

Cable-Extension Position Transducer

Incremental Encoder Output
Ranges: 0-25 to 0-50 inches
Instrument Grade

DPT250

Specification Summary:

General

Full Stroke Ranges 0-25 to 0-50 inches [0-625 to 0-1250 mm]
 Output Signal incremental encoder (quadrature)
 Sensor optical encoder
 Output Driver Options TTL/CMOS, open collector or line driver
 Accuracy *see ordering information*
 Repeatability *see ordering information*
 Resolution Options 25 to 1250 pulses per inch
 Measuring Cable 0.019-in. dia. nylon-coated stainless steel
 Enclosure Material powder-painted and anodized aluminum
 Weight 2 lbs. max.

Electrical

Input Voltage *see ordering information*

Environmental

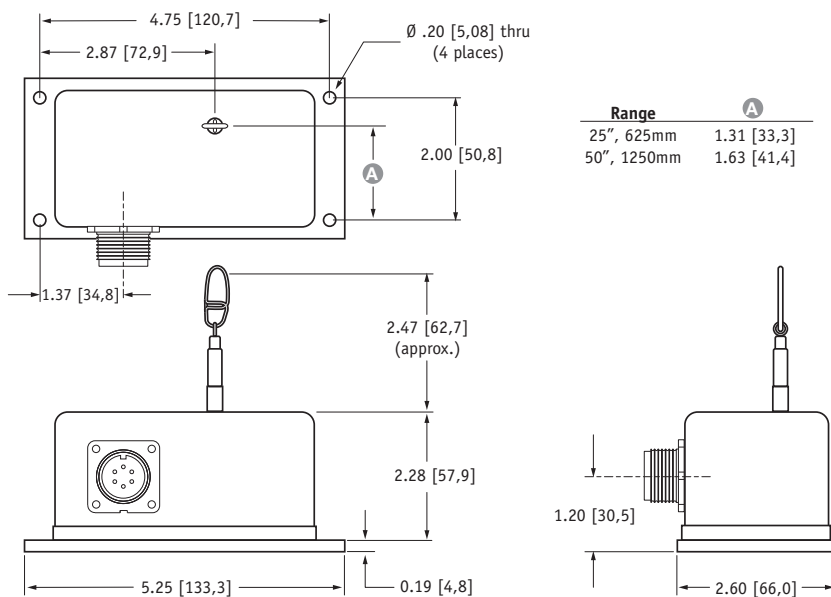
Operating Temperature 0°F to 160°F [-20°C to 70°C]
 Humidity 98% RH, no condensation
 Vibration up to 10G's to 2000 Hz
 Enclosure NEMA 1



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 thousandth's of an inch!

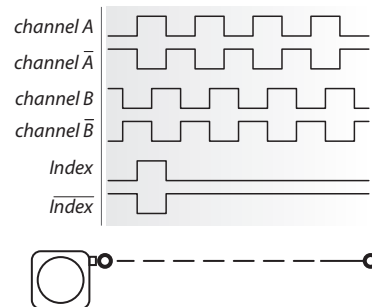
Delivering high accuracy and fine resolution without the need for perfect parallel alignment, this compact device offers the additional benefits of ease of installation and ability to interface to any PLC or controller. These features make the DPT250 the perfect choice for many applications that range from hydraulic cylinder positioning to robotic arm motion feedback.

fig. 1: Top Exit Option



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

Electrical Output Signal Options



Ordering Information:

Model Number:

DPT250 - - - **1** - - - - **0**

order code: R A B C D E F G

Sample Model Number:

DPT250 - 0025 - 111 - 1130

- R** range: 25 inches
- A** measuring cable tension: standard - 12 oz.
- C** cable exit: top
- D** sensing circuit/channels: TTL/CMOS, A,B
- E** resolution: 500 pulses per inch
- F** electrical connection: 6-pin plastic connector

Full Stroke Range:

R order code:	0025	0050	0625	1250
full stroke range, min:	25 in.	50 in.	625 mm	1250 mm
accuracy:	±0.010 in. (max)	±.020 in. (max)	±0.25 mm (max)	±0.50 mm (max)
repeatability:	±0.005 in. (max)	±.010 in. (max)	±0.12 mm (max)	±0.25 mm (max)
cable tension* (±30%):	13 oz.	6 oz.	3,6 N	1,6 N
cable acceleration, max.:	11 G's	4 G's	11 G's	4 G's
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

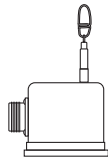
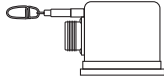
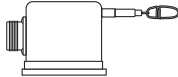
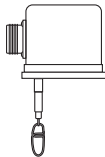
*note: increased cable tension options available for re-orders only (see below)

Measuring Cable Tension:

A order code:	1	H	2**	3**
	standard tension	high tension*		
25 inch range:	13 oz.	65 oz.	44 oz.	73 oz.
50 inch range:	6 oz.	33 oz.	22 oz.	36 oz.
625 mm range:	3,6 N	18,1 N	12 N	20 N
1250 mm range:	1,6 N	9,2 N	6 N	10 N
measuring cable:	.019-in. dia. nylon-coated stainless steel		.024-in. dia. stainless steel	

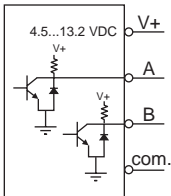
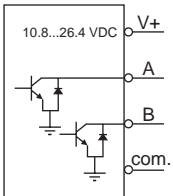
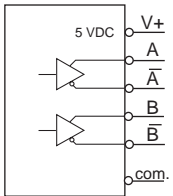
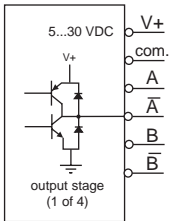
*-note: spring tension tolerance: ±20% **-note: outline dimensions for these options not controlled on this datasheet.

Measuring Cable Exit:

C order code:	1	2	3	4
	top exit (see fig. 1)	front exit*	rear exit*	bottom exit*
				

*-note: dimensions for optional cable exits not controlled on this datasheet, please contact factory

Sensing Circuit / Channels:


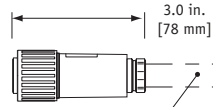
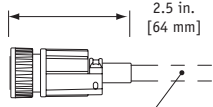


D order code:	1	2	4	6
description:	TTL / CMOS	open collector	line driver	universal line driver
Input voltage (V+):	4.5...13.2 Vdc	10.8...26.4 Vdc	5 Vdc	5...30 VDC
Sink current:	20 mA max.	20 mA max.	20 mA max.	20 mA max.
Input current:	80 mA max.	80 mA max.	150 mA max.	50 mA max, no load
				

Ordering Information (cont.):

Resolution:

order code:	1	2	3	4
25 in. range:	500 ppi	1000 ppi	1250 ppi	50 ppi
50 in. range:	250 ppi	500 ppi	625 ppi	25 ppi
625 mm range:	20 ppmm	40 ppmm	50 ppmm	2 ppmm
1250 mm range:	10 ppmm	20 ppmm	25 ppmm	1 ppmm

Electrical Connection:

order code:	1	3	4																																																																											
	15-inch, shielded instrumentation cable	6-pin plastic connector with mating plug	18-pin plastic connector with mating plug																																																																											
																																																																														
	15-inch, multiconductor cable	.30 - .39 in. [8 - 10 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	.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																																																																											
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