

Cable-Extension Position Transducer

- ▼ Short to Medium Range
- ▼ Compact Size • OEM Applications
- ▼ Incremental Encoder Output Signals

Specification Summary:

GENERAL

Full Stroke Ranges 0-2 to 0-50 inches
 Output Signal incremental encoder (quadrature) signal
 Output Driver Options TTL/CMOS, open collector or line driver
 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 0.02% of measurement $\pm 1/2$ pulse max.
 Resolution 25 to 1250 pulses per inch
 Measuring Cable 0.019-in. dia. nylon-coated stainless steel
 Enclosure Material ABS plastic and black anodized aluminum
 Sensor optical encoder
 Weight 1 lb., max.

ENVIRONMENTAL

Enclosure Design NEMA 4, IP 67
 Operating Temperature 0° to 160°F
 Vibration up to 10 G's to 2000 Hz maximum

PT1E

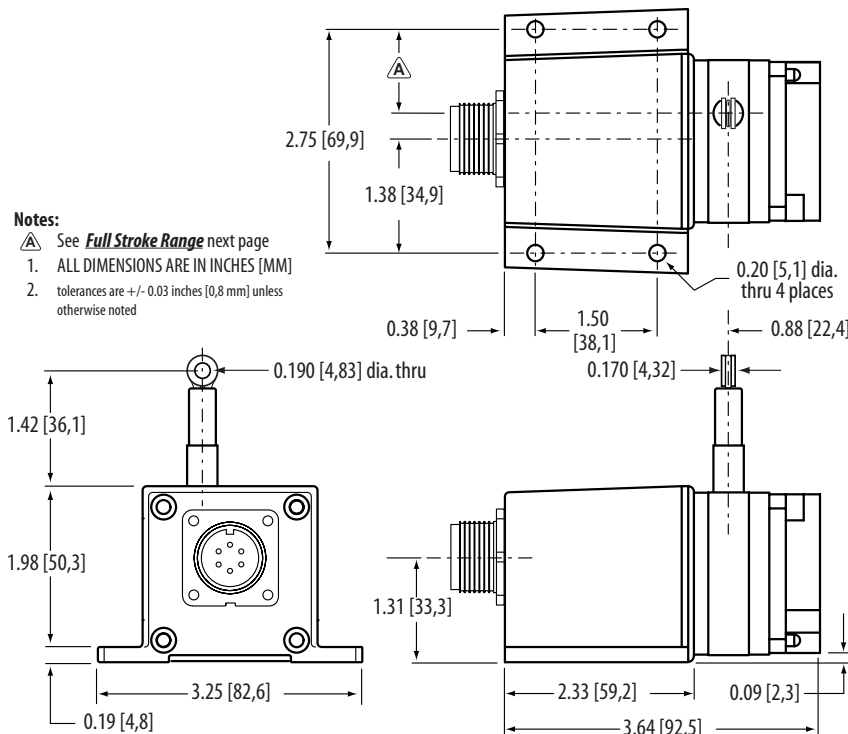


The heart of the PT1E is an incremental optical encoder which delivers a quadrature formatted digital pulse train. This compact transducer is available with several resolution options for a wide variety of applications from high accuracy position feedback to slow velocity feedback requirements.

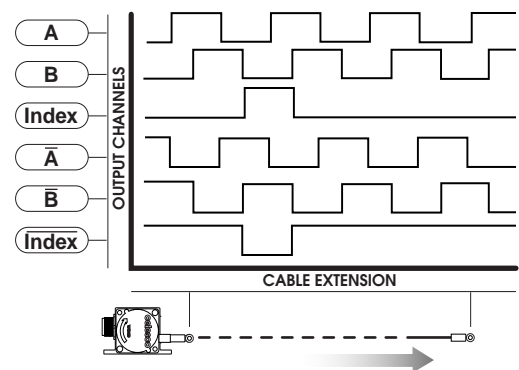
The PT1E has many options available including full stroke measurement ranges from 0-2 inches up to 0-50 inches, different output drivers and alternate measuring cable exits.

Notes:

- ▲ See **Full Stroke Range** next page
- 1. ALL DIMENSIONS ARE IN INCHES [MM]
- 2. tolerances are +/- 0.03 inches [0,8 mm] unless otherwise noted



Electrical Output Signal:



celesco

Nordic Transducer
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 ntt@ntt.dk www.ntt.dk

Ordering Information

Model Number:

PT1E - - - - - - -
order code: **R** **A** **B** **C** **D** **E**

Sample Model Number:

