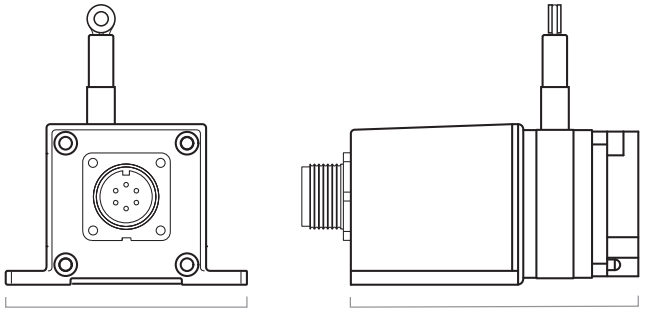
PT1E

Industrial Grade • Incremental Encoder

Linear Position to 50 inches (1270 mm)
Aluminum and Polycarbonate Enclosure
Compact Design • Incremental Encoder Output Signal
IP65 • NEMA 4 Protection

CE





3.3" [83 mm] 3.9" [98 mm]

GENERAL

Full Stroke Range Options	0-25 to 0-50 inches
Output Signal	incremental encoder (quadrature)
Accuracy	0.04% full stroke *contact factory for higher accuracy*
Repeatability	± 0.02% full stroke
Resolution Options	25 to 1250 pulses per inch
Measuring Cable Options	.019-in. dia. nylon-coated stainless steel
Enclosure	glass-filled polycarbonate and black anodized aluminum
Sensor	optical encoder
Maximum Retraction Acceleration	see ordering information
Weight	1 lb. max.

ELECTRICAL

Input Voltage	see ordering information
Input Current	see ordering information

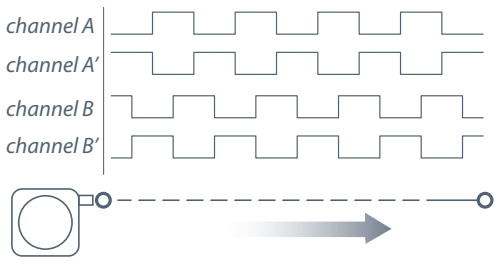
ENVIRONMENTAL

Enclosure	NEMA 4, IP 65
Operating Temperature	0° to 160°F (-17° to 71°C)
Vibration	up to 10 g to 2000 Hz maximum

The heart of the PT1E is an incremental optical encoder which delivers a quadrature formated digital pulse train. This compact transducer is available with several resolution options for a wide variety of applications from high accuracy position feedback to slow velocity feedback requirements.

The PT1E has many options available including full stroke measurement ranges from 0-2 inches up to 0-50 inches, different output drivers and alternate measuring cable exits.

Output Signal:

