

Celeco's model RT8420 provides extended rotational position feedback from as little as 1/8 of a turn f.s. all the way up to 200 turns f.s. The RT8420 combines the superb linearity and resolution of a plastic-hybrid potentiometer with the durability of Celeco's 4...20 mA circuit to provide an accurate and reliable electrical signal over all ranges.

Additionally, the RT8420 has fully accessible zero and span settings allowing precise matching of the output signal to the required measurement.

Output Signal



*Optional 3-wire, 0...20mA output signal available.

RT8420

0–45° to 0–200 Turns • 0..20mA • 4..20mA

Industrial Grade Rotational Position Sensor

Absolute Rotary Position up to 200 turns

Aluminum or Stainless Steel Enclosure Options

IP68 / NEMA 6

General

Full Stroke Range	0-0.125 to 0-200 turns
Output Signal Options	4...20 mA (2-wire) and 0...20 mA (3-wire)
Accuracy	0.15% to 1.25%, 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 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	see ordering information
Input Current	20 mA max.
Maximum Loop Resistance (Load)	(loop supply voltage - 8)/0.020
Circuit Protection	38 mA max.
Impedance	100M ohms@100 VDC, min.
Output Signal Adjustment:	
Zero Adjustment	from factory set zero to 50% of full stroke range
Span Adjustment	to 50% of factory set span
Thermal Effects, Zero	0.01% f.s./°F, max.
Thermal Effects, Span	0.01% f.s./°F, max.

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

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0–45° to 0–200 Turns • 0..20mA • 4..20mA

Enclosure Material:

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

Shaft Diameter:

B order code:	1	2	3	4
	0.25-in. diameter	6 mm diameter	0.25-in. dia. w/flats	6 mm dia. w/flats
	.2497 in. (+.0000 - .0003)	5.995 mm (+.000 - .025)	0.33 in. ← 0.025 in.	8.4 mm ← 0.64 mm

Mounting Style:

C order code:	1	2
	face mount	flange mount
	1.38 [35,1]	1.00 [25,4]
	mounting holes spaced 120° apart on 2.00 [50,8] BC 6mm shaft option threaded M6 x 9 mm deep .25 in. shaft option #10-32 x 0.375 inch deep	Ø 4.1 [104.14] .28 [7,1] wide mounting slot on a Ø3.50 [88,9] BC
		IN [MM]

Output Signals:

D order code:	1	2	3	4
output signal options:	4...20 mA	20...4 mA	0...20 mA	20...0 mA
sensitivity:	16 mA/full stroke ±0.25%		20 mA/full stroke ±0.25%	
wiring configuration:	2 - wire		3 - wire	
input voltage:	8 - 34 vdc		14 - 29 vdc	

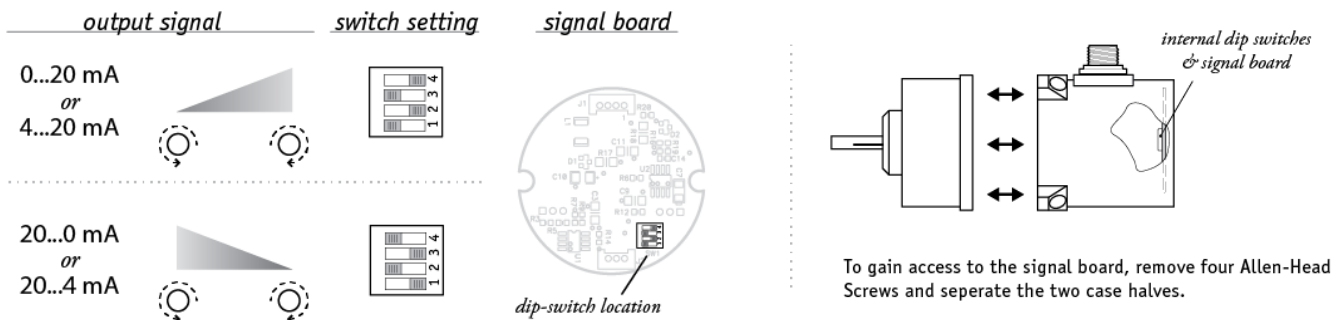
Example:

ordercode = **1** = 4...20 mA

= 4 mA
 = 20 mA

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.



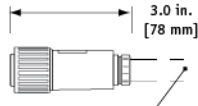
RT8420

0–45° to 0–200 Turns • 0..20mA • 4..20mA

Electrical Connection:

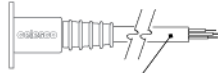
Order code:

1
6-pin plastic connector
w/mating plug
IP 67, NEMA 4X, 6**



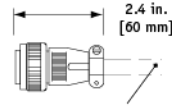
1/2 - 5/16" [14 - 8 mm] cable dia.
16 AWG max conductor size
connector: MS3102E-14S-6P
mating plug: MS3106E-14S-6S

2
10-ft. [3 M]
waterproof cable
IP 67, NEMA 4X, 6**



10 ft. x 0.4-in. dia.
[3 M x 10 mm dia.]
18 AWG, type SJTW

3
6-pin metal connector
w/mating plug
IP 65, NEMA 4



3/8-in. [9 mm] max cable dia.
16 AWG max conductor size
connector: MS3102E-14S-6P
mating plug: MS3106E-14S-6S

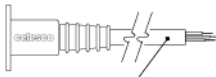
4
25-ft. [7.5 M]
instrumentation cable
IP 67, NEMA 6



25 ft. x 0.2-in. dia.
[7.5 M x 5 mm dia.]
24 AWG, shielded

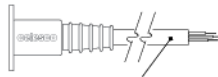
Order code:

5
100-ft. [30 M]
waterproof cable
IP 67, NEMA 4X, 6**



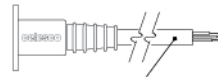
100 ft. x 0.4-in. dia.
[30 M x 10 mm dia.]
18 AWG, type SJTW

6
10-ft. [3 M]
pressure tested*
waterproof cable
IP 68, NEMA 4X, 6P**



10 ft. x 0.4-in. dia.
[3 M x 10 mm dia.]
18 AWG, type SJTW

7
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

6-pin Mating Plug		
pin	2-wire	3-wire
A	8...34 vdc	14...29 vdc
B	4...20 mA out	common
C	-	0...20 mA out
D	case ground	-



Waterproof Cable		
color code	2-wire	3-wire
WHITE	8...34 vdc	14...29 vdc
BLACK	4...20 mA out	common
GREEN	case ground	0...20 mA out

Instrumentation Cable		
color code	2-wire	3-wire
RED	8...34 vdc	14...29 vdc
BLACK	4...20A out	common
WHITE	n/a	n/a
GREEN	case ground	0...20 mA out

Notes: { * -Test pressure: 100 feet [30 meters] H₂O (40 PSID); Test Medium: Air; Duration: 2 hours.
** -NEMA 4X applies to stainless steel enclosure only.

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RT8420 12/01/2015



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Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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