

Cable-Extension Position Transducer

Incremental Encoder Output

Ranges: 0-30, 0-60 in. • 0-625, 0-1250 mm

Industrial Grade • 20 to 500 ppi

PT8150

Specification Summary:

GENERAL

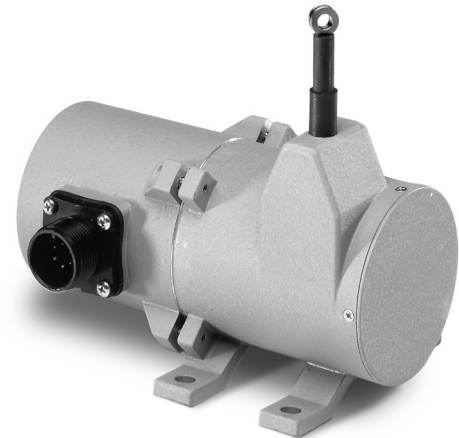
Full Stroke Range Options 0-30 to 0-60 inches
 Output Signal incremental encoder (quadrature)
 Accuracy 0.04% full stroke *contact factory for higher accuracy*
 Repeatability $\pm 0.02\%$ full stroke
 Resolution Options 20 to 500 pulses per inch
 Measuring Cable Options nylon-coated stainless steel or thermoplastic
 Enclosure Material powder-painted aluminum or stainless steel
 Sensor optical encoder
 Maximum Retraction Acceleration *see ordering information*
 Weight, Aluminum (Stainless Steel) Enclosure 3 lbs. (6 lbs.) max.

ELECTRICAL

Input Voltage *see ordering information*
 Input Current *see ordering information*

ENVIRONMENTAL

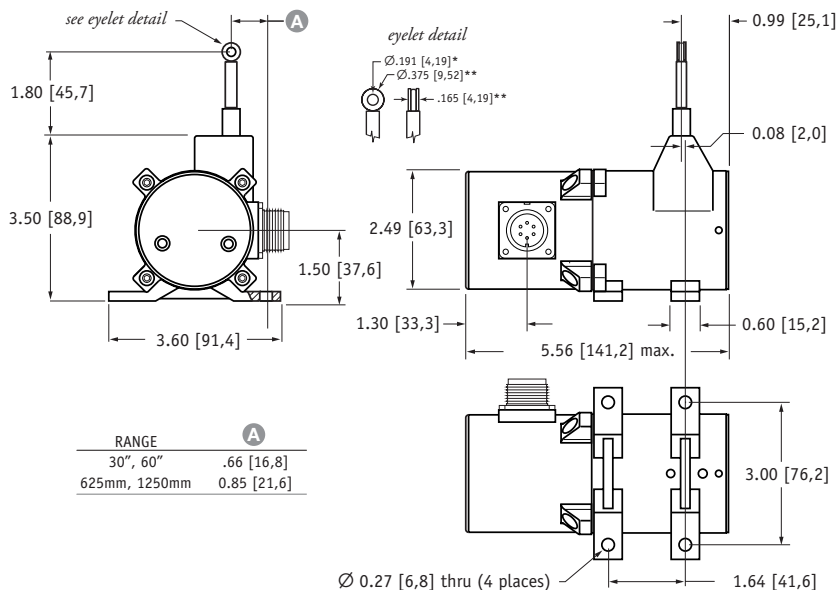
Enclosure NEMA 4/4X/6, IP 67/68
 Operating Temperature 0° to 160°F (-17° to 71°C)
 Vibration up to 10 G's to 2000 Hz maximum



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. For measurements up to 60 inches, this model is available in a variety of resolutions and output stages to fit virtually any requirement.

The PT8150 offers numerous advantages over other industrial-grade sensors: It installs in minutes by mounting its body to a fixed surface and attaching its cable to the movable object, fits into areas unsuited for rod-type measurement devices, and works without perfect parallel alignment.

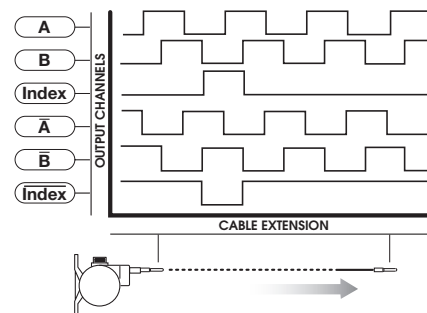
Outline Drawing



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

* tolerance = $+0.005 -0.001$ [$+0.13 -0.03$]
 ** tolerance = $+0.005 -0.005$ [$+0.13 -0.13$]

Output Signal



Ordering Information:

Model Number:

PT8150- _____ **1** - _____
order code: R A B C D E F G

Sample Model Number:

PT8150 - 0030 - 111 - 1110

- R** range: 30 inches
- A** enclosure/cable tension: aluminum/standard (12 oz.)
- B** measuring cable: .034 nylon-coated stainless
- D** output signal: TTL/CMOS driver
- E** resolution: 200 ±4 pulses per inch
- F** electrical connection: 6-pin plastic connector
- G** cable guide option: standard nylon cable guide

Full Stroke Range:

R order code:	0030	0060	0625	1250
full stroke range, min:	30 in.	60 in.	625 mm	1250 mm

Enclosure Material and Measuring Cable Tension:

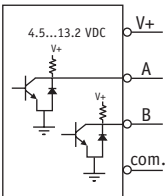
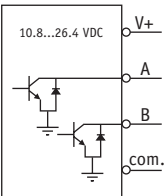
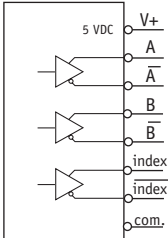
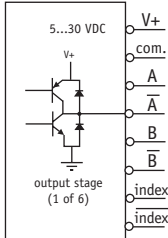
A order code:	1	5	2	3	6	4	8	7	9
enclosure:	aluminum			303 stainless			316 stainless		
cable tension:	standard	medium	high	standard	medium	high	standard	medium	high
max. acceleration:	15 G	25 G	40 G	6 G	12 G	18 G	6 G	12 G	18 G

cable tension option specifications (tension tolerance: ± 30%)	Range:	30 in.	60 in.	625 mm	1250 mm
	Standard:	16 oz.	16 oz.	4,5 N	4,5 N
	Medium:	26 oz.	26 oz.	7,2 N	7,2 N
	High:	47 oz.	47 oz.	13,1 N	13,1 N

Measuring Cable:

B order code:	1	2	3	4
	∅.034-inch nylon-coated stainless steel	∅.047-inch non-coated stainless steel	∅.062-inch thermoplastic	∅.031-inch non-coated stainless steel
	available in <i>all</i> ranges	<i>30 in. and 625 mm</i> ranges only	<i>30 in. and 625 mm</i> ranges only	<i>60 in. and 1250 mm</i> ranges only

Output Signals:

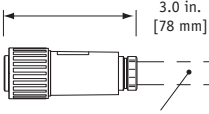
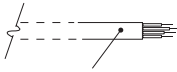
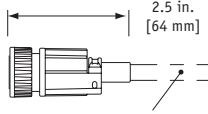
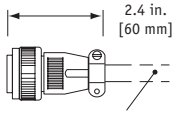
D order code:	1	2	3	4
output driver:	TTL - CMOS	Open Collector	5 V - Line Driver	Universal Line Driver
	Input voltage (V+): 4.5...13.2 Vdc Sink current: 20 mA max. Input current: 80 mA max.	Input voltage (V+): 10.8...26.4 Vdc Sink current: 20 mA max. Input current: 80 mA max.	Input voltage (V+): 5 Vdc Sink current: 20 mA max. Input current: 150 mA max.	Input voltage (V+): 5...30 VDC Source/Sink: 20 mA max. Input current: 100 mA max, no load
				

Ordering Information:

Resolution:

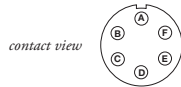
F order code:	1	2	3	4
english ranges:	200 ±4 pulses per in.	400 ±8 pulses per in.	500 ±10 pulses per in.	20 ±0.4 pulses per in.
metric ranges:	10 ±0,2 pulses per mm	20 ±0,4 pulses per mm	25 ±0,5 pulses per mm	1 ±0,02 pulses per mm

Electrical Connection:

F order code:	1	2	3	4
	6-pin plastic connector with mating plug IP 67, NEMA 4X*,6	25-ft. instrumentation cable 24 AWG, shielded IP 67, NEMA 6	18-pin plastic connector with mating plug IP 65, NEMA 4	6-pin metal connector with mating plug IP 67, NEMA 6
				
	.30 - .39 in. [8 - 10 mm] 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	.26 - .30 in. [7 - 8 mm] cable dia. 20 - 24 AWG conductor size connector: Conxall 14282-18PG-300-K mating plug: Conxall 13282-18SG-326-K	.375 in. [9 mm] max cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S

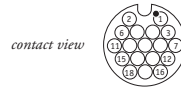
6-pin mating plug:

pin	TTL/CMOS Open Collector	5 V Line Driver Universal Line Driver
A	input voltage	input voltage
B	common	common
C	channel A	channel A
D	channel B	channel B
E	-	channel A'
F	-	channel B'



18-pin mating plug:

pin	TTL/CMOS Open Collector	5 V Line Driver Universal Line Driver
1	input voltage	input voltage
2	common	common
3	channel B	channel B
6	channel A	channel A
7	-	index
11	-	channel B'
12	-	channel A'
15	-	index'

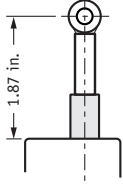
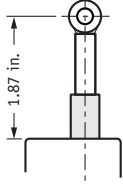
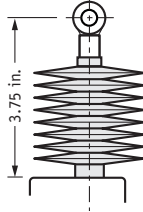
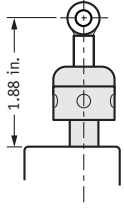


25-ft. instrumentation cable:

color	TTL/CMOS Open Collector	5 V Line Driver Universal Line Driver
red	input voltage	input voltage
black	common	common
green	channel A	channel A
white	channel B	channel B
blue	-	channel A'
brown	-	channel B'
yellow	-	index
orange	-	index'

*-applies to stainless steel enclosure only.

Cable Guide Options:

G order code:	0	1	2*	3
	standard cable guide	stainless steel cable guide	polyurethane cable bellows	integral cable brush
				

*important! - bellows limits measuring cable travel to 25 inches, contact factory before ordering.