



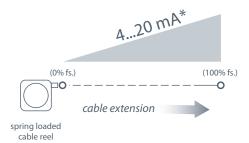
The PT8420 with its 4-20 mA feedback signal, is ideal for monitoring the stroke of a hydraulic cylinder and other applications requiring position data acquistion in harsh environments.

5.6" [141 mm]

3.6" [91 mm]

As a member of our family of NEMA 4-rated cable-extension transducers, the PT8420 provides a feedback signal that is proportional to the linear movement of a traveling stainless-steel extension cable. Simply mount the body of the transducer to a fixed surface and attach the extension cable to the moving object.

Output Signal



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

PT8420

Cable Actuated Sensor Industrial • 4..20 mA • 0..20mA

Absolute Linear Position to 60 inches (1524 mm)
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

4...20 mA (2-wire) and
0...20 mA (3-wire)
see ordering information
± 0.05% full stroke
essentially infinite
stainless steel or thermoplastic
powder-painted aluminum or stainless
steel
plastic-hybrid precision potentiometer
see ordering information

0-2 to 0-60 inches

ELECTRICAL

Input Voltage
Input Current
Max. Loop Resistance (Load)
Circuit Protection
Impedance
Signal Adjust, Zero

Signal Adjust, Span Thermal Effects, Zero Thermal Effects, Span see ordering information

20 mA max.

(loop supply voltage - 8)/0.020

38 mA max.

100M ohms@100 VDC, min.

from factory set zero to 50% of full stroke

range

to 50% of factory set span

0.01% f.s./°F, max.

0.01% f.s./°F, max.

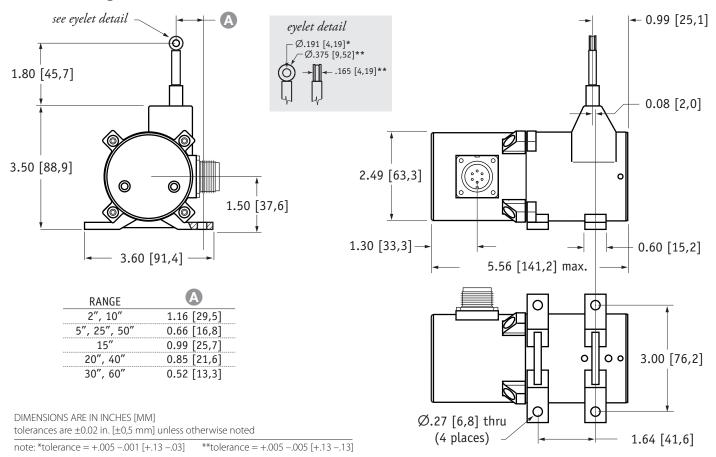
ENVIRONMENTAL

Enclosure
Hazardous Area Certification
Operating Temperature
Vibration
Weight, Aluminum Enclosure
Weight, Stainless Steel Encl.

NEMA 4/4X/6, IP 67/68 see ordering information -40° to 200°F (-40° to 90°C) up to 10 g's to 2000 Hz maximum 3 lbs. max.

6 lbs. max.

Outline Drawing:



Ordering Information:

Model Number:



Sample Model Number:

PT8420 - 0030 - 111 - 1110

- R range:
- nclosure/cable tension:
- B measuring cable:
- (B) output signal:
- able: .034 nylon-coated stainless
 al: 4...20mA, 2-wire

30 inches

- electrical connection:
 Cable guide option:
- 4...20mA, 2-wire 6-pin plastic connector standard nylon cable guide

aluminum/standard (13 oz.)

Full Stroke Range:

| order code: | 0002 | 0005 | 0010 | 0015 | 0020 | 0025 | 0030 | 0040 | 0050 | 0060 |
|----------------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|
| full stroke range, min: | 2 in. | 5 in. | 10 in. | 15 in. | 20 in. | 25 in. | 30 in. | 40 in. | 50 in. | 60 in. |
| accuracy (% of f.s.): | 1.00% | 1.00% | 0.18% | 0.18% | 0.18% | 0.18% | 0.18% | 0.15% | 0.15% | 0.15% |
| potentiometer cycle life*: | 2.5 x 10 ⁶ | 2.5 x 10 ⁶ | 5 x 10 ⁵ | 2.5 x 10 ⁵ | 2.5 x 10 ⁵ | 2.5 x 10 ⁵ |

 $^{^*}$ -1 cycle is defined as the travel of the measuring cable from full retraction to full extension and back to full retraction

Enclosure Material and Measuring CableTension:

