OEL8G-K
8 BIT GRAY CODE ENCODER
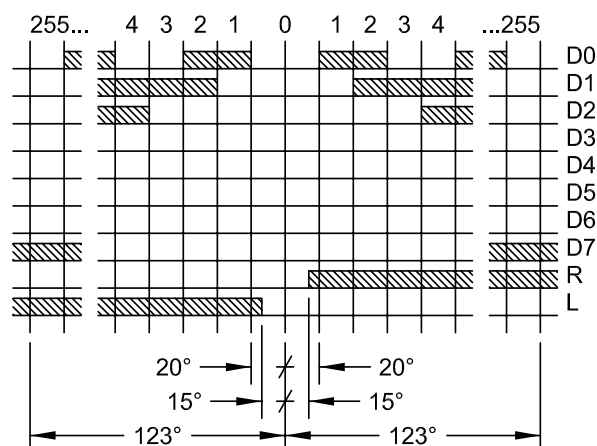
J.R. MERRITT® CONTROLS

PART #	DESCRIPTION
04.770	OEL8G-K Gray Code Encoder with 1.3 ft Cable
04.771	04.770 with 6.5 ft Extension Cable
04.778	6.5 ft Extension Cable Only
30.180	NSO Adapter / Mounting Plate

The OEL8G-K (OER8G-1) absolute encoder produces a gray coded digital output with a resolution of 255 discrete counts in each direction. This contactless system uses optoelectronics to identify each position, which eliminates the wear usually associated with analog potentiometer outputs. In addition to the 255 steps in each direction, the OEL8G-K has (2) directional bits and an LED to indicate zero position. The encoder seamlessly mounts to VNSO, VNS2, and NSO-SFA controllers via an adapter mounting plate, creating a heavy duty control solution for digital variable
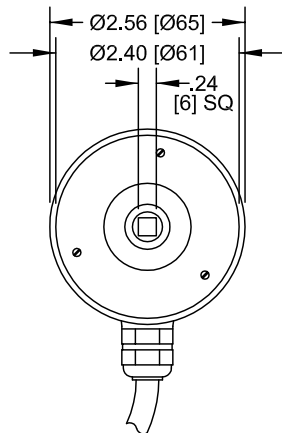
FEATURES

- High quality electronic design with long life and high accuracy
- 15 pin D-Sub connector with 1.3 ft [0.4 m] cable
- Special shaft with sealed ball bearing
- LED for zero pulse position
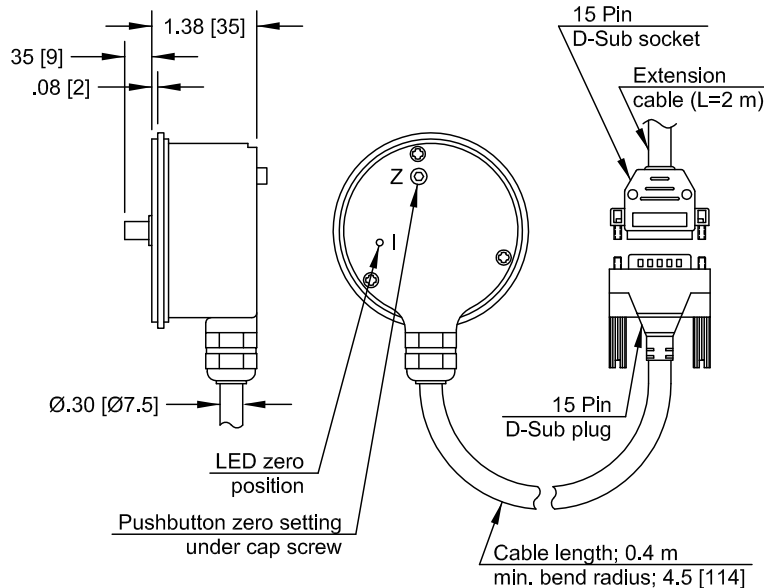- Push button for setting zero
- Optional 6.5 ft [2 m] extension cable.

OUTPUT SIGNALS

COMPATIBLE WITH:

VNSO   VNS2   NSO-SFA

DIMENSIONS & CONNECTIONS

Connections:

Function:	Pin:	Color:
Supply (V+)	9	White
Ground (0V)	8	Brown
D0	7	Green
D1	6	Yellow
D2	5	Grey
D3	4	Pink
D4	3	Blue
D5	2	Red
D6	15	Red / Blue
D7	14	Grey / Pink
Right	13	Black
Left	12	Violet
Shielding	Housing	

Ø2.56 [Ø65]
Ø2.40 [Ø61]
.24 [6] SQ

1.38 [35]
35 [9]
.08 [2]
Ø.30 [Ø7.5]

Z
I
LED zero position
Pushbutton zero setting under cap screw

15 Pin D-Sub socket
Extension cable (L=2 m)
15 Pin D-Sub plug
Cable length; 0.4 m
min. bend radius; 4.5 [114]

ELECTRICAL DATA

Supply Voltage (V+)	9 - 36 VDC
Supply Current	45 (typical) 75 (max) mA @ 24 VDC
Output Signals	Push / pull, short circuit protected
Outputs (all)	$V_{high} \geq$ (V+) - 3.0 V $V_{low} \leq$ 0.5 V @ max. load
Max. Load	20 mA max. per channel
Scanning Frequency	1 kHz
Resolution	0.404° per step
Precision	± 1 LSB
Directional Signals (Looking at Shaft)	R = 1 (0), L = 0 (1) CW (CCW) from 0 position
Shock	≤ 200 m^2/s (11 ms)
Vibrations	≤ 300 m^2/s (50 - 2000 Hz)

MECHANICAL DATA

Encoder Material	Aluminum Housing with Stainless Steel Shaft
Standard Cable (LIYCY)	1.3 ft [0.4m] with 15-pin D-Sub Plug
Optional Extension Cable	6.5 ft [2m] with D-Sub socket to single wires
Weight	.77 lb [350 g]

ENVIRONMENTAL DATA

Operating & Storage Temperature	-40° to +70°C
IP Rating	IP65