

Cable-Extension Position Transducer

- Short to Medium Range
- Incremental-Encoder Output / Quadrature



Standard Specifications:

GENERAL

Range 0-25 in., 0-50in., 0-650mm, 0-1250mm
 Weight 2 lb. typical
 Enclosure Materials powder coated and anodized aluminum
 Sensor incremental optical encoder
 Electrical Connection 6-pin connector

ELECTRICAL

Input Voltage 4.5 - 13.2 VDC
 Optional Input Voltage see order code
 Output incremental encoder signal, quadrature

PERFORMANCE (English)

25 Inch Range:
 Resolution 500 pulses per inch, nominal
 Accuracy ± 0.010 inches, maximum
 Repeatability ± 0.005 inches, maximum
 Cable Tension 34 ounces, nominal

50 Inch Range:
 Resolution 250 pulse per inch, nominal
 Accuracy ± 0.020 inches, maximum
 Repeatability ± 0.010 inches, maximum
 Cable Tension 17 ounces, nominal

PERFORMANCE (Metric)

625 Millimeter Range:
 Resolution 20 pulses per millimeter, nominal
 Accuracy ± 0.25 millimeters, maximum
 Repeatability ± 0.12 millimeters, maximum
 Cable Tension 970 grams, nominal

1250 Millimeter Range:
 Resolution 10 pulses per millimeter, nominal
 Accuracy ± 0.50 millimeters, maximum
 Repeatability ± 0.25 millimeters, maximum
 Cable Tension 485 grams, nominal

MECHANICAL

Measuring Cable $\emptyset.019$ -inch nylon-coated stainless steel
 Measuring Cable Fitting crimp and swivel

ENVIRONMENTAL

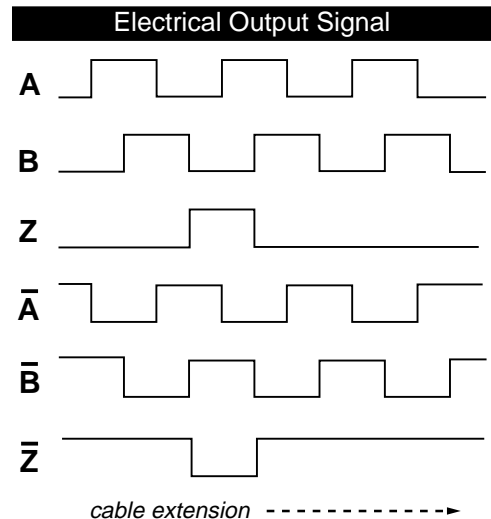
Operating Temperature 0°F to +160°F (-20°C to 70°C)
 Humidity 98% RH, no condensation
 Vibration up to 10 G's to 2000 Hz
 Enclosure NEMA 1

DPT250

The DPT250 Cable-Extension Transducer offers a highly accurate incremental encoder output signal that can provide both position and velocity information. The output is a digital pulse stream that can provide resolution down to *two thousands* of an inch!

Delivering high accuracy and fine resolution without the need for perfect parallel alignment, this compact device offers the additional benefits of ease of installation and ability to interface to any PLC or controller.

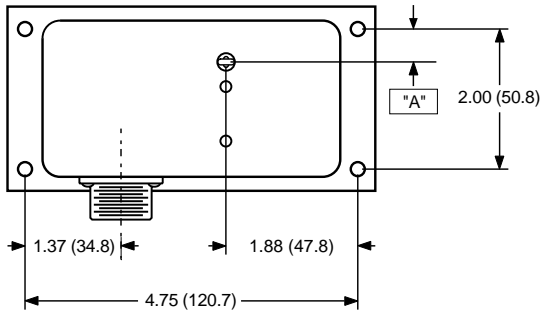
These features make the DPT250 the perfect choice for many applications that range from hydraulic cylinder positioning to robotic arm motion feedback.



Latin Tech, Inc.

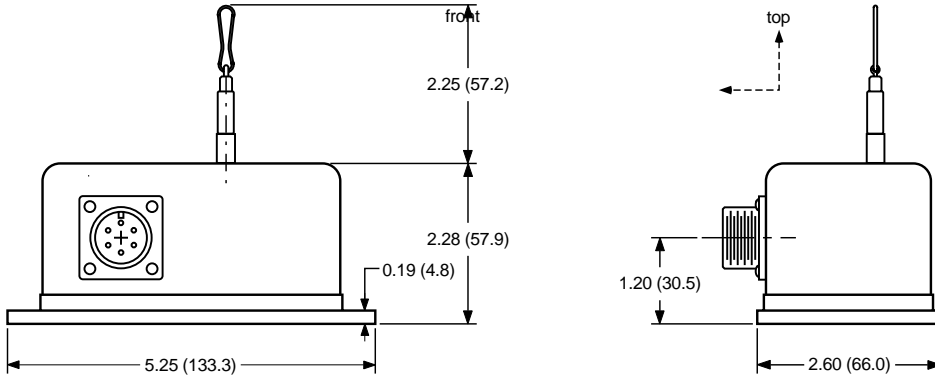
www.lt-automation.com • info@lt-automation.com

