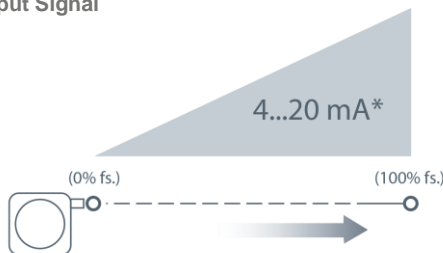


The PT1MA adds 4...20 mA position feedback signal to Celesco's compact line of cable-extension transducers. The PT1MA is available with full stroke ranges from as little as 2 inches on up to 50 inches with adjustable zero and span settings to precisely match the full scale output to your exact measurement range.

The PT1MA offers several options including forward and reverse 0...20 and 4...20 mA output signals, alternate measuring cable exits and a couple different electrical connection options.

Output Signal



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

PT1MA

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

Absolute Linear Position to 50 inches (1270 mm)

Aluminum and Polycarbonate Enclosure

Compact Design

IP65 • NEMA 4 Protection

General

Full Stroke Range	0-2 to 0-50 inches
Output Signal	4...20 mA (2-wire) and 0...20 mA (3-wire)
Accuracy	± 0.28% to ± 0.15% full stroke (see ordering information)
Repeatability	± 0.05% full stroke
Resolution	essentially infinite
Measuring Cable	.019-in. dia. nylon-coated stainless steel
Enclosure	glass-filled polycarbonate and black anodized aluminum
Sensor	plastic-hybrid precision potentiometer
Potentiometer Cycle Life	see ordering information
Maximum Retraction	see ordering information
Acceleration	
Weight	1 lb. 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.
Signal Adjust, Zero	from factory set zero to 50% of full stroke range
Signal Adjust, Span	to 50% of factory set span
Thermal Effects, Zero	0.01% f.s./°F, max.
Thermal Effects, Span	0.01% f.s./°F, max.

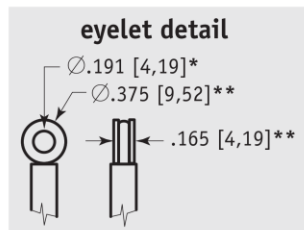
Environmental

Enclosure	NEMA 4, IP 65
Operating Temperature	0° to 200°F (-17° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum

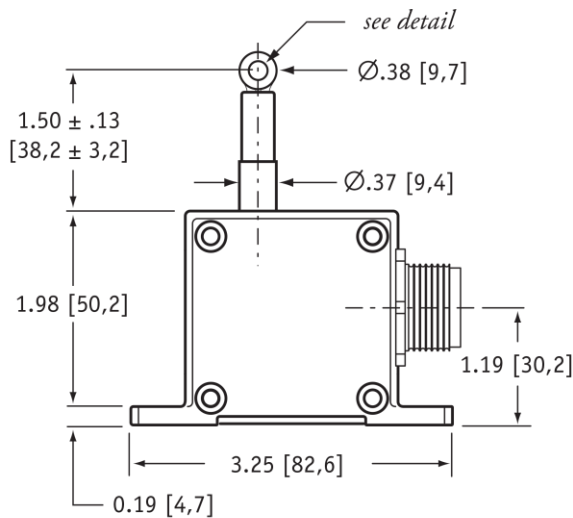
EMC COMPLIANCE PER DIRECTIVE 89/336/EEC

Emission/Immunity	EN50081-2/EN50082-2
--------------------------	---------------------

