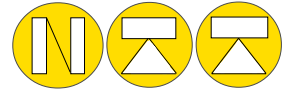




Cable-Extension Position Transducer



PT9150

- ▼ Medium to Long Range
- ▼ Industrial Grade
- ▼ Incremental Encoder Output



Specifications:

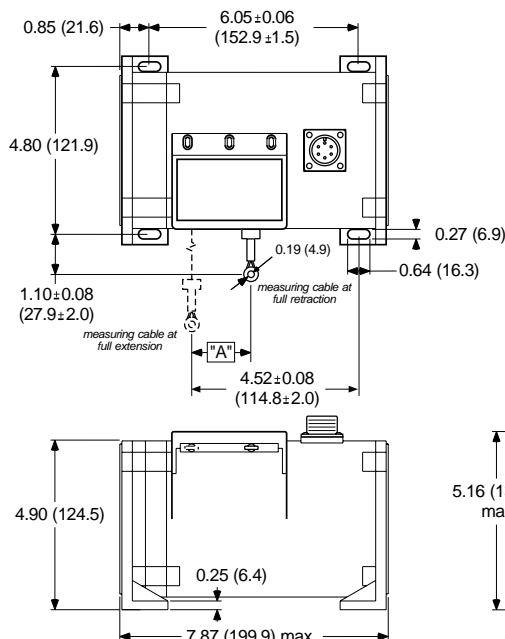
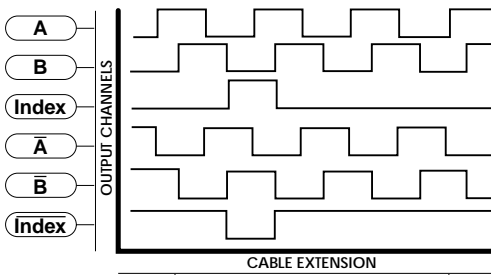
GENERAL

Full Stroke Ranges—on this data sheet 0-75 to 0-550 inches,
(1.9m to 14m) see ① next page
Output Signal incremental encoder (quadrature) signal
Output Driver TTL/CMOS, open collector or line driver, see ⑦
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 10 to 100 pulses per inch, see ③ and ⑨
Measuring Cable stainless steel, nylon-coated or thermoplastic, see ⑥
Enclosure Material powder-painted aluminum or stainless steel, see ②
Sensor optical encoder
Maximum Retraction Acceleration see ⑤
Maximum Velocity see ④
Weight, Aluminum (Stainless Steel) Enclosure 4kg. (7kg) max.

ENVIRONMENTAL

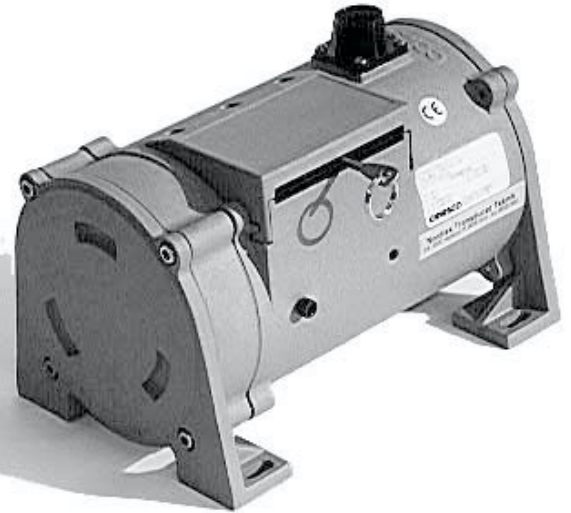
Enclosure Design NEMA 4/4X, IP 65/67/68, see ⑩ and ⑪
Operating Temperature -5° to 45°C
Vibration up to 10 G's to 2000 Hz maximum

Electrical Output Signal:



RANGE	"A" DIMENSION MEASURING CABLE DIAMETER		
	0.034 in.	0.047 in.	0.062 in.
75	0.22	0.29	0.37
100	0.29	0.39	0.49
150	0.44	0.59	0.73
200	0.58	0.79	0.98
250	0.73	0.98	1.22
300	0.88	1.18	1.47
350	1.02	1.38	1.71
400	1.17	1.57	1.96
450	1.31	1.77	N/A
500	1.46	1.97	N/A
550	1.61	N/A	N/A

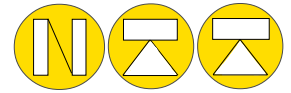
DIMENSIONS ARE IN INCHES (MILLIMETERS ARE IN PARENTHESES)
TOLERANCES ARE ± 0.001 (0.0254 MM)
UNLESS OTHERWISE NOTED



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. This model is available in a wide variety of resolutions and output stages to fit virtually any requirement. It can measure up to 44m, yet when its cable is retracted it is only 150mm long. Its small size and low-cost-to-measurement ratio offers remarkable flexibility and value.



