Rotational Position Transducer

- **Up to 50 Turns**
- **Industrial Grade**
- **0...10 VDC Output Signal**

CE

RT9510

Specification Summary:

GENERAL

Full Stroke Ranges ..... 0.25 to 0-50 turns, see ① next page
Output Signal ..... 0-10, 0-5 VDC, see ④
Accuracy ..... ± 0.30 to ± 0.15% full stroke, see ②
Repeatability ..... ± 0.05% full stroke
Resolution ..... essentially infinite
Enclosure Material ..... powder-painted aluminum or stainless steel, see ③
Sensor ..... plastic-hybrid precision potentiometer
Shaft Loading ..... up to 35 lbs. radial and 5 lbs. axial
Weight, Aluminum (Stainless Steel) Enclosure ..... 5 lbs. (10 lbs.) max.

ELECTRICAL

Input Voltage ..... 14.5-40VDC (10.5-40VDC for 0-5 volt output)
Input Current ..... 10 mA maximum
Output Impedance ..... 1000 ohms
Maximum Output Load ..... 5000 ohms
Zero and Span Adjustment ..... 2:1 turndown

ENVIRONMENTAL

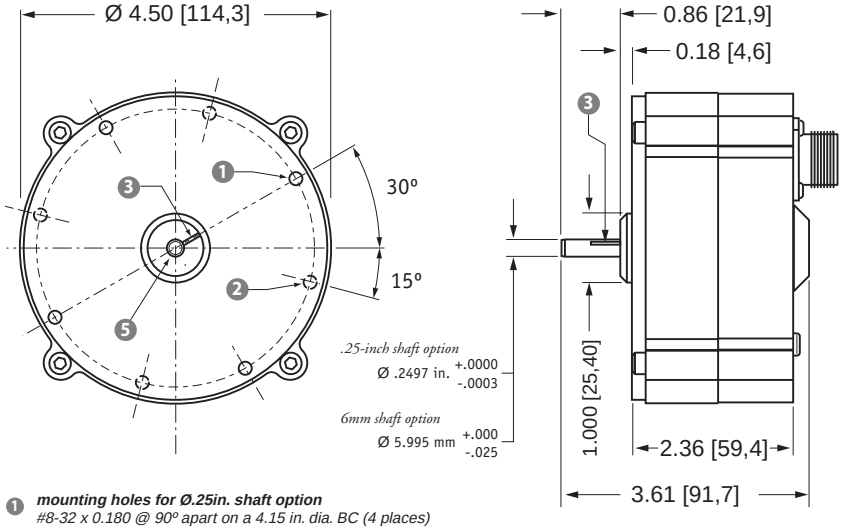
Enclosure Design ..... NEMA 4/4X/6, IP67/68, see ⑤ and ⑥
Operating Temperature ..... -40º to 200ºF
Vibration ..... up to 10 G's to 2000 Hz maximum

CE **EMC COMPLIANCE PER DIRECTIVE 89/336/EEC**

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

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.



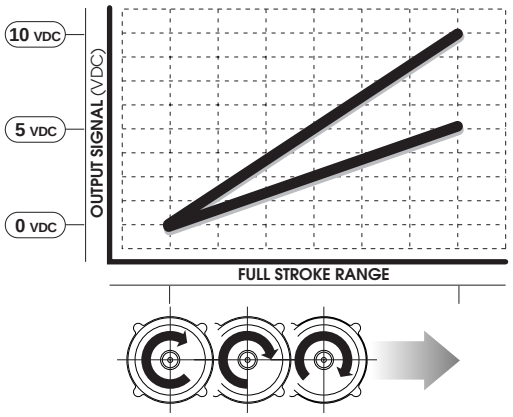
① ***mounting holes for Ø.25in. shaft option***
#8-32 x 0.180 @ 90º apart on a 4.15 in. dia. BC (4 places)

② ***mounting holes for Ø 6mm shaft option***
M4 x 4.5mm @ 90º apart on a 105.4mm dia. BC (4 places)

③ ***reference mark***
full counter-clockwise position - align mark on shaft to mark on face for start of measurement range

ALL DIMENSIONS ARE IN INCHES [MM]

Electrical Output Signal:



Latin Tech, Inc.

