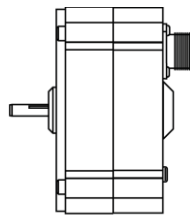


4.5" [114 mm]

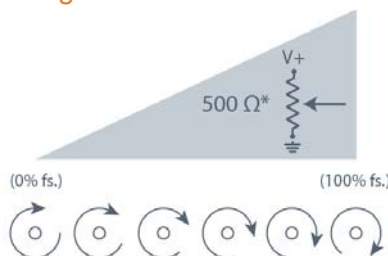


2.4" [59 mm]

Celesco's model RT9101 provides a voltage feedback signal for rotational position. The sensing element of this device is a precision plastic-hybrid potentiometer which provide superb linearity and resolution.

This innovative sensor from Celesco, designed to meet tough NEMA-4 and IP67 environmental standards, is available in full-stroke measurement ranges of 1/4 to 50 turns. Because the sensor is potentiometric, the RT9101 is absolute and will maintain position information even after a loss of power.

Output Signal



*—1K, 5K, 10K-ohm and bridge circuit also available.
see ordering info.

RT9101

0–90° to 0–50 Turns • Voltage Divider

Industrial Grade Rotational Position Sensor

Absolute Rotary Position up to 50 turns

Aluminum or Stainless Steel Enclosure Options

IP68 / NEMA 6

General

Full Stroke Range	0-0.25 to 0-50 turns
Output Signal Options	voltage divider (potentiometer)
Accuracy	see ordering information
Repeatability	± 0.02% full stroke
Resolution	essentially infinite
Enclosure Material Options	powder-painted aluminum or stainless steel
Sensor	plastic-hybrid precision potentiometer
Potentiometer Cycle Life	see ordering information
Shaft Loading	up to 35 lbs. radial and 5 lbs. axial
Weight, Aluminum (Stainless Steel) Enclosure	5 lbs. (10 lbs.) max.

Electrical

Input Resistance Options	see ordering information
Power Rating, Watt	2.0 at 70°F derated to 0 at 250°
Recommended Maximum Input Voltage	30 V (AC/DC)
Output Signal Change Over Full Stroke Range	94% ±4% of input voltage

Environmental

Enclosure	see ordering information
Operating Temperature	-40° to 200°F (-40° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum

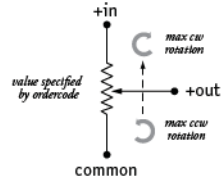
RT9101

0–90° to 0–50 Turns • Voltage Divider

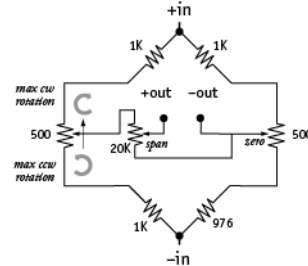
Output Signals:

1	2	3	4	5
500 ohm*	1000 ohm*	5000 ohm*	10,000 ohm*	adjustable bridge (0...30 mV/V)
				*tolerance = ±10%

circuit options: 1, 2, 3, 4

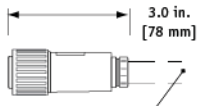
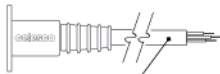
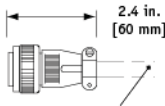



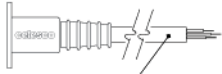
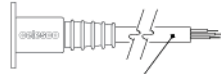
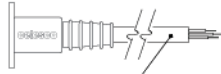
circuit option: 5 (adjustable bridge)



full scale output: adjustable from 0 to 30mV/V
zero adjust: to 50% of full stroke

Electrical Connection:

1	2	3	4
6-pin plastic connector w/mating plug IP 67, NEMA 4X**, 6	10-ft. [3 M] waterproof cable IP 67, NEMA 4X**, 6	6-pin metal connector w/mating plug IP 65, NEMA 4	25-ft. [7.5 M] instrumentation cable IP 67, NEMA 6
 3.0 in. [78 mm]	 10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJTW	 2.4 in. [60 mm]	 25 ft. x 0.2-in. dia. [7.5 M x 5 mm dia.] 24 AWG, shielded
1/2 - 5/16" [14 - 8 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S		3/8-in. [9 mm] max cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	

5	6	7
100-ft. [30 M] waterproof cable IP 67, NEMA 4X**, 6	10-ft. [3 M] pressure tested* waterproof cable IP 68, NEMA 4X**, 6P	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 SJTW	 10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJTW	 100 ft. x 0.4-in. dia. [30 M x 10 mm dia.] 18 AWG, type SJTW

6-pin Mating Plug				Waterproof Cable			Instrumentation Cable		
pin	standard	bridge		color code	standard	bridge	color code	standard	bridge
A	+ in	+ in	(A)	WHITE	+ in	n/a	RED	+ in	+ in
B	common	- in	(B)	BLACK	common	n/a	BLACK	- in	- in
C	+ out	- out	(C)	GREEN	+ out	n/a	GREEN	+ out	+ out
D	-	+ out	(D)				WHITE	-	- out
			(E)						
			(F)						
			(F)						

contact view

*-Test pressure: 100 feet [30 meters] H₂O (40 PSID); Test Medium: Air; Duration: 2 hours. **-Applies to stainless steel enclosure only.

RT9101

0–90° to 0–50 Turns • Voltage Divider

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

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RT9101 12/01/2015