

Cable-Extension Position Transducer

Incremental Encoder Output
Ranges: 0-600 to 0-1700 inches
Industrial Grade

<Extended Range>

PT9150



Specification Summary:

GENERAL

Full Stroke Range Options—on this datasheet 0-600 to 0-1700 inches
 Output Signal incremental encoder (quadrature)
 Output Driver Options TTL/CMOS, open collector or line driver
 Accuracy 0.04% full stroke *contact factory for higher accuracy*
 Repeatability $\pm 0.02\%$ full stroke
 Resolution Options 10 to 250 pulses per inch
 Measuring Cable nylon-coated stainless steel
 Enclosure Material powder-painted aluminum or stainless steel
 Sensor optical incremental encoder
 Maximum Retraction Acceleration *see ordering information*
 Maximum Velocity *see ordering information*
 Weight, Aluminum (Stainless Steel) Enclosure 14 lbs. (28 lbs.) max.

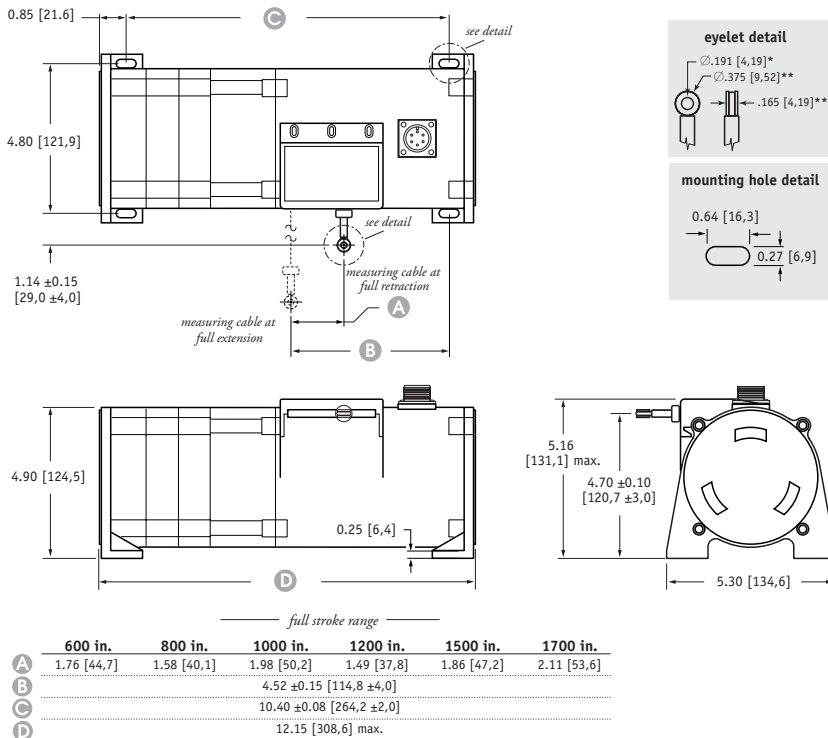
ELECTRICAL

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

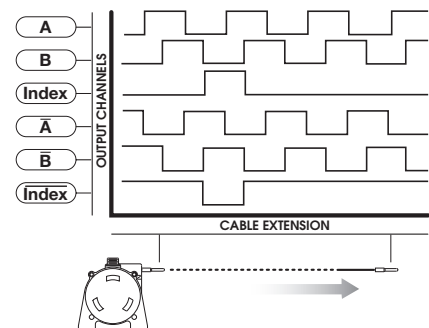
Outline Drawing



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 1700", yet when its cable is retracted it is only 6" long. Its small size and low-cost-to-measurement ratio offers remarkable flexibility and value.

Output Signal



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:

PT9150- **1** **0**
order code: R A B C D E F G

Sample Model Number:

PT9150 - 0800 - 111 - 1110

- R** range: 500 inches
- A** enclosure: aluminum
- C** cable exit: front
- D** output signal: TTL/CMOS driver
- E** resolution: 100 ±2 pulses per inch
- F** electrical connection: 6-pin plastic connector

Full Stroke Range:

R <i>order code:</i>	0600	0800	1000	1200	1500	1700
full stroke range, min:	600 in.	800 in.	1000 in.	1200 in.	1500 in.	1700 in.
cable tension (±35%):	27 oz.	24 oz.	20 oz.	19 oz.	18 oz.	17 oz.
measuring cable:	.034-in. dia. nylon-coated stainless	.019-in. dia. nylon-coated stainless	.019-in. dia. nylon-coated stainless	.019-in. dia. nylon-coated stainless	.014-in. dia. nylon-coated stainless	.014-in. dia. nylon-coated stainless

.....english ranges.....

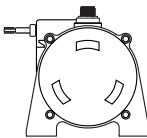
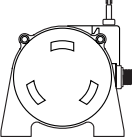
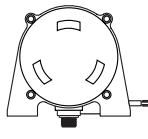
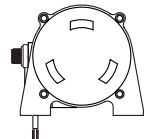
R <i>order code:</i>	15000	20000	25000	30000	35000	40000
full stroke range, min:	15.000 mm	20.000 mm	25.000 mm	30.000 mm	35.000 mm	40.000 mm
cable tension (±35%):	7,5 N	6,7 N	5,6 N	5,3 N	5,0 N	4,7 N
measuring cable:	0,86-mm dia. nylon-coated stainless	0,48-mm dia. nylon-coated stainless	0,48-mm dia. nylon-coated stainless	0,48-mm dia. nylon-coated stainless	0,36-mm dia. nylon-coated stainless	0,36-mm dia. nylon-coated stainless

.....metric ranges.....

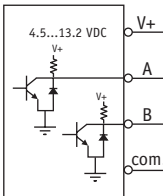
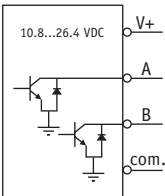
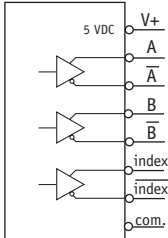
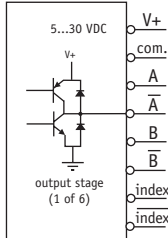
Enclosure Material:

	1	3
enclosure material:	powder-painted aluminum	303 stainless steel
max. acceleration:	1G	.33G
max. velocity:	60 inches/sec.	20 inches/sec.

Cable Exit:

C <i>order code:</i>	1 front	2 top	3 back	4 down
				

Output Signals:

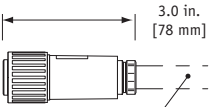

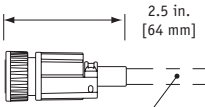
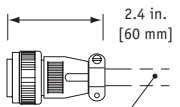
D <i>order code:</i>	1	2	3	4
output driver:	TTL - CMOS	Open Collector	5 V - Line Driver	Universal Line Driver
Input voltage (V+):	4.5...13.2 Vdc	10.8...26.4 Vdc	5 Vdc	5...30 VDC
Sink current:	20 mA max.	20 mA max.	20 mA max.	20 mA max.
Input current:	80 mA max.	80 mA max.	150 mA max.	100 mA max, no load
				

Ordering Information:

Resolution:

E order code:	1	2	3	4
english ranges:	100 ±2 pulses per in.	200 ±4 pulses per in.	250 ±5 pulses per in.	10 ±0.2 pulses per in.
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:

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. [6,6 - 7,6 mm] cable dia. 20 - 24 AWG conductor size connector: Conxall 14282-18PG-300-K mating plug: Conxall 13282-18SG-326-K	3/8-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'

contact view



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'

contact view



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.