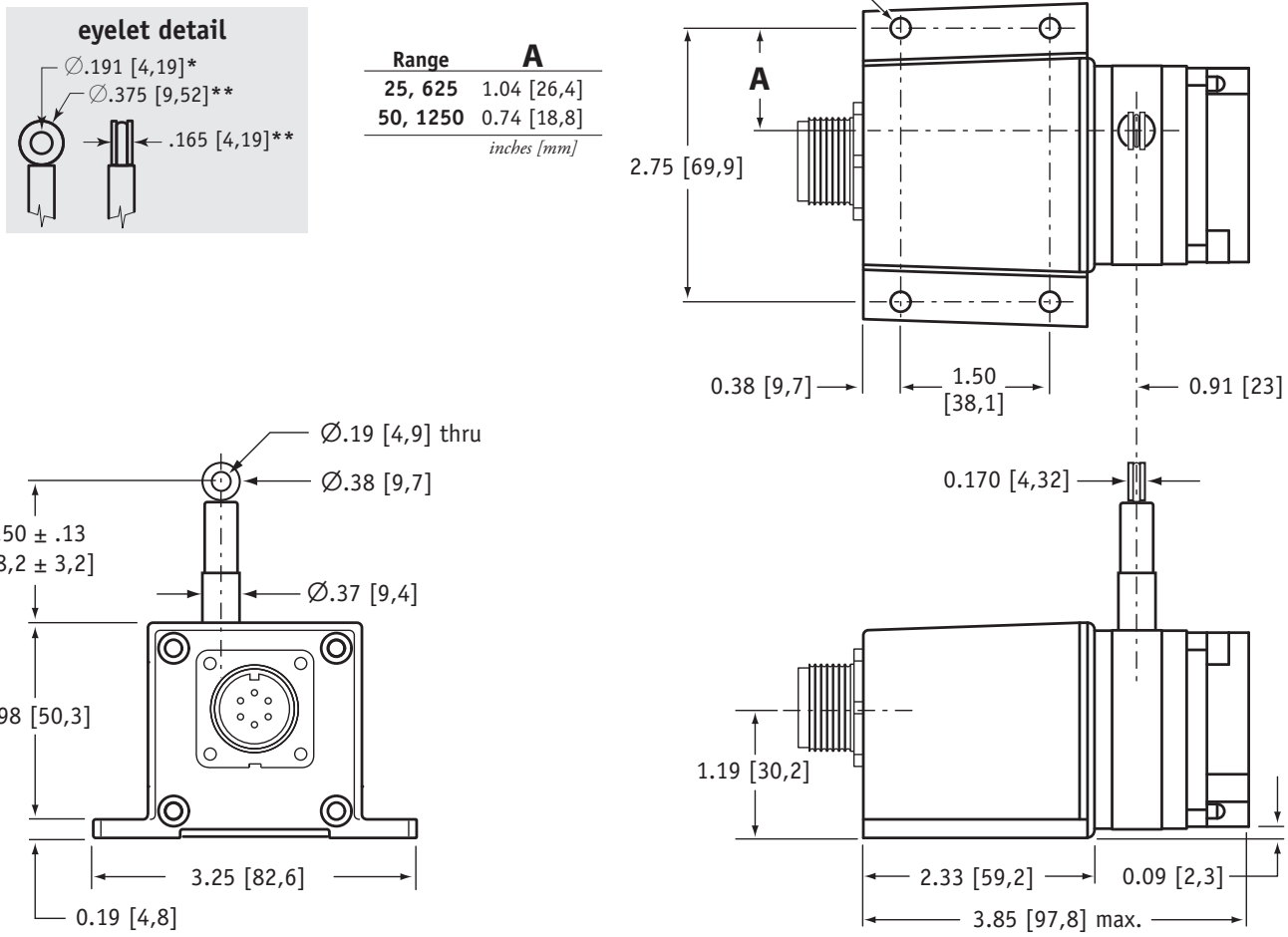


-- see ordering information for available channels

20630 Plummer Street • Chatsworth, CA 91311
tel: 800.423.5483 • +1.818.701.2750 • fax: +1.818.701.2799

celesco

Outline Drawing:



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:

PT1E - ____ - ____ - ____ - ____ - ____ - ____
order code: Ⓡ Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

Sample Model Number:

PT1E - 25 - UP - 50 - AB-TTL - MC4 - SG

Ⓡ	range:	25 inches
Ⓐ	measuring cable exit:	up
Ⓑ	resolution:	50 pulses per inch
Ⓒ	electrical connection:	4-pin micro connector
Ⓓ	output signal:	TTL/CMOS driver, Channels A,B
Ⓔ	cable guide:	spring-loaded guide

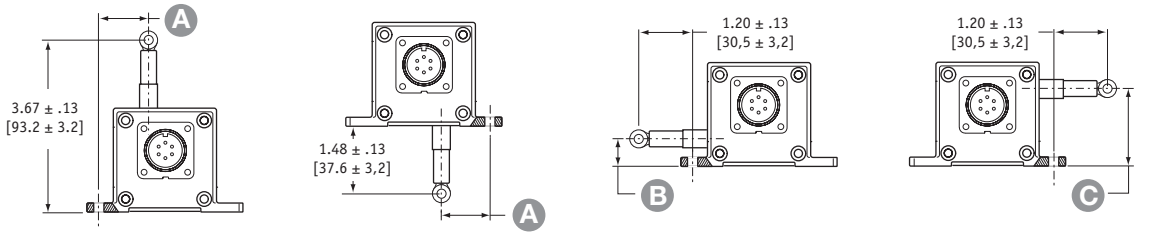
Full Stroke Range:

Ⓡ order code:	25	50	625	1250
full stroke range, min:	25 in.	50 in.	625 mm	1250 mm
cable tension (±20%):	12 oz.	6 oz.	3,3 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

Ordering Information (cont.):

Cable Exit:

