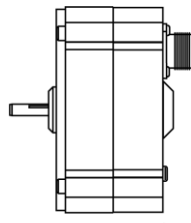


4.5" [114 mm]

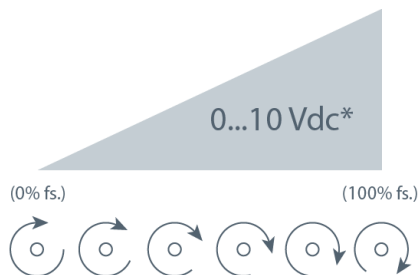


2.4" [59 mm]

The RT9510 is an incredibly simple device which provides a regulated 0...10 VDC rotational-position feedback signal with a 14.5...40 VDC unregulated input voltage.

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 RT9510 is absolute and will maintain position information even after a loss of power.

Output Signal



*Optional 0...5 Vdc output signal available.

RT9510

0–90° to 0–50 Turns • 0...5, 0...10 VDC

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	0...5, 0...10 VDC
Accuracy	0.15% to 0.3% full stroke, see ordering information
Repeatability	± 0.05% 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	3 lbs. (6 lbs.) max.

Electrical

Input Voltage	14.5-40 VDC (10.5-40 VDC for 0...5 volt output)
Input Current	10 mA max.
Output Impedance	1000 ohms
Maximum Load	5000 ohms.
Zero Adjustment	from factory set zero to 50% of full stroke range
Span Adjustment	to 50% of factory set span

EMC COMPLIANCE PER DIRECTIVE 89/336/EEC

Emission/Immunity	EN50081-2/EN50082-2
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Environmental

Enclosure	NEMA 4/4X/6, IP 67/68
Operating Temperature	-40° to 200°F (-40° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum

RT9510

0–90° to 0–50 Turns • 0...5, 0...10 Vdc

Output Signals:

order code:

1	2	3	4
0...10 VDC	10...0 VDC	0...5 VDC	5...0 VDC
ccw cw	ccw cw	ccw cw	ccw cw
input voltage: 14.5...40 VDC		10.5...40 VDC	

Example:

ordercode = 1 = 0...10 VDC

= 0 VDC
 = 10 VDC

Electrical Connection:

order code:

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]		 2.4 in. [60 mm]	
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 SJTW	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
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 pin A signal B input voltage C output signal common		Waterproof Cable color code WHITE GREEN BLACK signal input voltage output signal common	
 contact view		Instrumentation Cable color code RED GREEN BLACK signal input voltage output signal common	

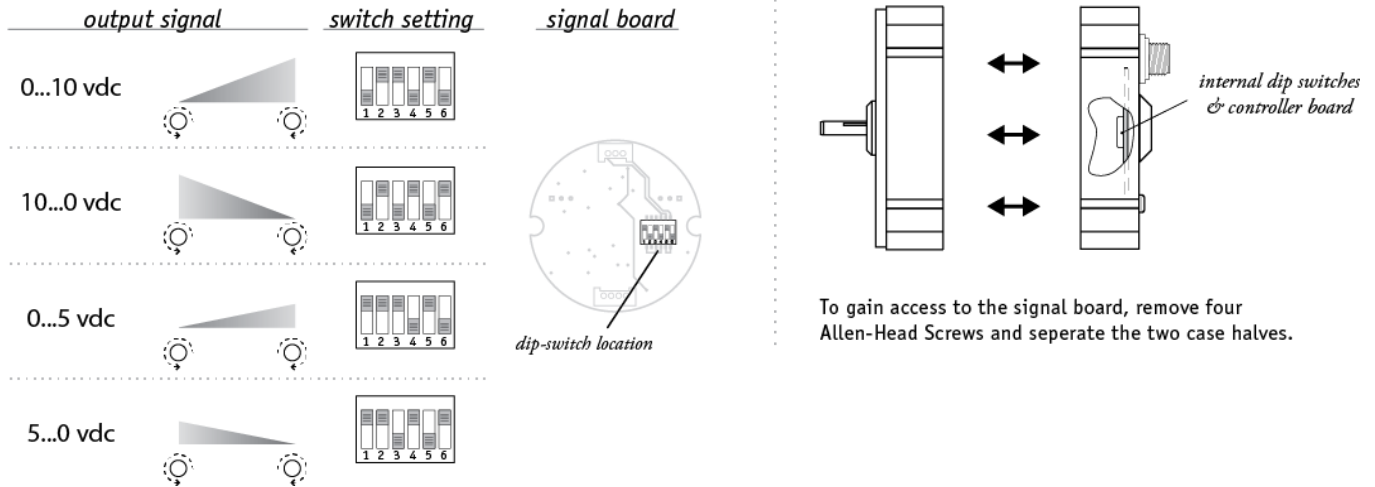
*-Test pressure: 100 feet [30 meters] H₂O (40 PSID); Test Medium: Air; Duration: 2 hours. **-Applies to stainless steel enclosure only.

RT9510

0–90° to 0–50 Turns • 0...5, 0...10 Vdc

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.



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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RT9510 12/01/2015