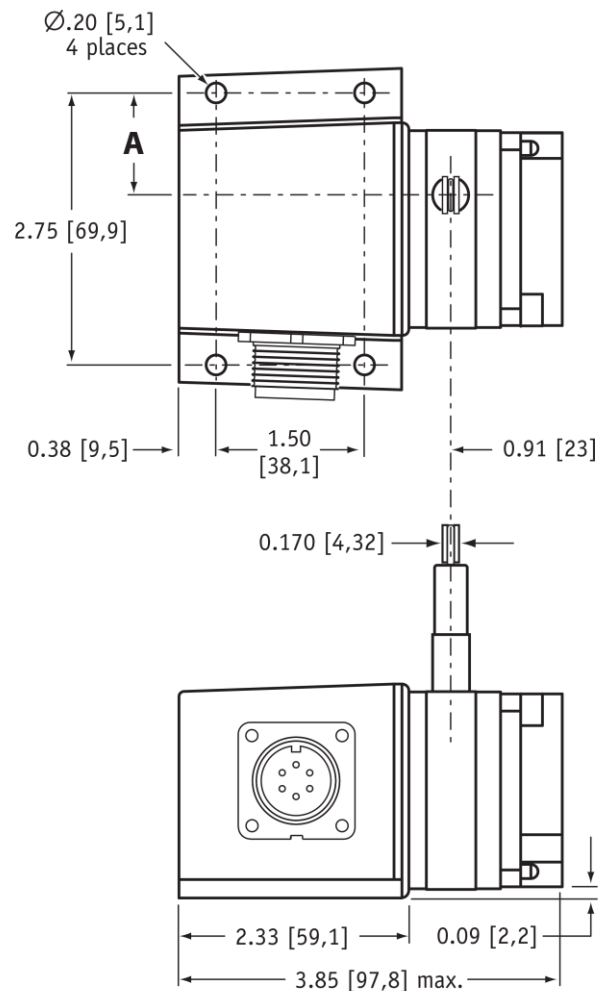
Outline Drawing



Range	A
2, 10	1.04 [26,4]
5, 25, 50	0.58 [14,7]
15, 30	0.82 [20,8]
20, 40	0.74 [18,8]
<i>inches [mm]</i>	



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:

PT1MA - **order code:** **R** - **A** - **B** - **C** - **D**

Sample Model Number:

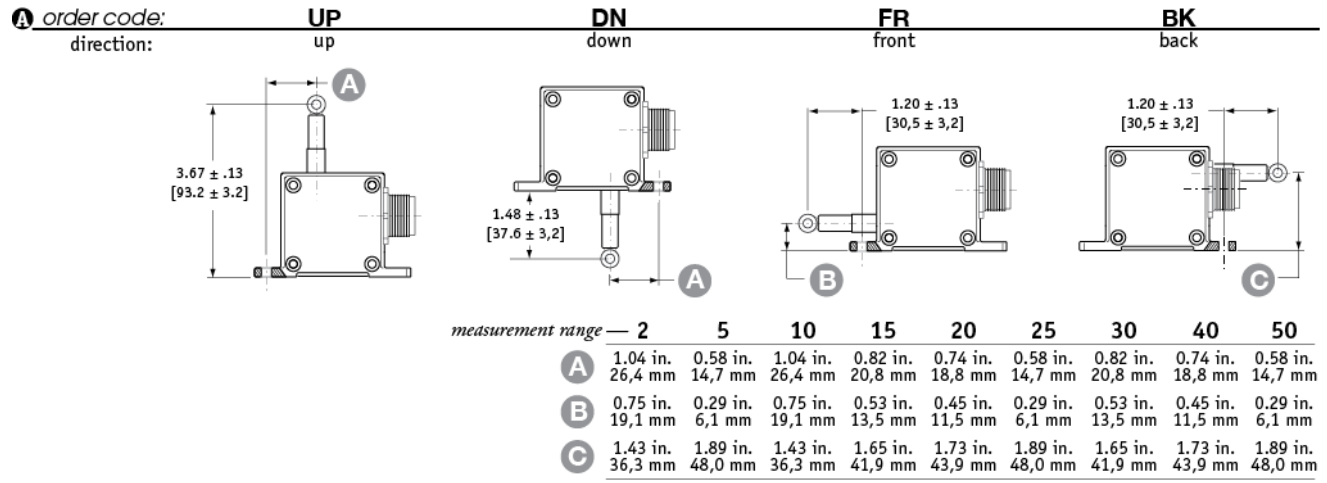
PT1MA - 30 - UP - 420E - MC4 - SG

R range: 30 inches
A measuring cable exit: up
B output signal: 4...20mA
C electrical connection: 4-pin micro connector
D cable guide: spring-loaded guide

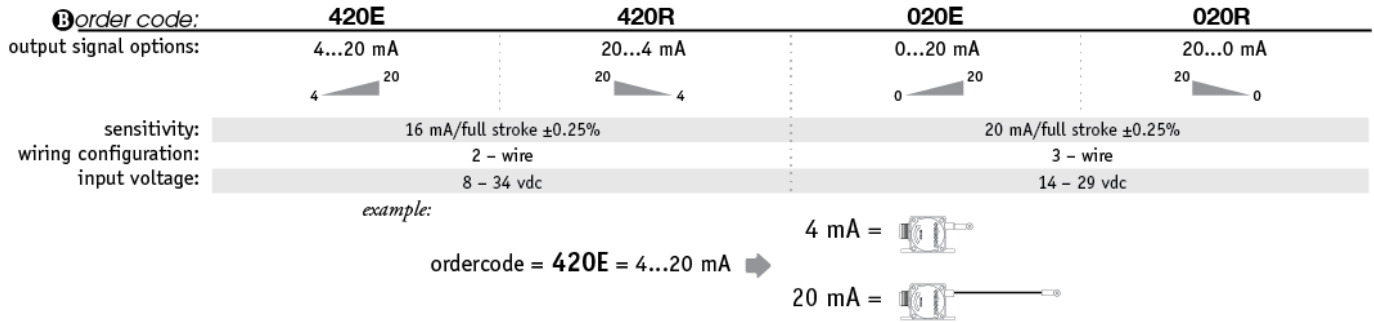
Full Stroke Range:

