

# Rotary Incremental Encoder

100 to 5000 Pulses Per Revolution

5...30 VDC • Push-Pull Driver

M12 Connector • IP67



## Specification Summary:

### ELECTRICAL

Pulses Per Revolution Options ..... 100, 360, 500, 1024, 2048, 4096, 5000  
 Output Driver ..... push-pull ( $V_{out} = V_{in}$ )  
 Input Voltage ( $V_{in}$ ) ..... 5...30 VDC  
 Input Current ..... 70 mA max.  
 Load ..... 40 mA max.  
 Output Level (@ 20 mA load)  
 High .....  $> V_{in} - 10\%$   
 Low .....  $< 2.5$  VDC  
 Pulse Frequency ..... 200 kHz  
 Circuit Protection ..... inverse-polarity protection  
 Electrical Connection ..... M12 (8-pin) connector—*mating plug not included*

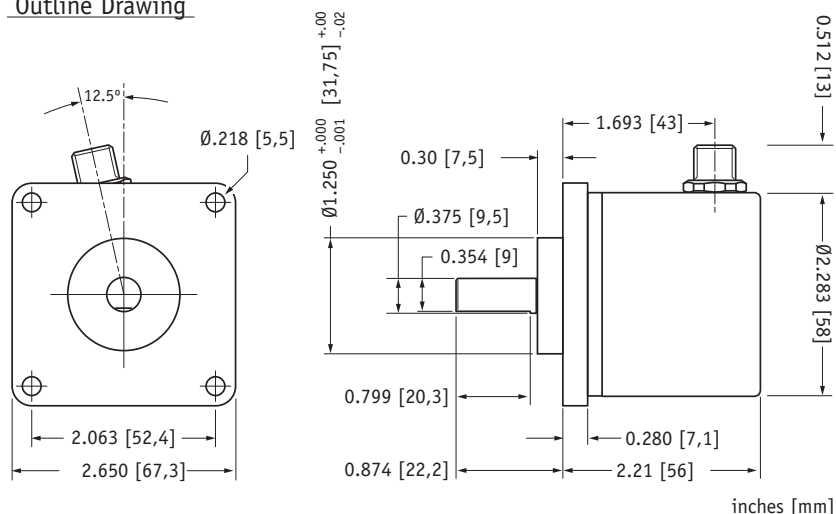
### MECHANICAL

Housing ..... aluminum, powder-coated  
 Flange ..... aluminum  
 Shaft ..... stainless steel  
 Shaft Loading, Radial ..... 49.5 lbs (220 N) max.  
 Shaft Loading, Axial ..... 27 lbs (120 N) max.  
 Starting Torque ..... approx. 1.4 oz-in. (1 N-cm) @ ambient temperature  
 Bearing Type ..... precision ball bearings  
 Bearing Life:  
 @ 100% of full rated load .....  $10^9$  shaft revolutions  
 @ 40% of full rated load .....  $10^{10}$  shaft revolutions  
 @ 20% of full rated load .....  $10^{11}$  shaft revolutions  
 Maximum Operating Speed ..... 8000 RPM  
 Weight (approx) ..... 10.5 oz (300g)

### ENVIRONMENTAL

Enclosure Design ..... IP67  
 Shaft Seals ..... IP65  
 Operating Temperature .....  $-4^{\circ}$  to  $176^{\circ}$ F ( $-20^{\circ}$  to  $80^{\circ}$ C)  
 Storage Temperature .....  $-22^{\circ}$  to  $176^{\circ}$ F ( $-30^{\circ}$  to  $80^{\circ}$ C)

### Outline Drawing



# CH25



Introducing Celesco's CH25 Incremental Encoder. This encoder comes with a 2.5-inch square flange, 3/8-inch shaft and a push-pull output driver. The CH25 also accepts a wide input voltage from 5 to 30 VDC and is available in resolutions from 100 to 5000 pulses per revolution.

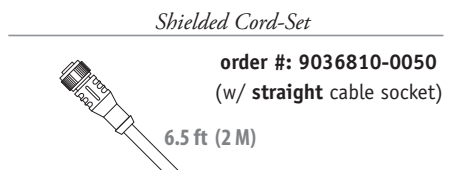
This encoder is perfect for many applications including electric motors, packaging machines, conveyor systems and elevators.

## Ordering Information:

### Encoder:

Order Number	Pulses Per Turn
CH25-100	100
CH25-360	360
CH25-500	500
CH25-1024	1024
CH25-2048	2048
CH25-4096	4096
CH25-5000	5000

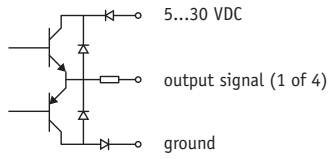
### Accessories:



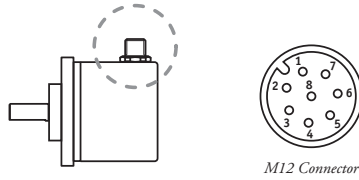
Celesco Transducer Products, Inc.  
 20630 Plummer Street • Chatsworth, CA 91311  
 tel: 800.423.5483 • +1.818.701.2750 • fax: +1.818.701.2799

**celesco**  
 celesco.com • info@celesco.com

Output Driver:



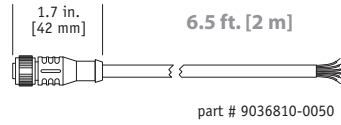
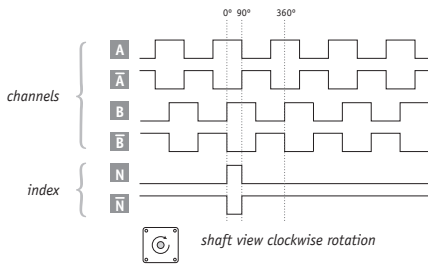
Output Signal Connections:



**Encoder Pin Connections**

pin	signal	pin	signal
1	ground	5	N
2	5...30 VDC	6	channel A'
3	channel A	7	channel B'
4	channel B	8	N'

Output Waveforms



**Cord Set Connections**

pin	conductor	signal	pin	conductor	signal
(1)	white	ground	(5)	gray	N
(2)	brown	5...30 VDC	(6)	pink	channel A'
(3)	green	channel A	(7)	blue	channel B'
(4)	yellow	channel B	(8)	red	N'

**cable specifications**

length:	6.5 ft. (2m)
wire size:	24 AWG (.25mm <sup>2</sup> )
shield:	yes
cable material:	PVC
cable color:	gray