

PT1E

Cable Actuated Sensor Industrial Grade • Incremental Encoder

Linear Position to 50 inches (1270 mm)

Aluminum and Polycarbonate Enclosure

Compact Design • Incremental Encoder Output Signal

IP65 • NEMA 4 Protection

General

Full Stroke Range 0-2 to 0-50 inches
Output Signal incremental encoder (quadrature)

Accuracy $\pm 0.04\%$ full stroke

Repeatability $\pm 0.02\%$ full stroke

Resolution Options 25 to 1250 pulses per inch

Measuring Cable .019-in. dia. nylon-coated stainless steel

Enclosure glass-filled polycarbonate and black anodized aluminum

Sensor optical encoder

Maximum Retraction see ordering information

Acceleration

Weight 1 lb. max.

Electrical

Input Voltage see ordering information

Input Current see ordering information

Environmental

Enclosure NEMA 4, IP 65

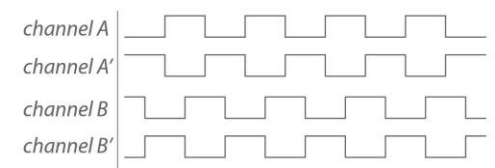
Operating Temperature 0° to 160°F (-17° to 71°C)

Vibration up to 10 g to 2000 Hz maximum

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.

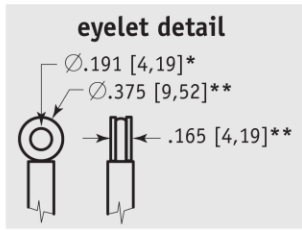
The PT1E has many options available including full stroke measurement ranges from 0-2 inches up to 0-50 inches, different output drivers and alternate measuring cable exits.

Output Signal

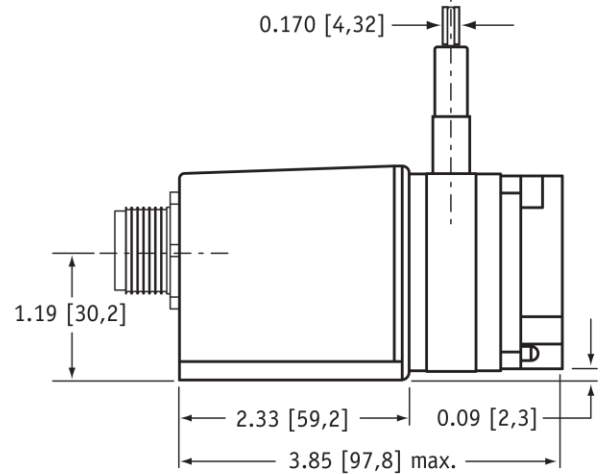
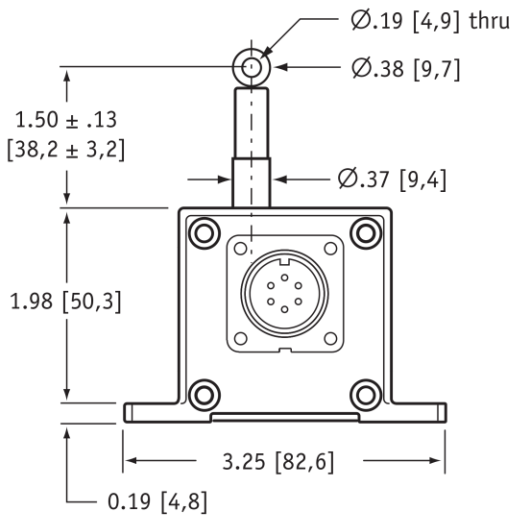
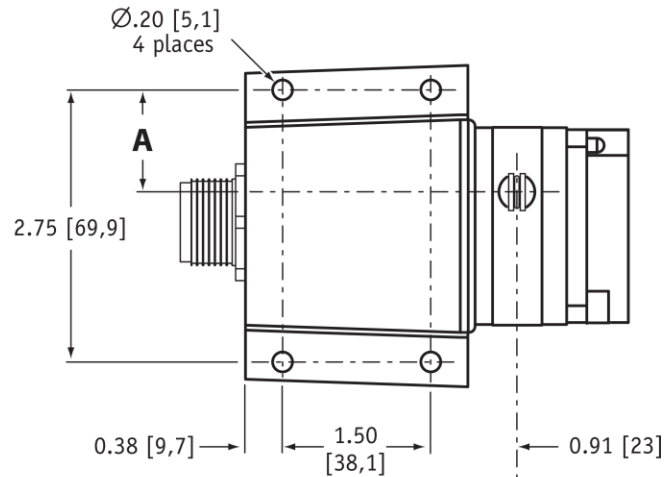


-- see ordering information for available channels

Outline Drawing



Range	A
25, 625	1.04 [26,4]
50, 1250	0.74 [18,8]
<i>inches [mm]</i>	



DIMENSIONS ARE IN INCHES [MM]
tolerances are 0.03 IN. [0.5 MM] unless otherwise noted.

