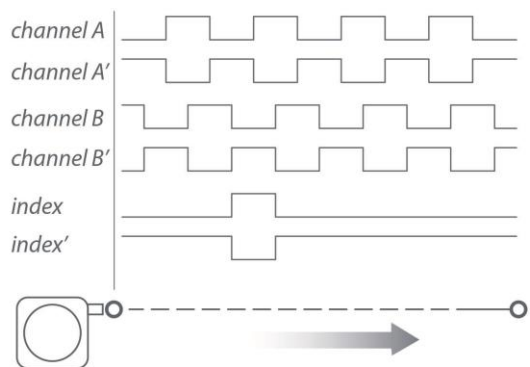


The DPT250 Cable-Extension Transducer offers a highly accurate incremental encoder output signal that can provide both position and velocity information. The output is a digital pulse stream that can provide resolution down to less than a thousandth's of an inch!

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.

Electrical Output Signal Options



-- see ordering information for available channels

DPT250

Cable Actuated Sensor Instrument Grade • Incremental Encoder

Short-Range String Encoder • High Resolution

25, 50-inch Stroke Range Options

Powder Painted & Anodized Aluminum Enclosure

Perfect Solution for Industrial & Testing Applications

General

Full Stroke Range Options	0-25 to 0-50 inches [0-625 to 0-1250 mm]
Output Signal	incremental encoder (quadrature)
Output Driver Options	TTL/CMOS, Open Collector, Line Driver
Accuracy	.01 to .02 in. (see ordering information)
Repeatability	.005 to .010 in. (see ordering information)
Resolution	25 to 1250 pulses per inch
Measuring Cable	0.019-in. dia. nylon-coated stainless steel
Enclosure Material	powder-painted and anodized aluminum
Sensor	optical encoder
Weight	2 lbs. max.

Electrical

Input Voltage	see ordering information
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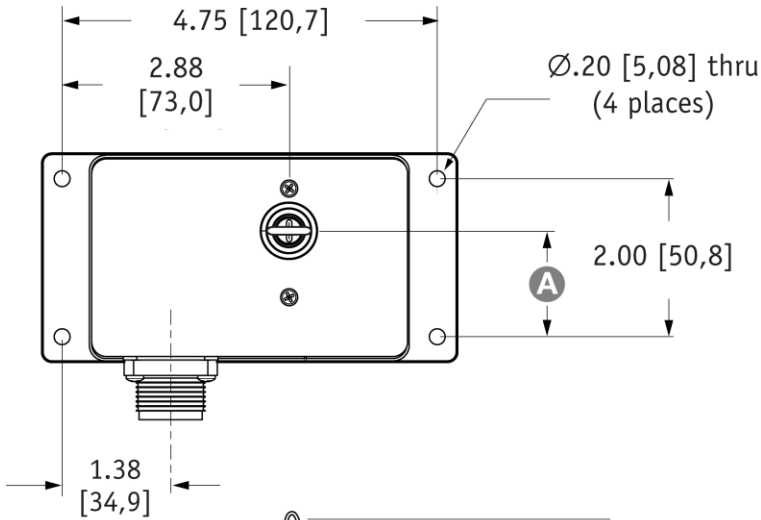
Environmental

Enclosure	IP 55, NEMA 12
Operating Temperature	0°F to 160°F (-20°C to 70°C)
Vibration	up to 10g to 2000 Hz
Humidity	98% RH, no condensation

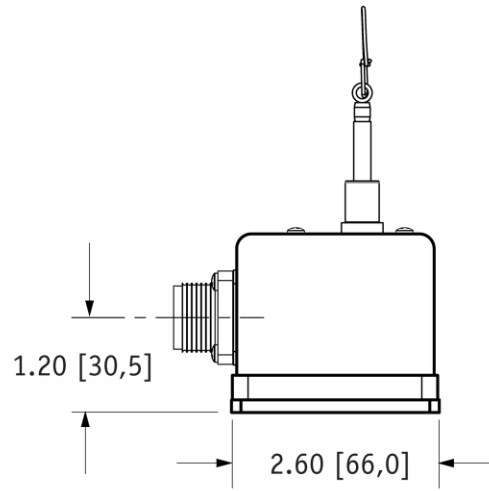
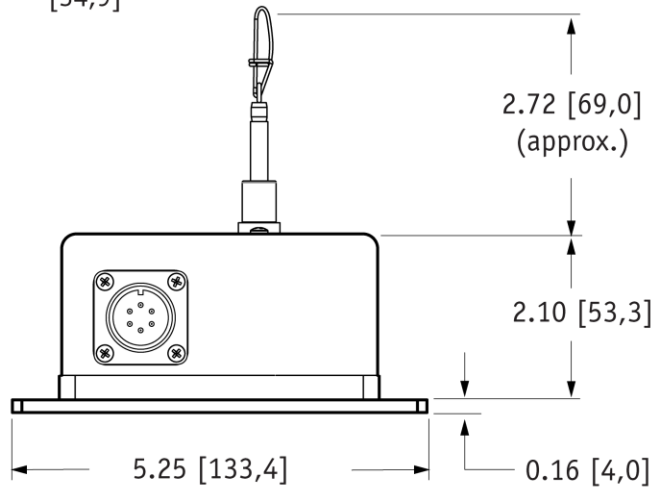
DPT250

Instrument Grade • Incremental

Outline Drawing:



Range	A
25", 625mm	1.31 [33,3]
50", 1250mm	1.63 [41,4]



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

Ordering Information

Model Number:

DPT250 - - **1** **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.
- 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	4 g	11 g	4 g
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

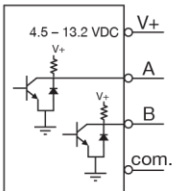
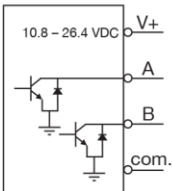
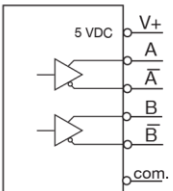
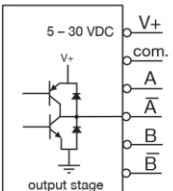
*note: increased cable tension options available (see below)

Measuring Cable Tension:

A order code:	1	H
	standard tension*	high tension*
25 inch range:	13 oz.	65 oz.
50 inch range:	6 oz.	33 oz.
625 mm range:	3,6 N	18,1 N
1250 mm range:	1,6 N	9,2 N

*-note: spring tension tolerance: ±30%

Sensing Circuit / Channels:

I 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
				

Resolution:

B 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:

1 *order code:*

1
15-inch, shielded instrumentation cable

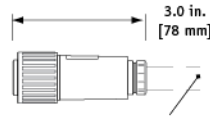


15-inch, multiconductor cable

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'

3

6-pin plastic connector with mating plug



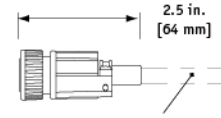
contact view

.30 - .39 in. [8 - 10 mm] cable dia.
16 AWG max conductor size
connector: MS3102E-14S-6P
mating plug: MS3106E-14S-6S

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'

4

18-pin plastic connector with mating plug



contact view

.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

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'