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▼ Ordering Information

Model Number:

RT9510- ____ **-** ____ ____ **1** **-** ____ ____ ____ **0**

order code: ⓡ ⓐ ⓑ ⓒ ⓓ ⓔ ⓕ ⓖ

Full Stroke Range:

ⓡ *order code:*	**0R25**	**0R50**	**0001**	**0002**	**0003**
① clockwise shaft rotations, min:	0.25	0.50	1	2	3
② accuracy (% of f.s.):	0.30%	0.30%	0.30%	0.30%	0.30%
potentiometer cycle life*:	2.5 x 10^6	2.5 x 10^6	2.5 x 10^6	2.5 x 10^6	2.5 x 10^6

ⓡ *order code:*	**0005**	**0010**	**0020**	**0030**	**0050**
clockwise shaft rotations, min:	5	10	20	30	50
accuracy (% of f.s.):	0.20%	0.15%	0.15%	0.15%	0.15%
potentiometer cycle life*:	5 x 10^5	2.5 x 10^5	2.5 x 10^5	2.5 x 10^5	2.5 x 10^5

note:* ***potentiometer cycle life* *is defined as the minimum number of times the sensor can be cycled back and forth, from beginning to end, before any measureable degradation of the output signal occurs.*

Enclosure Material:

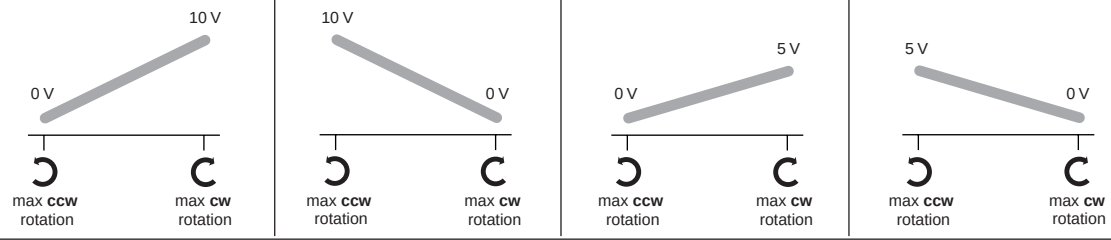
ⓐ *order code:*	**1**	**2**
③ enclosure material:	powder-painted aluminum	303 stainless steel

Mounting Configuration and Shaft Diameter:

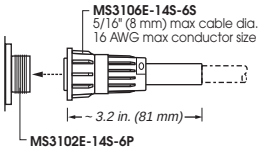
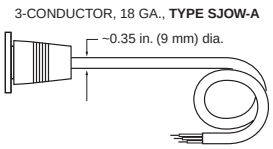
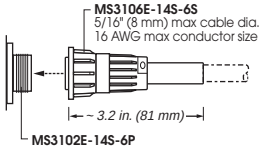
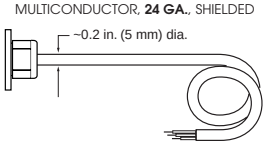
ⓑ *order code:*	**1**	**2**
shaft diameter:	0.25 inch diameter	6 mm diameter
mounting holes:	8-32 x 0.25 in.	M4 x 6 mm

Output Signals:

ⓔ *order code:*	**1**	**2**	**3**	**4**
④ output signal configuration:	0...10 VDC	10...0 VDC	0...5 VDC	5...0 VDC



Electrical Connection:

Ⓕ *order code:*	1	2	3	4
electrical connection:	6-pin plastic connector and mating plug	10 ft. waterproof cable	6-pin metal connector and mating plug	25 ft. instrumentation cable
				
contact view				
connections	A = input voltage B = output signal C = common	WHT = input voltage GRN = output signal BLK = common	A = input voltage B = output signal C = common	RED = input voltage GRN = output signal BLK = common
⑤ **IP** rating:	67	67, 68*	65	67
⑥ **NEMA** rating:	6, 4X**	6, 4X**	4	6

*note: *requires factory submersion test* **applies to stainless steel enclosure, see ③*

▼ Sample Model Number

RT9510- 0005 - 1 1 1 - 1 1 1 0
order code: Ⓡ Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ

Specifications:

Full Stroke Range:	5 turns (5 clockwise shaft rotations)
Enclosure Material:	powder-painted aluminum
Shaft Diameter:	0.25 inches
Mounting Holes:	8-32 x 0.250 in.
Output Signal:	0-10 VDC, output increasing with clockwise shaft rotation
Electrical Connection:	6-pin plastic connector