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

Ordering Information

Model Number:

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

Sample Model Number:

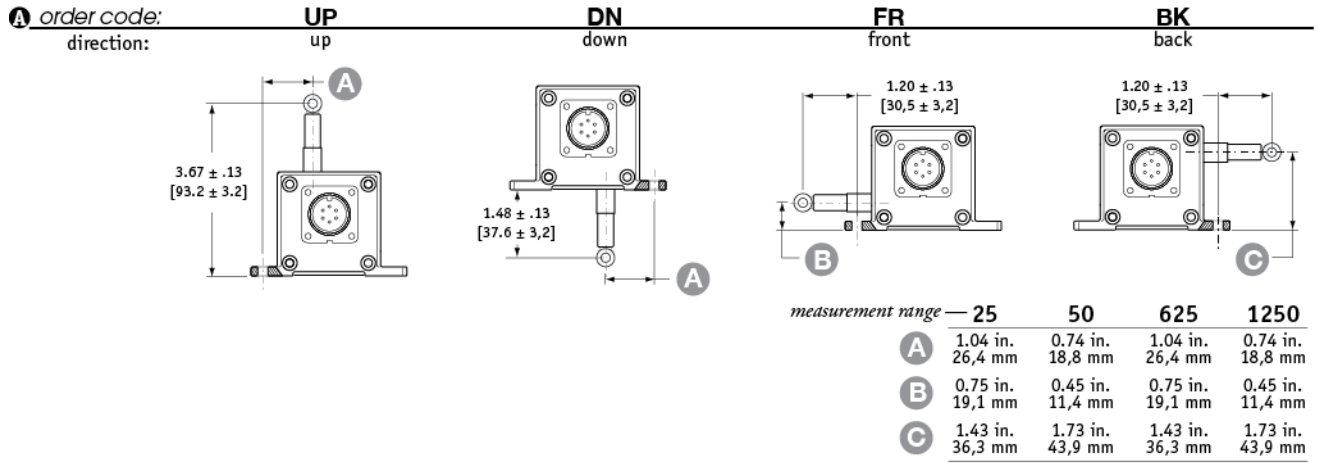
PT1E - 25 - UP - 50 - AB-TTL - MC4 - SG

- 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
cable tension (±20%):	12 oz.	6 oz.	3,3 N	1,6 N
cable acceleration, max.:	11 g	4 g	11 g	4 g
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

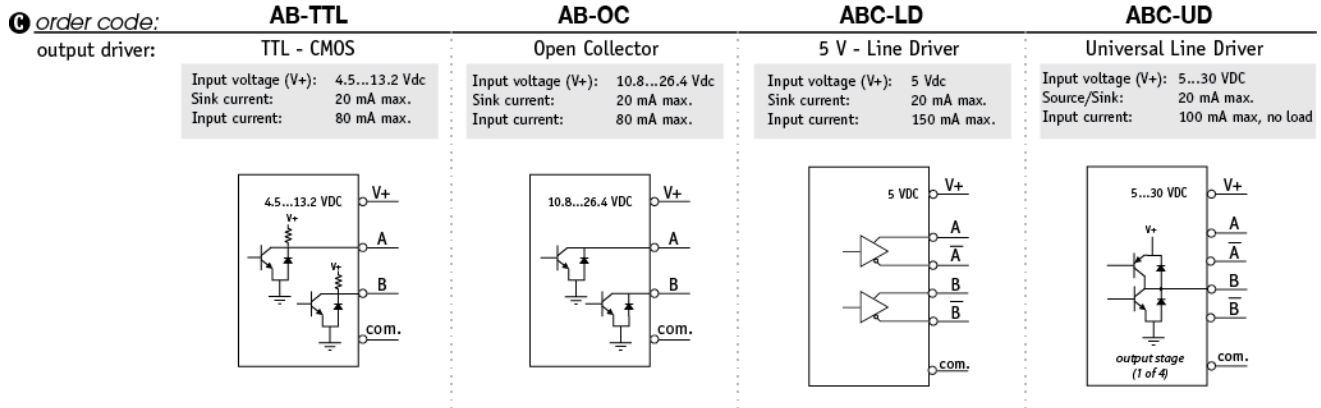
Cable Exit:



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

Output Signal



Electrical Connection:

① *order code:*

MC4			M6			C25		
4-pin micro-connector with 12 ft [3.5 M] cordset			6-pin plastic connector with mating plug			25-ft. instrumentation cable 24 AWG, shielded		
<p>4-pin mating plug and cordset</p> <p><i>contact view</i></p>			<p>6-pin mating plug</p> <p><i>contact view</i></p>			<p>25-ft. cable</p>		
pin	color code	TTL/CMOS	pin	TTL/CMOS	5 V Line Driver	color	TTL/CMOS	5 V Line Driver
1	RED-BLK TR.	Open Collector	A	Open Collector	Universal Line Driver	red	Open Collector	Universal Line Driver
2	RED-WHT TR.	input voltage	B	input voltage	input voltage	black	input voltage	input voltage
3	RED	channel A	C	common	common	green	common	common
4	GREEN	channel B	D	channel A	channel A	white	channel A	channel A
		common	E	channel B	channel B	blue	channel B	channel B
			F	-	channel A'	brown	-	channel A'
					channel B'			channel B'

Cable Guide:

② *order code:*

blank	SG
standard cable guide	spring-loaded guide
	<p><i>cushions impact from accidental free release</i></p>
<p><i>*note: start of full stroke range begins at full compression point</i></p>	