

Cable-Extension Position Transducer

0/4...20 mA Output • Hazardous Area Certification
Ranges: 0-600 to 0-1700 inches
Industrial Grade



<Extended Range>

PT9420

Specification Summary:

GENERAL

Full Stroke Range Options—on this datasheet 0-600 to 0-1700 inches
Output Signal Options 4...20 mA (2-wire) and 0...20 mA (3-wire)
Accuracy $\pm 0.12\%$ full stroke
Repeatability $\pm 0.05\%$ full stroke
Resolution essentially infinite
Measuring Cable stainless steel *see ordering information*
Enclosure Material powder-painted aluminum or 303 stainless steel
Sensor plastic-hybrid precision potentiometer
Potentiometer Cycle Life 250,000, min. —before signal degradation can occur
Maximum Retraction Acceleration/ Velocity *see ordering information*
Weight, Aluminum (Stainless Steel) Enclosure 14 lbs. (28 lbs.) max.

ELECTRICAL

Input Voltage *see ordering information*
Input Current 20 mA max.
Maximum Loop Resistance (Load) (loop supply voltage – 8)/0.020
Circuit Protection 38 mA max.
Impedance 100M ohms @ 100 VDC, min.
Output Signal Adjustment
Zero Adjustment from factory set zero to 50% of full stroke range
Span Adjustment from 100% down to 50% of factory set span

ENVIRONMENTAL

Enclosure NEMA 4/4X/6, IP 67/68
Hazardous Area Certification *see ordering information*
Operating Temperature -40° to 200°F (-40° to 90°C)
Vibration up to 10 G's to 2000 Hz maximum
Thermal Effects
Zero 0.01% f.s./°F, max.
Span 0.01%/°F, max.

EMC COMPLIANCE PER DIRECTIVE 89/336/EEC

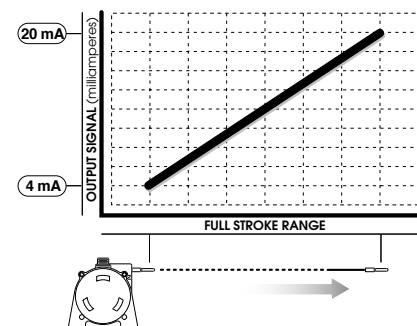
Emission / Immunity EN50081-2 / EN50082-2



The PT9420 is a great value for demanding long-range applications requiring a 4 - 20 mA linear position feedback signal. Sealed to meet NEMA 4 standards, this Cable-Extension Transducer will perform even under the harshest of environmental conditions.

As a member of Celesco's innovative family of NEMA-4 rated cable-extension transducers, the PT9420 offers numerous benefits. It installs in minutes, functions properly without perfectly parallel alignment, and when its cable is retracted, it measures only 6".

Output Signal



Ordering Information:

Model Number:

PT9420- _____ - **1** - **1** - **0**
order code: R A B C D E F G

Sample Model Number:

PT9420 - 1200 - 111 - 1110

- R** range: 1200 inches
- A** enclosure/cable tension: aluminum
- C** cable exit: front
- E** output signal: 4...20 mA, 2-wire
- F** electrical connection: 6-pin plastic connector

Full Stroke Range:

R order code:	0600	0800	1000	1200	1500	1700
full stroke range, min:	600 in.	800 in.	1000 in.	1200 in.	1500 in.	1700 in.
cable tension (30%):	25 oz.	25 oz.	24 oz.	24 oz.	23 oz.	23 oz.
measuring cable:	.034-in. dia. nylon-coated stainless	.024-in. dia. nylon-coated stainless	.024-in. dia. nylon-coated stainless	.019-in. dia. nylon-coated stainless	.015-in. dia. non-coated stainless	.015-in. dia. non-coated stainless

Enclosure Material:

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

Cable Exit:

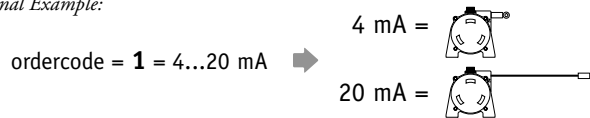
C order code:

1	2	3	4
front	top	back	down

Output Signals:

E order code:	1	2	3	4	5*	6*
output signal options:	4...20 mA 	20...4 mA 	0...20 mA 	20...0 mA 	4...20 mA 	4...20 mA
sensitivity:	16 mA/full stroke ±0.25%		20 mA/full stroke ±0.25%		16 mA/full stroke ±0.25%	
wiring configuration:	2 - wire		3 - wire		2 - wire	
input voltage:	8 - 40 vdc		8 - 40 vdc		14 - 32 vdc	
hazardous area certification:	not certified		not certified		CSA • Cenelec	

Output Signal Example:



Hazardous Area Certifications:

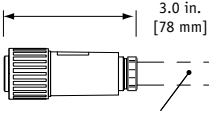
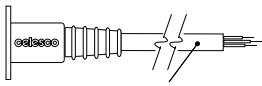
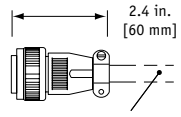
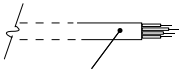
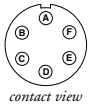
CSA Standard 22.2 Class 1 Groups A, B, C and D	Cenelec LCIE EEx ia IIC T4

**IMPORTANT: intrinsically safe when powered from a CSA certified zener barrier rated 28 VDC max, 110 mA max per installation drawing#677984*

