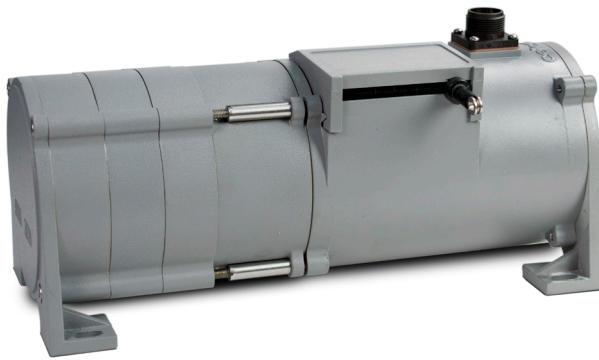
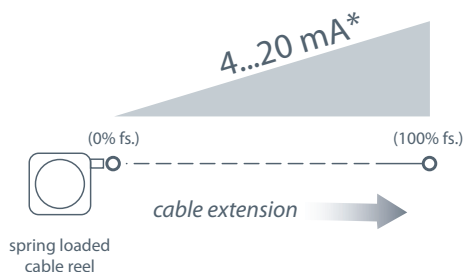


The PT9420 is a great value for demanding long-range applications requiring a 4 - 20 mA linear position feedback signal. Sealed to meet NEMA 4 standards, this Cable-Extension Transducer will perform even under the harshest of environmental conditions.

As a member of our 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



*Optional 3-wire, 0...20mA output signal available.

PT9420 (Extended Range)

Cable Actuated Sensor

Extended Ranges • 4...20 mA • 0...20mA

Absolute Linear Position to 1700 inches (43 meters)

Aluminum or Stainless Steel Enclosure Options

VLS Option to Prevent Free-Release Damage

IP68 / NEMA 6 • Hazardous Area Certification

GENERAL

Full Stroke Range Options

Output Signal Options

Accuracy

Repeatability

Resolution

Measuring Cable Options

Enclosure Material

Sensor

Potentiometer Cycle Life

Max. Retraction Acceleration

Max. Velocity

Weight, Aluminum Enclosure

Weight, Stainless Steel Enclosure

0-600 to 0-1700 in. (on this data sheet)

4...20 mA (2-wire) and

0...20 mA (3-wire)

± 0.12% full stroke

± 0.05% full stroke

essentially infinite

stainless steel or thermoplastic

powder-painted aluminum or 303 stainless steel

plastic-hybrid precision potentiometer

≥ 250,000

see ordering information

see ordering information

14 lbs. max.

28 lbs. max.

ELECTRICAL

Input Voltage

Input Current

Maximum Loop Resistance (Load) (loop supply voltage – 8)/0.020

Circuit Protection

Impedance

Output Signal, Zero Adjust

Output Signal, Span Adjust

see ordering information

20 mA max.

(loop supply voltage – 8)/0.020

38 mA max.

100M ohms @ 100 VDC, min.

up to 50% of full stroke range

to 50% of factory set span

ENVIRONMENTAL

Enclosure

Hazardous Area Certification

Operating Temperature

Vibration

Thermal Effects, Zero

Thermal Effects, Span

NEMA 4/4X/6, IP 67/68

see ordering information

-40° to 200°F (-40° to 90°C)

up to 10 g to 2000 Hz maximum

0.01% f.s./°F, max.

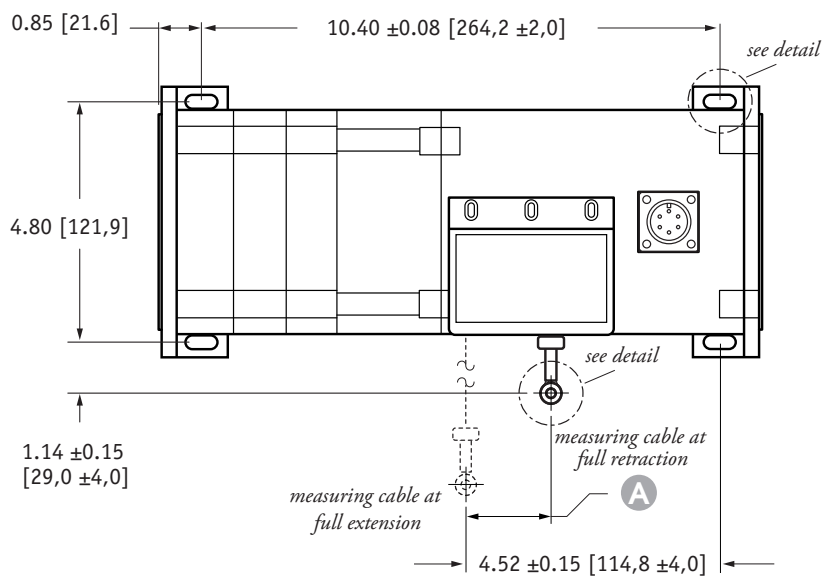
0.01%/°F, max.