Ⓐ order code:	UP	DN	FR	BK
direction:	up	down	front	back



measurement range —	25	50	625	1250
A	1.04 in. 26,4 mm	0.74 in. 18,8 mm	1.04 in. 26,4 mm	0.74 in. 18,8 mm
B	0.75 in. 19,1 mm	0.45 in. 11,4 mm	0.75 in. 19,1 mm	0.45 in. 11,4 mm
C	1.43 in. 36,3 mm	1.73 in. 43,9 mm	1.43 in. 36,3 mm	1.73 in. 43,9 mm

Resolution:

Ⓑ order code:	50	500	1000	1250
25-inch full stroke range:	50 ±1 pulses per inch	500 ±10 pulses per inch	1000 ±20 pulses per inch	1250 ±24 pulses per inch

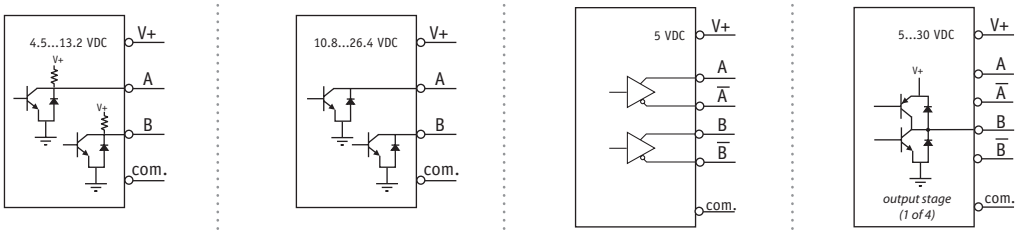
Ⓑ order code:	25	250	500	625
50-inch full stroke range:	25 ±0.5 pulses per inch	250 ±5 pulses per inch	500 ±10 pulses per inch	625 ±12 pulses per inch

Ⓑ order code:	2	20	40	50
625 mm full stroke range:	2 ±0,04 pulses per mm	20 ±0,4 pulses per mm	40 ±0,8 pulses per mm	50 ±1 pulses per mm

Ⓑ order code:	1	10	20	25
1250 mm full stroke range:	1 ±0,02 pulses per mm	10 ±0,2 pulses per mm	20 ±0,4 pulses per mm	25 ±0,5 pulses per mm

Output Signals:

Ⓒ order code:	AB-TTL	AB-OC	ABC-LD	ABC-UD
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



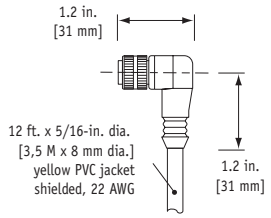
Ordering Information (cont.):

Electrical Connection:

Ⓓ *order code:*

MC4

4-pin micro-connector
with 12 ft [3.5 M] cordset



4-pin mating plug and cordset

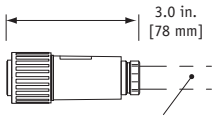


contact view

pin	color code	TTL/CMOS Open Collector
1	RED-BLK TR.	input voltage
2	RED-WHT TR.	channel A
3	RED	channel B
4	GREEN	common

M6

6-pin plastic connector
with mating plug



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

6-pin mating plug

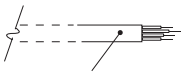


contact view

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'

C25

25-ft. instrumentation cable
24 AWG, shielded



25 ft. x 0.2-in. dia.
[7,5 M x 5 mm dia.]
24 AWG, shielded

25-ft. cable



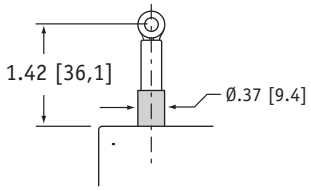
color	TTL/CMOS Open Collector	5 V Line Driver Universal Line Driver
red	input voltage	input voltage
black	common	common
green	channel A	channel A
white	channel B	channel B
blue	-	channel A'
brown	-	channel B'

Cable Guide:

Ⓔ *order code:*

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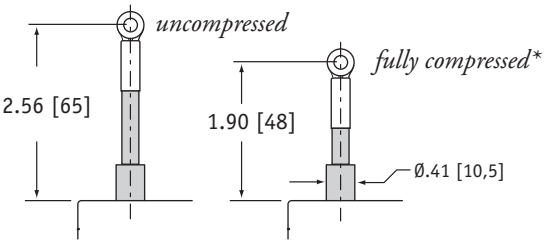
standard cable guide



SG

spring-loaded guide

cushions impact from accidental free release



note: start of full stroke range begins at **full compression point*