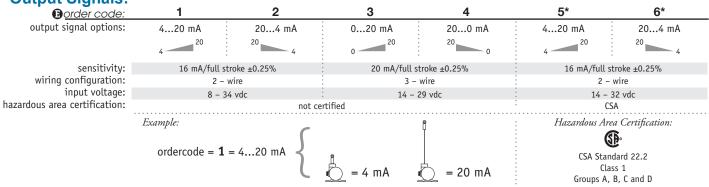
| A order code: | 1 | | 5 | 2 | 3 | 6 | i | 4 | 8 | 7 | 1 | 9 |
|-------------------------------------|----------|-----------|---------|---------------|----------|--------|----------|---------------|----------|--------|--------------|------------|
| enclosure: | aluminum | | | 303 stainless | | | | 316 stainless | | | | |
| cable tension: | stan | dard me | edium | high | standard | med | ium | high | standard | medi | ium | high |
| max. acceleration: | 15 | g 2 | ?5 g | 40 g | 6 g | 12 | g | 18 g | 6 g | 12 | g | 18 g |
| | | Range: | 2 in. | 5 in. | 10 in. | 15 in. | 20 in. | 25 in. | 30 in. | 40 in. | 50 in. | 60 in. |
| cable tension option specifications | (| Standard: | 39 oz. | 16 oz. | 39 oz. | 26 oz. | 20 oz. | 16 oz. | 13 oz. | 20 oz. | 16 oz. | 13 oz. |
| | 1 | Medium: | 65 oz. | 26 oz. | 65 oz. | 43 oz. | 33 oz. | 26 oz. | 22 oz. | 33 oz. | 26 oz. | 22 oz. |
| | l | High: | 116 oz. | 47 oz. | 116 oz. | 77 oz. | 60 oz. | 47 oz. | 40 oz. | 60 oz. | 47 oz. | 40 oz. |
| | | | | | | | | | | ter | nsion tolera | nce: ± 50% |

Ordering Information (cont.):

Measuring Cable:

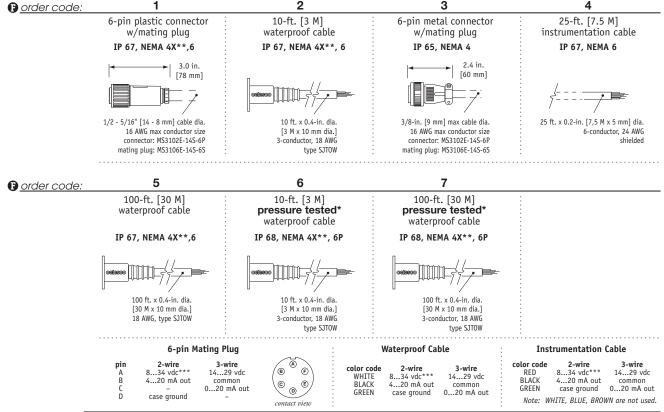
| B order code: | 1 | 2 | 3 | 4 |
|----------------------|--|--------------------------------------|---|--------------------------------------|
| cable construction: | Ø.034-inch nylon-coated stainless steel rope | Ø.047-inch bare stainless steel rope | Ø.058-inch PVC jacketed vectra fiber rope | Ø.031-inch bare stainless steel rope |
| available ranges: | all ranges | 5, 15, 20, 25, 30-inch only | thru 30 inches only | 40, 50, 60-inch only |
| general use: | indoor | outdoor, debris, high temperature | high voltage or magnetic field | outdoor, debris, high temperature |

Output Signals:



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

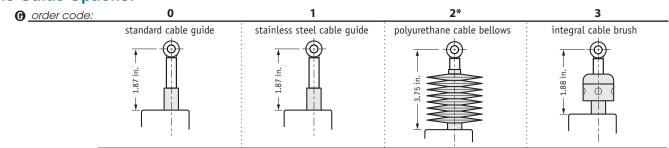
Electrical Connection:



*–Test pressure: 100 feet [30 meters] H₂O (40 PSID) Test Medium: Air; Duration: 2 hours. ** –applies to stainless steel enclosure only. ***14-32 VDC for hazardous area option.

Ordering Information (cont.):

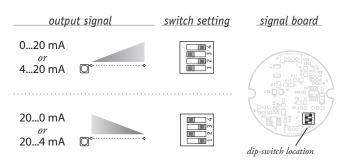
Cable Guide Options:

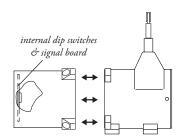


*note: all ranges up to 25 inches only

Output Signal Selection:

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 rear cover.