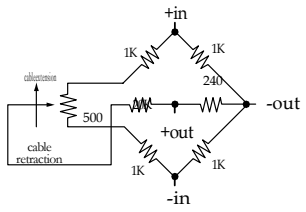
max. input voltage and power rating, options: 1 - 4

	2-inch, 5-inch range	10-inch to 60-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)

circuit, options 1-4

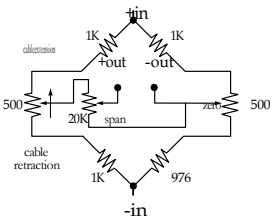


fixed bridge circuit



full scale output: 2 mV/V
zero adjust: not available

adjustable bridge cicuit

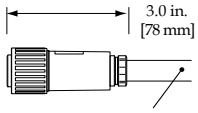
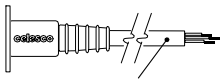
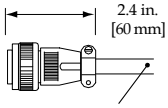


full scale output: adjustable from 0 to 30mV/V
zero adjust: to 50% of full stroke

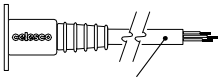
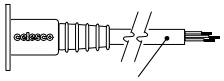
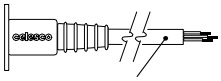
Ordering Information:

Electrical Connection:

order code:

1	2	3	4
6-pin plastic connector w/mating plug	10-ft. [3 M] waterproof cable	6-pin metal connector w/mating plug	25-ft. [7.5 M] instrumentation cable
IP 67, NEMA 4X**,6	IP 67, NEMA 4X**, 6	IP 65, NEMA 4	IP 67, NEMA 6
			
1/2 - 5/16" [14 - 8 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJTW	3/8-in. [9 mm] max cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	25 ft. x 0.2-in. dia. [7,5 M x 5 mm dia.] 24 AWG, shielded

order code:

5	6	7
100-ft. [30 M] waterproof cable	10-ft. [3 M] pressure tested* waterproof cable	100-ft. [30 M] pressure tested* waterproof cable
IP 67, NEMA 4X**,6	IP 68, NEMA 4X**, 6P	IP 68, NEMA 4X**, 6P
		
100 ft. x 0.4-in. dia. [30 M x 10 mm dia.] 18 AWG, type SJTW	10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJTW	100 ft. x 0.4-in. dia. [30 M x 10 mm dia.] 18 AWG, type SJTW

6-pin Mating Plug

pin	standard	bridge
A	+ in	+ in
B	common	- in
C	+ out	- out
D	- + out	

contact view

Waterproof Cable

color code	standard	bridge
WHITE	+ in	n/a
BLACK	common	n/a
GREEN	+ out	n/a

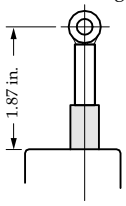
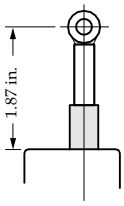
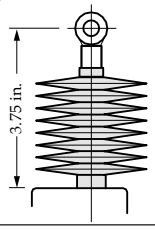
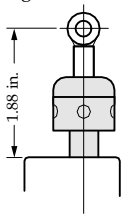
Instrumentation Cable

color code	standard	bridge
RED	+ in	+ in
BLACK	common	- in
GREEN	+ out	+ out
WHITE	-	- out

*-Test pressure: 100 feet [30 meters] H_2O (40 PSID); Test Medium: Air; Duration: 2 hours. ** -Applies to stainless steel enclosure only.

Cable Guide Options:

order code:

0	1	2*	3
standard cable guide	stainless steel cable guide	polyurethane cable bellows	integral cable brush
			

*note: all ranges up to 25 inches only