

Rotational Transducer

- ▼ Up to 50 Turns
- ▼ Industrial Grade
- ▼ Precision Potentiometric Output



RT9101

Specification Summary:

GENERAL

Full Stroke Ranges 0-0.25 to 0-50 turns, see ① next page
 Output Signal voltage divider (potentiometer)
 Accuracy ± 0.30 to $\pm 0.15\%$ full stroke, see ②
 Repeatability $\pm 0.02\%$ 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 Resistance 500, 1K, 5K, 10K ohms ($\pm 10\%$) or adjustable bridge, see ④
 Power Rating, Watts 2.0 at 70°F (derated to 0 @ 250°F)
 Recommended Maximum Input Voltage 30 V(AC or DC)
 Output Signal Change Over Measurement Range 94% $\pm 4\%$ of input voltage

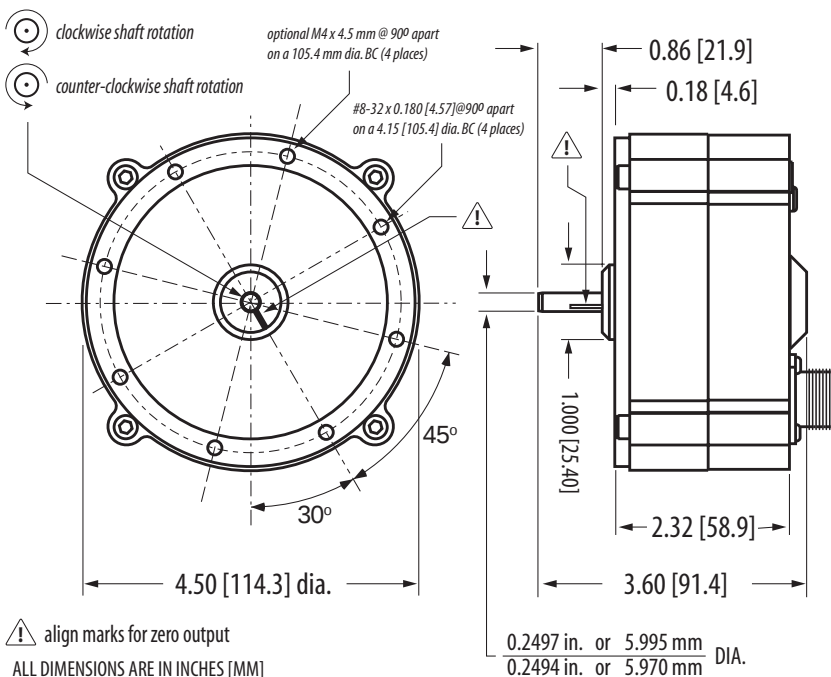
ENVIRONMENTAL

Environmental Suitability 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

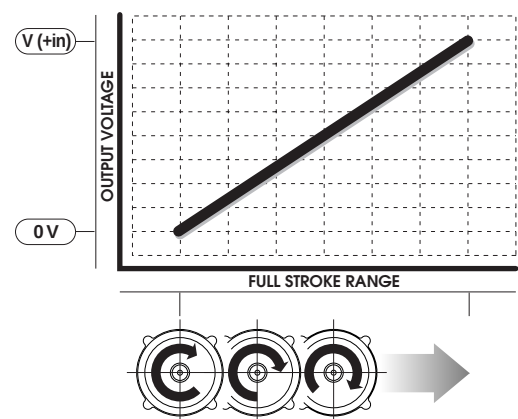


Celeco's model RT9101 provides a voltage feedback signal for rotational position. The sensing element of this device is a precision plastic-hybrid potentiometer which provided superb linearity and resolution.

This innovative sensor from Celeco, 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.



Electrical Output Signal:



celeco

Tope Co., Ltd.

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 fax: +886-2-8228-0659

<http://www.sensor.com.tw>
 e-mail: tope@ms1.hinet.net

▼ Ordering Information

Model Number:

RT9101 - **1** - **1** - **0**
order code: R A B C D E F G

Full Stroke Range:

R 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*:	2.5×10^6	2.5×10^6	2.5×10^6	2.5×10^6	2.5×10^6

R 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*:	5×10^5	2.5×10^5	2.5×10^5	2.5×10^5	2.5×10^5

*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.

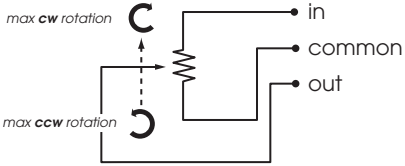
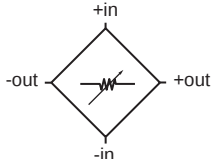
Enclosure Material:

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

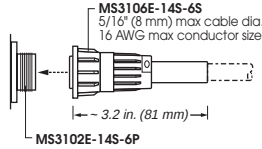
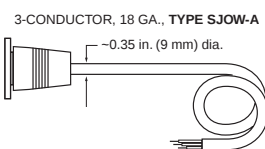
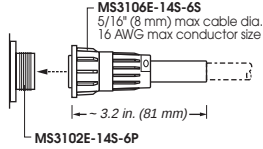
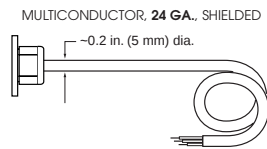
Mounting Configuration and Shaft Diameter:

B 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:

D order code:	1	2	3	4	5
④ sensing circuit:	500 Ω	1K Ω	5K Ω	10K Ω	0...30 mV/V adjustable bridge
					full scale output: zero adjust:  adjustable from 0 to 30mV/V from full retraction to 50% of full stroke

Electrical Connection:

	⑥ 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																				
																									
		<table> <tr> <td>contact view</td><td colspan="2">connections</td></tr> <tr> <td></td><td> standard A = +IN B = COMMON C = +OUT </td><td> bridge A = +IN B = -IN C = -OUT D = +OUT </td></tr> </table>	contact view	connections			standard A = +IN B = COMMON C = +OUT	bridge A = +IN B = -IN C = -OUT D = +OUT	<table> <tr> <td colspan="2">connections</td></tr> <tr> <td> standard WHT = +IN BLK = COMMON GRN = OUT </td><td> bridge not available </td></tr> </table>	connections		standard WHT = +IN BLK = COMMON GRN = OUT	bridge not available	<table> <tr> <td>contact view</td><td colspan="2">connections</td></tr> <tr> <td></td><td> standard A = +IN B = COMMON C = +OUT </td><td> bridge A = +IN B = -IN C = -OUT D = +OUT </td></tr> </table>	contact view	connections			standard A = +IN B = COMMON C = +OUT	bridge A = +IN B = -IN C = -OUT D = +OUT	<table> <tr> <td colspan="2">connections</td></tr> <tr> <td> standard RED = +IN BLK = COMMON GRN = OUT </td><td> bridge RED = +IN BLK = -IN WHT = -OUT GRN = +OUT </td></tr> </table>	connections		standard RED = +IN BLK = COMMON GRN = OUT	bridge RED = +IN BLK = -IN WHT = -OUT GRN = +OUT
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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

IT9101- 030 - 120 - 1 1 1 - 1
order code: CW CCW A B C D

Specifications: Full Clockwise Rotation: 5 turns (5 clockwise shaft rotations)
Full Counter-Clockwise Rotation: 120 degrees
Enclosure Material: powder-painted aluminum
Electrical Connection: 6-pin plastic connector
Dampening: magnetic dampening