PT9150 • Cable-Extension Transducer • Incremental Encoder Output



▼ Ordering Information

Model Number:

PT9150- _____ **0**
order code: **R** **A** **B** **C** **D** **E** **F** **G**

Full Stroke Range:

①	english	R order code:	0075	0100	0150	0200	0250	0300
		full stroke range, min:	75 inches	100 inches	150 inches	200 inches	250 inches	300 inches
		R order code:	0350	0400	0450*	0500*	0550*	
		full stroke range, min:	350 inches	400 inches	450 inches	500 inches	550 inches	
	metric	R order code:	2500	3750	5000	6250	7500	8750
		full stroke range, min:	2500 mm	3750 mm	5000 mm	6250 mm	7500 mm	8750 mm
		R order code:	1000	11250	12500*	13750*		
		full stroke range, min:	10,000 mm	11,250 mm	12,500 mm	13,750 mm		

*note: *42 oz. cable tension (see ③ below) for these ranges is strongly recommended!*

Enclosure Material and Measuring Cable Tension:

	A order code:	1	2	3	4
	enclosure:	see front page	refer to supplement 9-A	see front page	refer to supplement 9-A
②	enclosure material:	powder-painted aluminum		303 stainless steel	
③	cable tension (±30%):	26 oz.	42 oz.	26 oz.	42 oz.
④	maximum velocity:	60 inches per second	200 inches per second	20 inches per second	80 inches per second
⑤	max. retraction acceleration:	1 G	5 G's	0.33 G	2 G's

Measuring Cable:

	B order code:	1*	2**	3***
⑥	cable construction:	nylon-coated stainless steel	stainless steel	thermoplastic

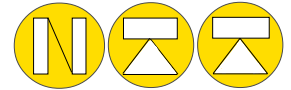
notes: *available in all ranges **available in ranges up to 500-inches only ***available in ranges up to 400-inches only

Cable Exit:

C order code:	1	2	3	4
direction:	front	top	rear	bottom



PT9150 • Cable-Extension Transducer • Incremental Encoder Output



Output Signals:

⑦	① order code:	1	2	3	4
	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: 50 mA max. (no load)

Resolution:

⑧	⑨	① order code:	1	2	3	4
resolution for english ranges:			100 ±2 pulses per inch	200 ±4 pulses per inch	250 ±5 pulses per inch	10 ±0.2 pulses per inch
resolution for metric ranges:			5 ±0.1 pulses per mm	10 ±0.2 pulses per mm	12.5 ±0.25 pulses per mm	0.5 ±0.01 pulses per mm

Electrical Connection:

⑩	⑪	① order code:	1 ^(*)	2	3	4 ^(*)
		electrical connection:	6-pin plastic connector and mating plug	25 ft. instrumentation cable	18-pin plastic connector and mating plug	6-pin metal connector and mating plug
			connections	connections	connections	connections
				RED = input power (V+) BLK = common (gnd.) GRN = channel A WHT = channel B		
				BLU = channel A ^(*) BRN = channel B ^(*) YEL = index ^(*) ORG = index ^(*)	1 = input power (V+) 2 = common (gnd.) 3 = channel B 6 = channel A 7 = index ^(*) 11 = channel B ^(*) 12 = channel A ^(*) 15 = index ^(*)	
		IP rating:	67	67, 68 ^(*)	67	67
		NEMA rating:	4, 4X ^(*)	4, 4X ^(*)	4	4

notes: *1-6-pin connector not available when Index channels are required

*2-no signal present when TTL-CMOS or Open Collector output drivers are selected

*3-requires factory submersion test

*4-applies to stainless steel enclosure, see ③

Sample Model Number

PT9150-0200 - 1 1 1 - 1 1 1 0

Specifications: Full Stroke Range: 200 inches
Enclosure Material: powder-painted aluminum
Measuring Cable: 0.034-in dia. nylon coated stainless steel cable
Cable Exit: front
Output Driver: TTL/CMOS, 4.5...13.2 VDC
Resolution: 98 - 102 pulses per inch
Electrical Connection: 6-pin plastic connector

celesco

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