PT1E - 25 - UP - 50 - AB-TTL - MC4 - SG

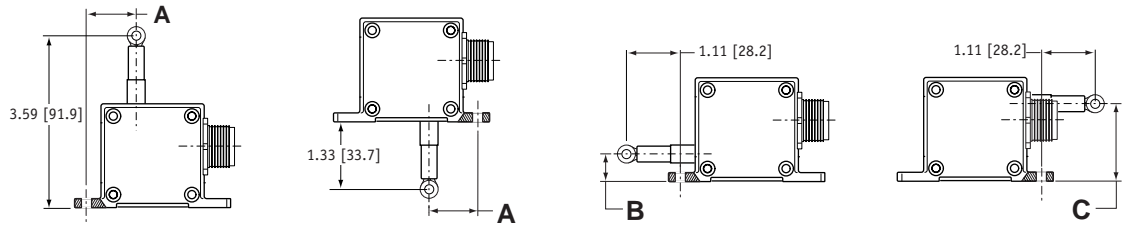
- R** range: 25 inches
- A** measuring cable exit: up
- B** resolution: 50 pulses per inch
- C** electrical connection: 4-pin micro connector
- D** output signal: TTL/CMOS driver, Channels A,B
- E** cable guide: spring-loaded guide

Full Stroke Range:

R order code:	25	50	625	1250
full stroke range, min:	25 in.	50 in.	625 mm	1250 mm
	12 oz.	6 oz.	12 oz.	6 oz.
	11 G's	4 G's	11 G's	4 G's
resolution options:	50, 500, 1000, 1250 pulses per inch	25, 250, 500, 625 pulses per inch	2, 20, 40, 50 pulses per mm	1, 10, 20, 25 pulses per mm

Cable Exit:

A order code:	UP	DN	FR	BK
direction:	up	down	front	back



range	25	50	625	1250
A	1.04 in. 26,3 mm	0.74 in. 18,7 mm	1.04 in. 26,3 mm	0.74 in. 18,7 mm
B	0.75 in. 19,1 mm	0.45 in. 11,5 mm	0.75 in. 19,1 mm	0.45 in. 11,5 mm
C	1.43 in. 36,3 mm	1.73 in. 43,7 mm	1.43 in. 36,3 mm	1.73 in. 43,7 mm

Resolution:

B order code:	50	500	1000	1250
25-inch full stroke range:	50 ±1 pulses per inch	500 ±10 pulses per inch	1000 ±20 pulses per inch	1250 ±24 pulses per inch
B order code:	25	250	500	625
50-inch full stroke range:	25 ±0.5 pulses per inch	250 ±5 pulses per inch	500 ±10 pulses per inch	625 ±12 pulses per inch
B order code:	2	20	40	50
625 mm full stroke range:	2 ±0,04 pulses per mm	20 ±0,4 pulses per mm	40 ±0,8 pulses per mm	50 ±1 pulses per mm
B order code:	1	10	20	25
1250 mm full stroke range:	1 ±0,02 pulses per mm	10 ±0,2 pulses per mm	20 ±0,4 pulses per mm	25 ±0,5 pulses per mm

Ordering Information (cont.)

Output Signals:

order code:	AB-TTL	AB-OC	ABC-LD*	ABC-UD*
output driver:	TTL/CMOS compatible	Open Collector	5 V - Line Driver	Universal Line Driver
Input voltage (V+):	4.5...13.2 Vdc	10.8...26.4 Vdc	5 Vdc	5...30 VDC
Sink current:	20 mA max.	20 mA max.	20 mA max.	20 mA max.
Input current:	80 mA max.	80 mA max.	150 mA max.	50 mA max, no load

*note: not available with 4-pin micro-connector

Electrical Connections:

order code:	MC4	M6	C25															
	4-pin micro-connector and 12 ft. [3.7 m] cable assembly	6-pin plastic connector and mating plug	25 ft. [7.6 m] instrumentation cable															
	4-pin dual keyway receptacle (male) Ø.3 in [8 mm] yellow PVC jacket 4-conductor 22 AWG	1/2 - 5/16" [14 - 8 mm] cable dia. 16 AWG max conductor size	0.2 in. (5 mm) dia. shielded, 24 AWG multiconductor															
	<table border="1"> <thead> <tr> <th>pin</th> <th>color-code</th> <th>i/o signals</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>RED-BLK. TR.</td> <td>input voltage</td> </tr> <tr> <td>2</td> <td>RED-WHT. TR.</td> <td>channel A</td> </tr> <tr> <td>3</td> <td>RED</td> <td>channel B</td> </tr> <tr> <td>4</td> <td>GREEN</td> <td>common (ground)</td> </tr> </tbody> </table>	pin	color-code	i/o signals	1	RED-BLK. TR.	input voltage	2	RED-WHT. TR.	channel A	3	RED	channel B	4	GREEN	common (ground)	 A = input voltage (V+) B = common (gnd.) C = channel A D = channel B E = channel A* F = channel B*	RED = input voltage (V+) BLK = common (gnd.) GRN = channel A WHT = channel B BLU = channel A* BRN = channel B*
pin	color-code	i/o signals																
1	RED-BLK. TR.	input voltage																
2	RED-WHT. TR.	channel A																
3	RED	channel B																
4	GREEN	common (ground)																

*note: available with line driver option only

Cable Guide:

order code:	blank	SG
description:	standard cable guide	spring-loaded guide
		 uncompressed fully compressed* cable-guide cushions impact from accidental free release

*note: start of full stroke range begins at full compression point