PT9420 • Extended Range • Cable-Extension Transducer: 0/4...20 mA Output Signal

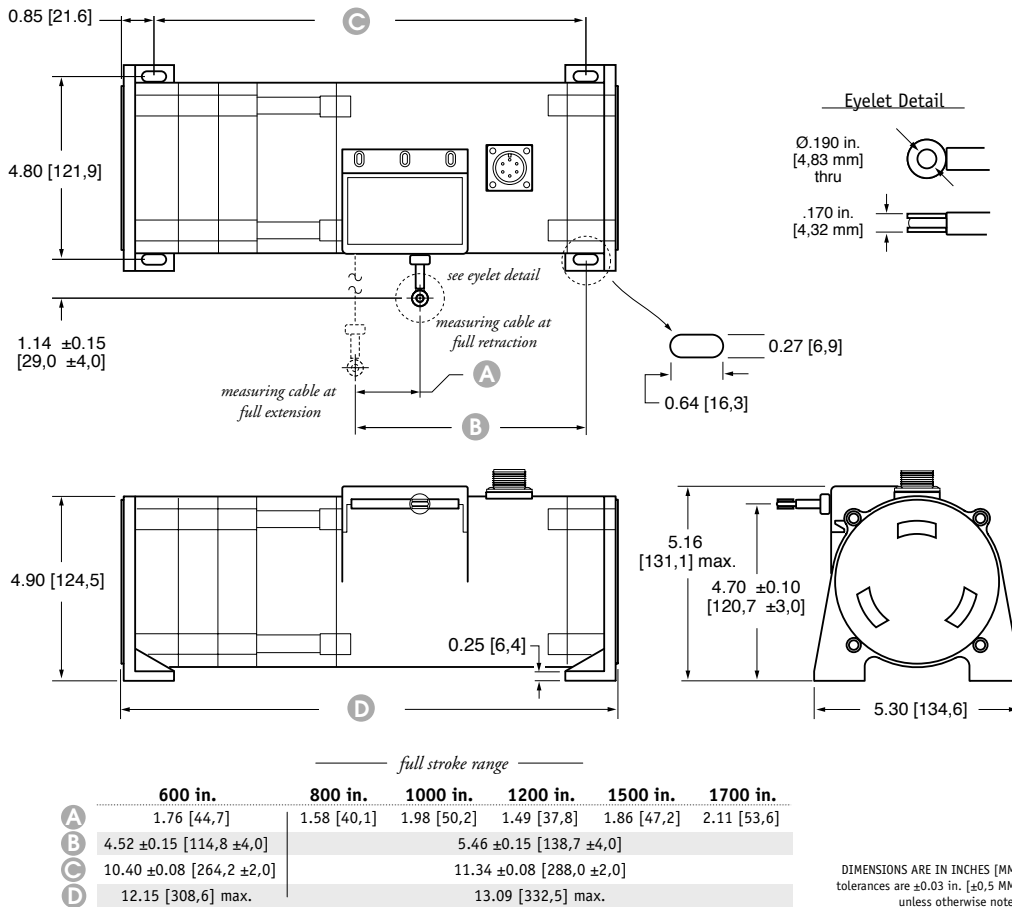
Ordering Information:

Electrical Connection:

order code:	1	2	3	4																																									
	6-pin plastic connector with mating plug IP 67, NEMA 4X*,6	10-ft. waterproof cable 18 AWG, sealed strain relief IP 67,68** NEMA 4X*,6	6-pin metal connector with mating plug IP 65, NEMA 4	25-ft. instrumentation cable 24 AWG, shielded IP 67, NEMA 6																																									
																																													
	1/2 - 5/16" [14 - 8 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJOW-A	3/8-in. [9 mm] max 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																																									
	6-pin mating plug: <table border="1"> <thead> <tr> <th>pin</th> <th>2-wire</th> <th>3-wire</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>8...40 vdc***</td> <td>8...40 vdc common</td> </tr> <tr> <td>B</td> <td>4...20 mA out</td> <td>-</td> </tr> <tr> <td>C</td> <td>-</td> <td>0...20 mA out</td> </tr> <tr> <td>D</td> <td>case ground</td> <td>-</td> </tr> </tbody> </table> 	pin	2-wire	3-wire	A	8...40 vdc***	8...40 vdc common	B	4...20 mA out	-	C	-	0...20 mA out	D	case ground	-	10-ft. waterproof cable: <table border="1"> <thead> <tr> <th>color code</th> <th>2-wire</th> <th>3-wire</th> </tr> </thead> <tbody> <tr> <td>WHITE</td> <td>8...40 vdc***</td> <td>n/a</td> </tr> <tr> <td>BLACK</td> <td>4...20 mA out</td> <td>n/a</td> </tr> <tr> <td>GREEN</td> <td>case ground</td> <td>n/a</td> </tr> </tbody> </table>	color code	2-wire	3-wire	WHITE	8...40 vdc***	n/a	BLACK	4...20 mA out	n/a	GREEN	case ground	n/a	25-ft. instrumentation cable: <table border="1"> <thead> <tr> <th>color code</th> <th>2-wire</th> <th>3-wire</th> </tr> </thead> <tbody> <tr> <td>RED</td> <td>8...40 vdc***</td> <td>8...40 vdc</td> </tr> <tr> <td>BLACK</td> <td>4...20 mA out</td> <td>0...20 mA out</td> </tr> <tr> <td>WHITE</td> <td>n/a</td> <td>common</td> </tr> <tr> <td>GREEN</td> <td>case ground</td> <td>n/a</td> </tr> </tbody> </table>	color code	2-wire	3-wire	RED	8...40 vdc***	8...40 vdc	BLACK	4...20 mA out	0...20 mA out	WHITE	n/a	common	GREEN	case ground	n/a
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*-applies to stainless steel enclosure only. **-requires factory submersion test. ***14-32 VDC for hazardous area option.

Outline Drawing



version: 1.0 last updated: March 25, 2005

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