CS15

Rotary Incremental Encoder

100 to 2500 Pulses Per Revolution
Size 15, Low Profile Design • 5..28 VDC, Push-Pull Driver
**OEM or Industrial Applications**
In Stock for Quick Delivery

GENERAL

Pulses Per Revolution Options	100, 1000, 2000, 2500
Output Driver	push-pull ($V_{out} = V_{in}$)
Input Voltage (V_{in})	5...28 VDC
Input Current	100 mA max.
Load	20 mA max.
Maximum Shaft Speed	8000 RPM
Maximum Frequency	200 kHz
Electrical Connection	18-inch, 26 AWG multi-conductor cable

MECHANICAL

Flange	aluminum
Shaft	stainless steel
Shaft Loading, Radial	5 lbs (22 N) max.
Shaft Loading, Axial	5 lbs (22 N) max.
Starting Torque	approx. .05 oz-in. (.35 N-mm) @ ambient temperature
Bearing Type	precision ball bearings
Bearing LIfe, @60% of full rated load	1.2×10^{10} revolutions
Moment of Inertia	6.7×10^{-5} oz-in-sec^2 (4.8 gm-cm^2)
Maximum Acceleration	1×10^5 rad/sec^2
Weight	3 oz.

ENVIRONMENTAL

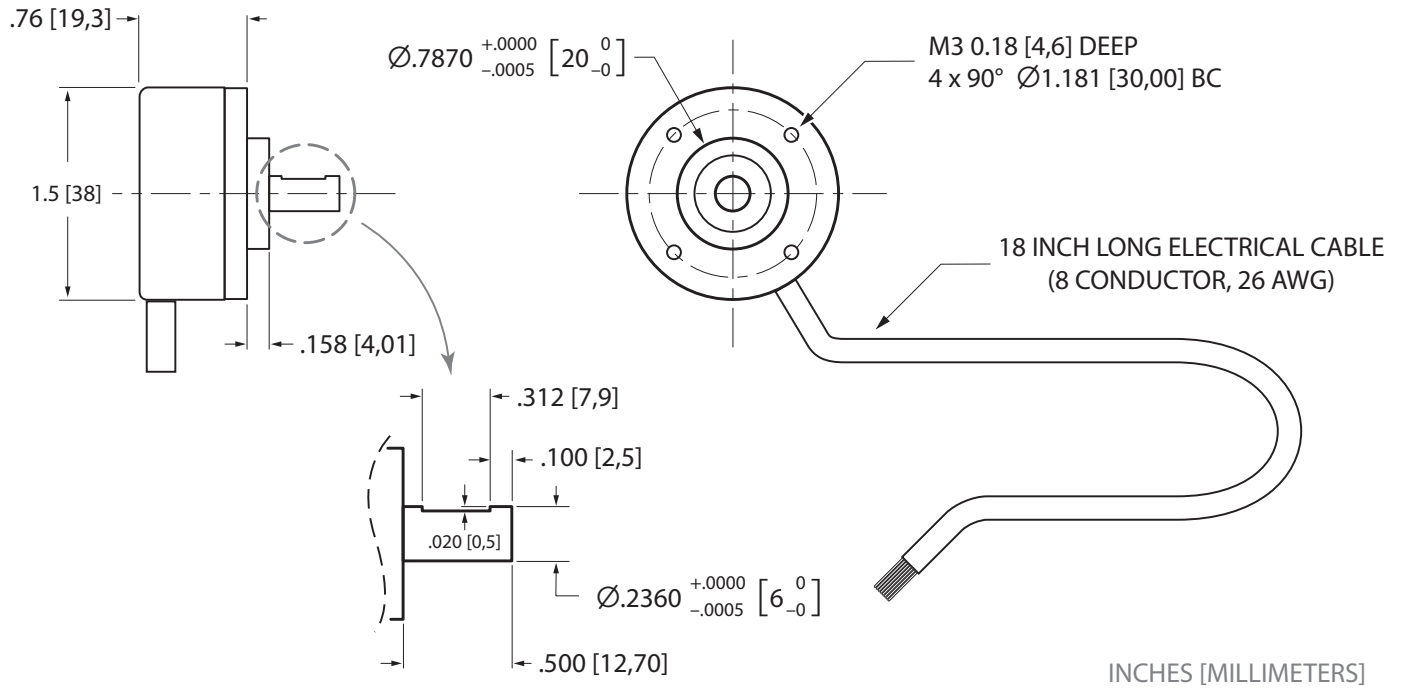|	
Environmental Suitability	IP50
Operating Temperature	0–185° F (-20–85° C)
Storage Temperature	-13°–185° F (-25°–85°C)
Humidity	98% RH non-condensing
Vibration	10 g @ 58 to 500 Hz
Shock	80 g @ 11 ms duration