DPT250 Short to Medium Range - Incremental Encoder Output

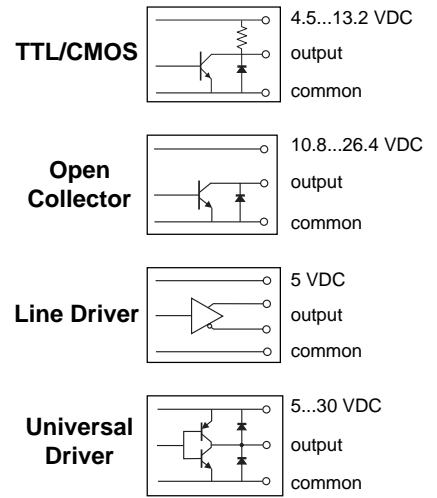


"A" DIMENSION	
RANGE	INCHES (MM)
25", 625mm	0.69 (17.5)
50", 1250mm	0.37 (9.4)

ALL DIMENSIONS ARE IN INCHES (MM)
tolerances are ±0.02 in. (+0.5mm) unless otherwise noted

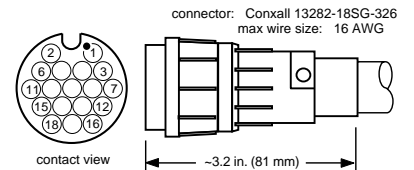
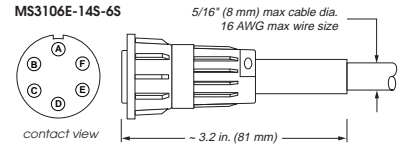


Output Driver



Electrical Connection

Mating Plugs



Ordering Information / Model Number:

DPT250 - - **A** **B** **C** **D** **E** **F** **G**
order code: **A** **B** **C** **D** **E** **F** **G**
sample: DPT250-0025-111-1110

- Full Stroke Range**
0025 = 25 inches 0625 = 625 millimeters
0050 = 50 inches 1250 = 1250 millimeters

- A** **Measuring Cable Tension**
1 = standard • see MECHANICAL specifications
NOTE: options 2, 3, and 4 below are available for RE-ORDER only!
2 = increased • approx. 2 x standard cable tension)
3 = high • approx. 4 x standard cable tension)
4 = decreased • approx. 0.5 x standard cable tension)

- C** **Measuring Cable Exit**
NOTE: options 2, 3, and 4 below are available for RE-ORDER only!
1 = top exit 2 = front exit 3 = rear exit 4 = bottom exit

- D** **Sensing Circuit / Channels**
1 = TTL/CMOS / A, B
2 = open collector/ A, B
4 = line driver / A, B, Z (index), C (compliments)*
6 = universal line driver / A, B, Z (index), C (compliments)*
*signal is not available with 6-pin connector option

- E** **Resolution**
- | | 25 in. range | 50 in. range | 625 mm range | 1250 mm range |
|-----|--------------|--------------|--------------|---------------|
| 1 = | 500 ppi | 250 ppi | 20 ppm | 10 ppm |
| 2 = | 1000 ppi | 500 ppi | 40 ppm | 20 ppm |
| 3 = | 1250 ppi | 625 ppi | 50 ppm | 25 ppm |
| 4 = | 50 ppi | 25 ppi | 2 ppm | 1 ppm |

- F** **Electrical Connection**
1 = 15 inch instrumentation cable
3 = 6-pin plastic connector and mating plug
4 = 18-pin connector and mating plug

Wiring Connections

	chan. A	chan. B	chan. A'	chan. B'	index (Z)	index (Z)	input power	com. (grnd.)
6-pin conn.	A						I	I
	B							
	C	•						
	D		•					
	E			•				
	F				•			
18-pin conn.	1						•	•
	2							
	3		•					
	6	•						
instr. cable	7				•			
	11					•		
	12						•	
	15							•
	RED						•	
	BLK							•
	WHT		•					
	GRN	•						
BLU			•					
ORG							•	
YEL					•			
BRN						•		