R order code:	2	5	10	15	20	25	30	40	50
full stroke range, min:	2 in.	5 in.	10 in.	15 in.	20 in.	25 in.	30 in.	40 in.	50 in.
accuracy (% of f.s.):	0.28%		0.18%				0.15%		
potentiometer cycle life:	2,500,000 cycles		500,000 cycles				250,000 cycles		
cable tension (20%):	12 oz.	5 oz.	12 oz.	9 oz.	6 oz.	5 oz.	9 oz.	6 oz.	5 oz.
max. cable acceleration:	11 g	3 g	11 g	5 g	4 g	3 g	5 g	4 g	3 g

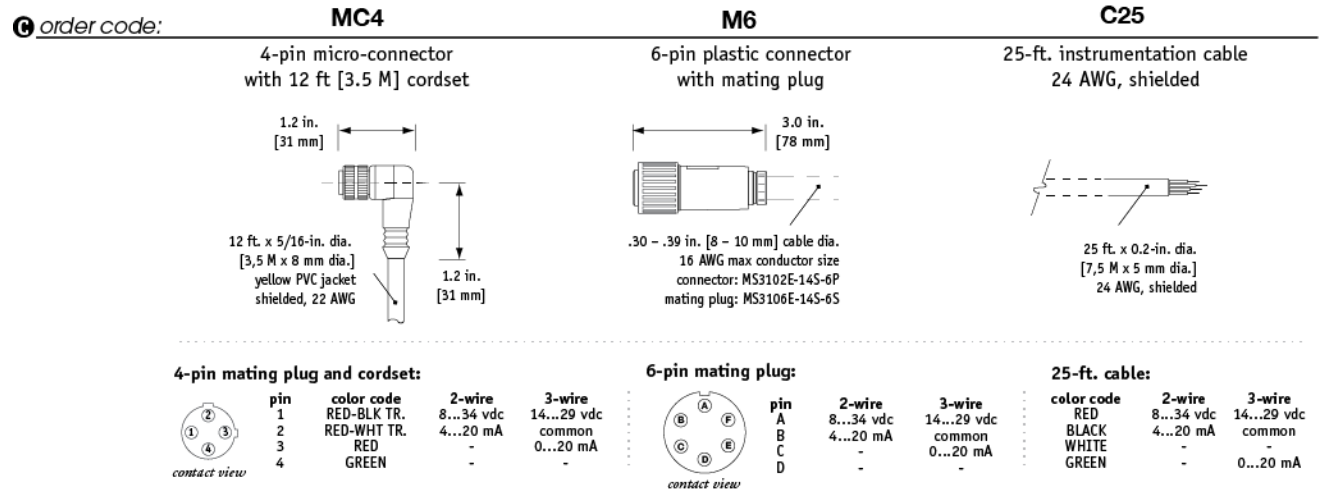
Cable Exit:



Output Signal:



Electrical Connection:



Cable Guide:

① order code:

blank	SG
standard cable guide	spring-loaded guide
<i>cable-guide cushions impact from accidental free release</i>	

*note: start of full stroke range begins at full compression point (except 2-inch and 5-inch ranges).

Output Signal Selection:

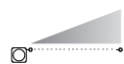
The output signal direction can be reversed at any time by simply changing the dip-switch settings found on the internal signal board. After the settings have been changed, adjustment of the Zero and Span trimpots will be required to precisely match signal values to the beginning and end points of the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

output signal switch setting

0...20 mA

or

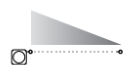
4...20 mA



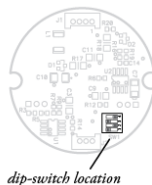
20...0 mA

or

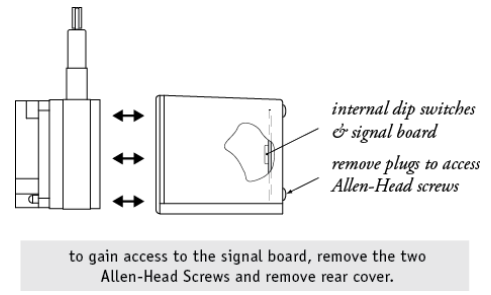
20...4 mA



signal board



dip-switch location



NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity company
20630 Plummer Street
Chatsworth, CA 91311
Tel +1 800 423 5483
Tel +1 818 701 2750
Fax +1 818 701 2799
info@celesco.com

TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.

PT1MA 12/01/2015