1.4" [36 mm]   Ø1.5" [38 mm]
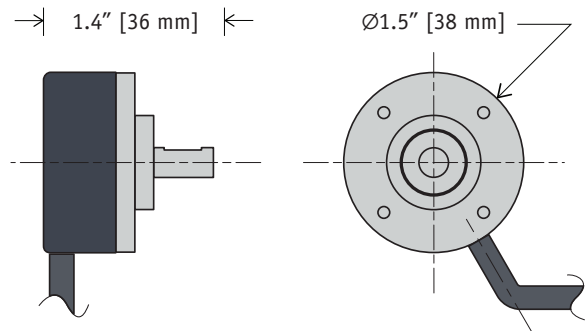
The CS15 is Celesco's compact industry standard size 15, servo-mount incremental encoder. With a low profile of less than an inch in height and a diameter of only 1.5 inches, the economically priced CS15 is perfect for both the OEM and single-piece user alike. Precision ball bearings support a durable stainless steel shaft for reliable, long life operation.

Standard features include 100, 1000, 2000 or 2500 pulses per turn option, a push pull driver and complementary output channels for single-ended or differential output connection. Every encoder ships with state of the art opto-asic circuitry designed to provide a clean, reliable output signal to just about any PLC or electrical interface.

ORDERING INFORMATION

Order Number	pulses per turn
CS15-100	100
CS15-1000	1000
CS15-2000	2000
CS15-2500	2500

Outline Drawing:

.76 [19,3]

1.5 [38]

.158 [4,01]

$\varnothing$.7870 $^{+.0000}_{-.0005}$ [20 $^{0}_{-0}$]

M3 0.18 [4,6] DEEP
4 x 90° $\varnothing$1.181 [30,00] BC

18 INCH LONG ELECTRICAL CABLE
(8 CONDUCTOR, 26 AWG)

.312 [7,9]

.100 [2,5]

.020 [0,5]

$\varnothing$.2360 $^{+.0000}_{-.0005}$ [6 $^{0}_{-0}$]

.500 [12,70]

INCHES [MILLIMETERS]

Signal Connections

color	signal
red	5...28 VDC
black	common
green	channel A
blue	channel A'

color	signal
white	channel B
gray	channel B'
yellow	Z
orange	Z'

Output Driver (1 of 4):

5...28 VDC

output signal (20 mA max. source/sink)

common

Output Waveforms

0°   180°   360°

channels

A
Ā
B
B̄

index

Z
Z̄

un-gated**

gated**

shaft view clockwise rotation
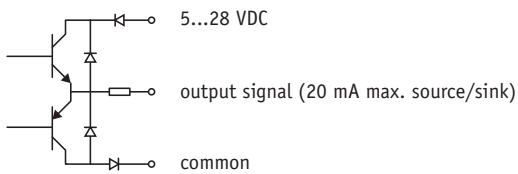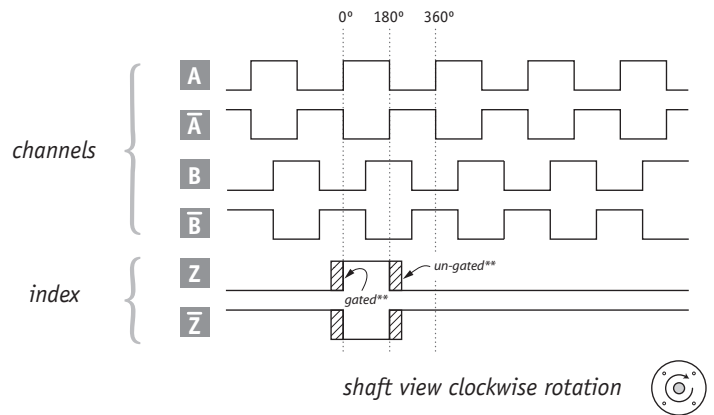
**note: – 1000, 2000, 2500 pulses-per-turn options — gated to A, index pulse = 180°
– 100 pulses-per-turn option — ungated, index pulse = approx 270°