

Rotational Position Transducer

- ▼ Up to 200 Turns
- ▼ Industrial Grade
- ▼ 0...10 VDC Output Signal



RT8510



Specification Summary:

GENERAL

Full Stroke Ranges 0-0.125 to 0-200 turns, see ① next page
 Output Signal 0-10, 0-5 VDC, see ④
 Accuracy ± 0.28 to $\pm 0.15\%$ full stroke, see ②
 Repeatability $\pm 0.05\%$ full stroke
 Resolution essentially infinite
 Enclosure Material powder-painted aluminum or stainless steel, see ④
 Sensor plastic-hybrid precision potentiometer
 Shaft Loading up to 10 lbs. radial and 5 lbs. axial
 Starting Torque (25°C) 2.0 in-oz., max.
 Weight, Aluminum (Stainless Steel) Enclosure 3 lbs. (6 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

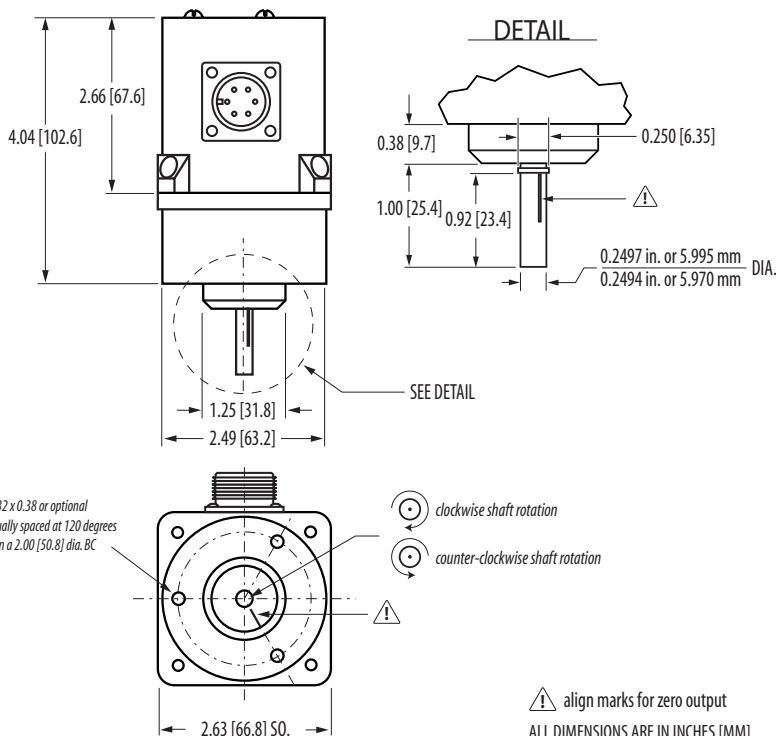
Enclosure Design NEMA 4/4X/6, IP 65/67/68 see ⑤ and ⑥
 Operating Temperature -40° to 200°F
 Vibration up to 10 G's to 2000 Hz maximum

EMC COMPLIANCE PER DIRECTIVE 89/336/EEC

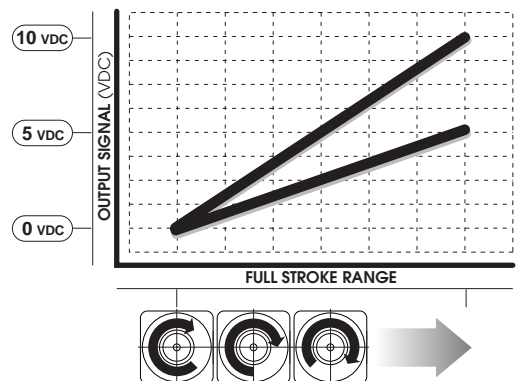
Emission / Immunity EN50081-2 / EN50082-2

The RT8510 can operate from an unregulated 14.5 to 40 VDC power supply while providing a regulated output signal over it's full range from 1/8 of a turn up to 200 turns. It provides a 0 - 10 VDC position feedback signal proportional to the rotational position of the shaft

As a member of Celesco's innovative family of NEMA-4/ IP67 rotational transducers, the RT8510 offers numerous benefits including a zero and span adjust and a potentiometric sensor which provides an "absolute" feedback signal that is unaffected by power loss.



Electrical Output Signal:



Latin Tech, Inc.

▼ **Ordering Information**

Model Number:

RT8510- _____ - _____ **1** - **1** _____ **0**
order code: R A B C D E F G

Full Stroke Range:

<small>R</small> order code:	R125	OR25	OR50	0001	0002	0003	0005	0010	0020	0030
① clockwise shaft rotations, min:	0.125	0.25	0.50	1	2	3	5	10	20	30
② accuracy (% of f.s.):	0.30 %						0.20 %	0.15 %		
potentiometer cycle life*:	2.5 x 10 ⁶						5 x 10 ⁵	2.5 x 10 ⁵		

<small>R</small> order code:	0040	0050	0060	0080	0100	0120	0140	0160	0180	0200
clockwise shaft rotations, min:	40	50	60	80	100	120	140	160	180	200
accuracy (% of f.s.):	0.15 %									
potentiometer cycle life*:	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 measurable degradation of the output signal occurs.*

Enclosure Material:

<small>A</small> order code:	1	2
③ enclosure material:	powder-painted aluminum	303 stainless steel

Mounting Configuration and Shaft Diameter:

<small>B</small> order code:	1	2
shaft diameter:	0.25 inch diameter	6 mm diameter
mounting holes:	10-32 x 0.25 in.	M6 x 10 mm

Output Signals:

<small>B</small> order code:	1	2	3	4
④ output signal configuration:	0...10 VDC	10...0 VDC	0...5 VDC	5...0 VDC

RT8510 • Rotational Transducer • 0...10 VDC Output Signal

Electrical Connection:

⑤ 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
		connections		connections
	connections	connections	connections	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
IP rating:	67	67, 68*	65	67
NEMA rating:	6, 4X**	6, 4X**	4	6

note: *requires factory submersion test

**applies to stainless steel enclosure, see ③

▼ Sample Model Number

RT8510-0005 - 1 1 1 - 1 1 1 0
order code: R A B C D E F G

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