EMC COMPLIANCE PER DIRECTIVE 89/336/EEC

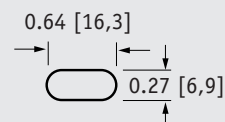
Emission / Immunity

EN50081-2 / EN50082-2

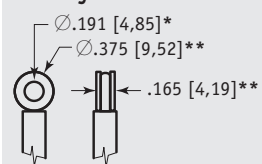
Outline Drawing



mounting hole detail

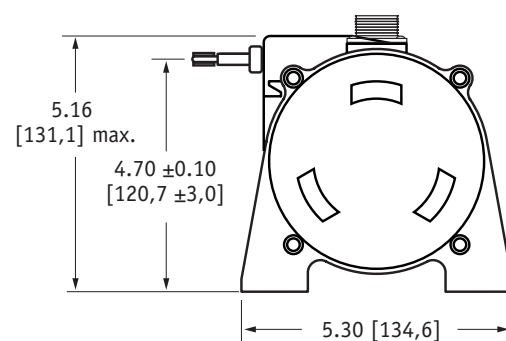
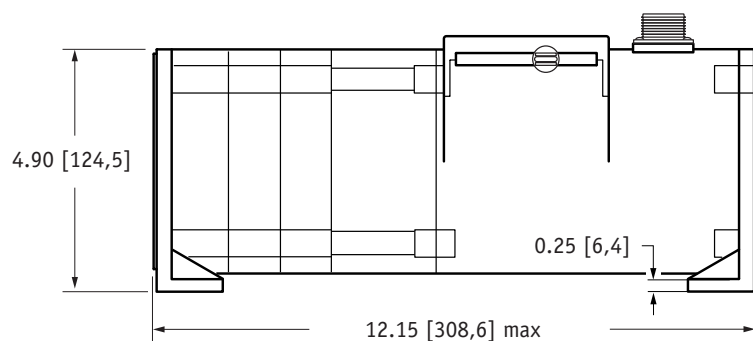


eyelet detail



A DIMENSION

RANGE	inches [mm]
600	1.76 [44,7]
800	1.58 [40,1]
1000	1.98 [50,2]
1200	1.98 [50,2]
1500	1.86 [47,2]
1700	2.11 [53,6]

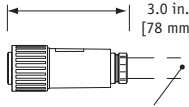
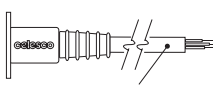
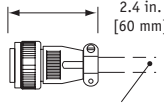
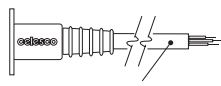
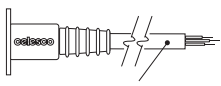
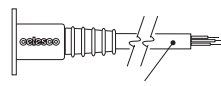
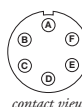


DIMENSIONS ARE IN INCHES [MM]
tolerances are 0.03 IN. [0.5 MM] unless otherwise noted.

* tolerance = +.005 –.001 [+.13 –.03]
** tolerance = +.005 –.005 [+.13 –.13]

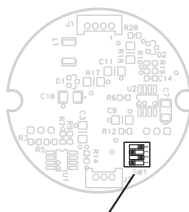
Ordering Information (cont.):

Electrical Connection:

1 order code: 6-pin plastic connector w/mating plug IP 67, NEMA 4X**, 6  1/2 - 5/16" [14 - 8 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	2 10-ft. [3 M] waterproof cable IP 67, NEMA 4X**, 6  10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJTOW	3 6-pin metal connector w/mating plug IP 65, NEMA 4  3/8-in. [9 mm] max cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	4 25-ft. [7.5 M] instrumentation cable IP 67, NEMA 6  25 ft. x 0.2-in. dia. [7.5 M x 5 mm dia.] 24 AWG, shielded																																										
5 order code: 100-ft. [30 M] waterproof cable IP 67, NEMA 4X**, 6  100 ft. x 0.4-in. dia. [30 M x 10 mm dia.] 18 AWG, type SJTOW	6 10-ft. [3 M] pressure tested* waterproof cable IP 68, NEMA 4X**, 6P  10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJTOW	7 100-ft. [30 M] pressure tested* waterproof cable IP 68, NEMA 4X**, 6P  100 ft. x 0.4-in. dia. [30 M x 10 mm dia.] 18 AWG, type SJTOW																																											
6-pin Mating Plug <table> <tr> <th>pin</th> <th>2-wire</th> <th>3-wire</th> </tr> <tr> <td>A</td> <td>8...34 vdc***</td> <td>14...29 vdc common</td> </tr> <tr> <td>B</td> <td>4...20 mA out</td> <td>0...20 mA out</td> </tr> <tr> <td>C</td> <td>-</td> <td>-</td> </tr> <tr> <td>D</td> <td>case ground</td> <td>-</td> </tr> </table>	pin	2-wire	3-wire	A	8...34 vdc***	14...29 vdc common	B	4...20 mA out	0...20 mA out	C	-	-	D	case ground	-	Waterproof Cable <table> <tr> <th>color code</th> <th>2-wire</th> <th>3-wire</th> </tr> <tr> <td>WHITE</td> <td>8...34 vdc***</td> <td>14...29 vdc common</td> </tr> <tr> <td>BLACK</td> <td>4...20 mA out</td> <td>0...20 mA out</td> </tr> <tr> <td>GREEN</td> <td>case ground</td> <td>-</td> </tr> </table>	color code	2-wire	3-wire	WHITE	8...34 vdc***	14...29 vdc common	BLACK	4...20 mA out	0...20 mA out	GREEN	case ground	-	Instrumentation Cable <table> <tr> <th>color code</th> <th>2-wire</th> <th>3-wire</th> </tr> <tr> <td>RED</td> <td>8...34 vdc***</td> <td>14...29 vdc common</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>n/a</td> </tr> <tr> <td>GREEN</td> <td>case ground</td> <td>0...20 mA out</td> </tr> </table>	color code	2-wire	3-wire	RED	8...34 vdc***	14...29 vdc common	BLACK	4...20 mA out	0...20 mA out	WHITE	n/a	n/a	GREEN	case ground	0...20 mA out	 contact view
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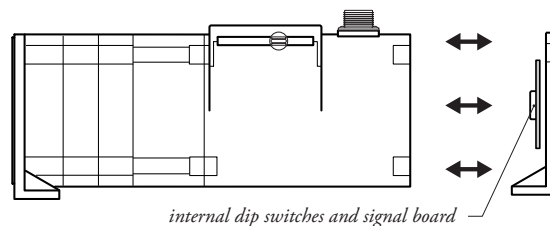
Notes: { * —Test pressure: 100 feet [30 meters] H₂O (40 PSID); Test Medium: Air; Duration: 2 hours.
** —NEMA 4X applies to stainless steel enclosure only.
*** —14-32 VDC for hazardous area option.

Output Signal Selection (not available with intrinsically safe option):

output signal	switch setting	signal board
0...20 mA or 4...20 mA		
20...0 mA or 20...4 mA		

The output signal direction can be reversed at any time by simply changing the dip-switch settings found on the internal signal board. After the settings have been changed, adjustment of the Zero and Span trimpots will be required to precisely match signal values to the beginning and end points of the stroke.

To gain access to the signal board, remove four Allen-Head Screws and remove end cover bracket.



Caution! Do Not Remove Spring-Side End Cover
Removing spring-side end cover could cause spring to become unseated and permanently damaged.

VLS Option - Free Release Protection

Our Velocity Limiting System (VLS) is an option for PT9000 Series cable extension transducers that limits cable retraction to a safe 40 to 55 inches per second for the single spring option and 40 to 80 inches per second for the higher tension dual spring option.

The VLS option prevents the measuring cable from ever reaching a damaging velocity during an accidental free release. This option is ideal for mobile applications that require frequent cable disconnection and reconnection. It prevents expensive unscheduled downtime due to accidental cable mishandling or attachment failure.

How To Configure Model Number for VLS Option:

1. using guide below, select PT9420 model **PT9420-1200-111-1110**
2. remove "PT" from the model number ~~PT~~ **9420-1200-111-1110**
3. add "VLS" **VLS + 9420-1200-111-1110**
4. completed model number! **VLS9420-1200-111-1110**

VLS9420-	1	2	3	4	5	6	7
0600	1	1	1		1	1	
0800	3	2	2		2	2	
1000			3		3	3	
1200			4		4	4	
1500					5	5	
1700					6	6	
							7

 = available options.

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