

Features

- Quadrature output
- Detent option
- Snap-in PC board mount
- Long operating life
- Incremental output
- Up to 24 full quadrature outputs per revolution

Additional Information

Click these links for more information:



ES Series - Shaftless Contacting Encoders

Electrical Characteristics

Output.....	2-bit quadrature code, Channel A leads Channel B turning clockwise (CW)
Closed Circuit Resistance.....	5 ohms maximum
Open Circuit Resistance.....	100 K ohms minimum
Contact Rating.....	10 milliamp @ 10 VDC or 0.1 watt maximum
Insulation Resistance (500 VDC).....	1,000 megohms minimum
Dielectric Withstanding Voltage (MIL-STD-202 Method 301) Sea Level.....	1,000 VAC minimum
Electrical Travel.....	Continuous
Contact Bounce (15 RPM).....	5 milliseconds maximum
RPM (Operating).....	120 maximum

Environmental Characteristics

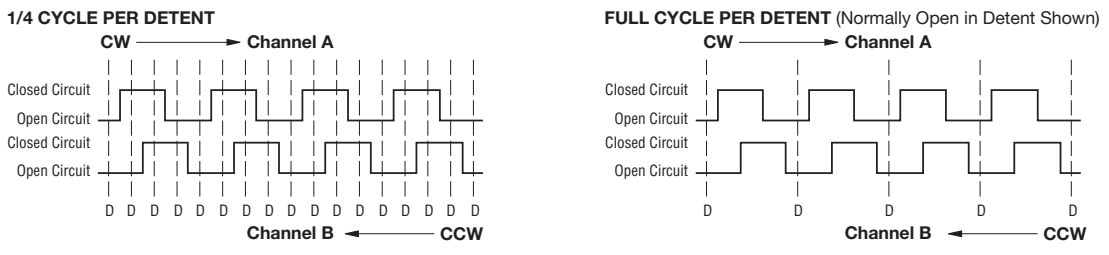
Operating Temperature Range.....	-40 °C to +85 °C (-40 °F to +185 °F)
Storage Temperature Range.....	-40 °C to +85 °C (-40 °F to +185 °F)
Humidity.....	MIL-STD-202, Method 103B, Condition B
Vibration.....	15 G
Contact Bounce.....	0.1 millisecond maximum
Shock.....	50 G
Contact Bounce.....	0.1 millisecond maximum
Rotational Life.....	200,000 shaft revolutions
IP Rating.....	IP 40

Mechanical Characteristics

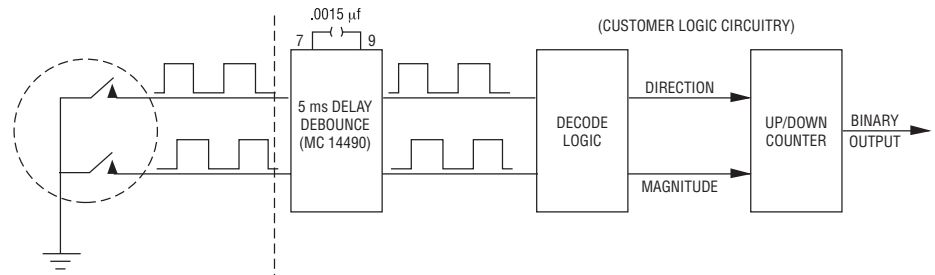
Mechanical Angle.....	Continuous
Running Torque (Detented).....	0.5 to 1.5 N-cm (0.75 to 2.25 oz-in.)
Undetented Torque.....	0.17 to 0.8 N-cm (0.25 to 1.25 oz-in.)
Weight.....	Approximately 8 gm (0.28 oz.)
Terminals.....	Printed circuit board terminals
Soldering Condition.....	96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire; 370 °C (700 °F) max. for 3 seconds
Manual Soldering.....	96.5Sn/3.0Ag/0.5Cu solder with no-clean flux; 260 °C (500 °F) max. for 5 seconds
Wave Soldering.....	96.5Sn/3.0Ag/0.5Cu solder with no-clean flux; 260 °C (500 °F) max. for 5 seconds
Wash Processes.....	Not recommended
Marking.....	Manufacturer's name and trademark, part number and date code
Hardware.....	No hardware supplied

Quadrature Output Table

This table is intended to show available outputs as currently defined.



RECOMMENDED INCREMENTAL CONTROL DIAGRAM FOR USE WITH A DEBOUNCE CIRCUIT

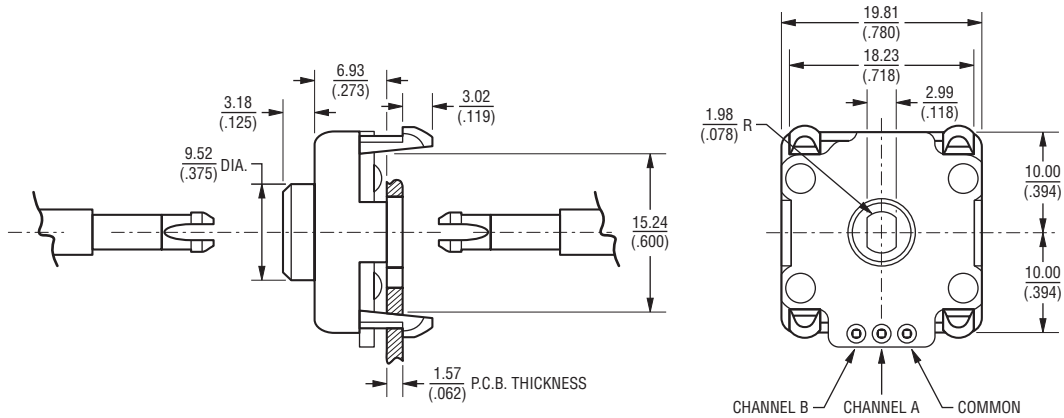


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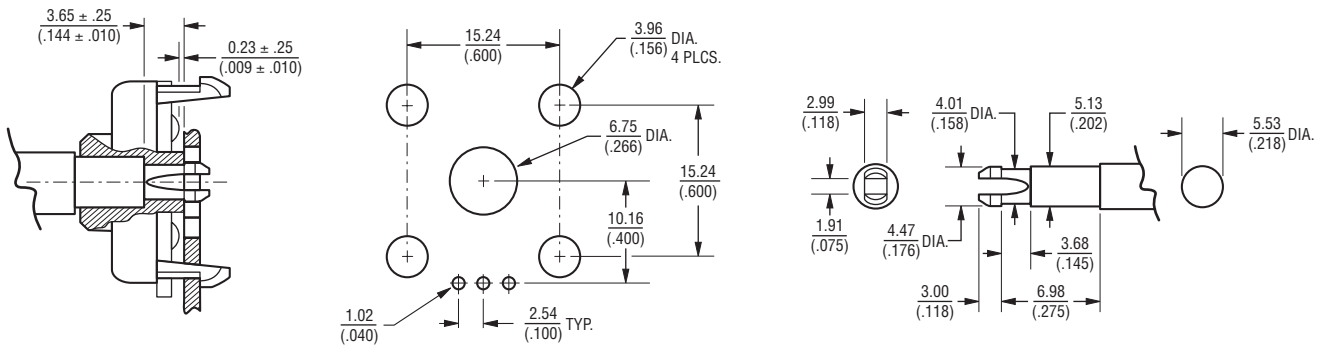
ES Series - Shaftless Contacting Encoders

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Product Dimensions



Mounting Dimensions



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

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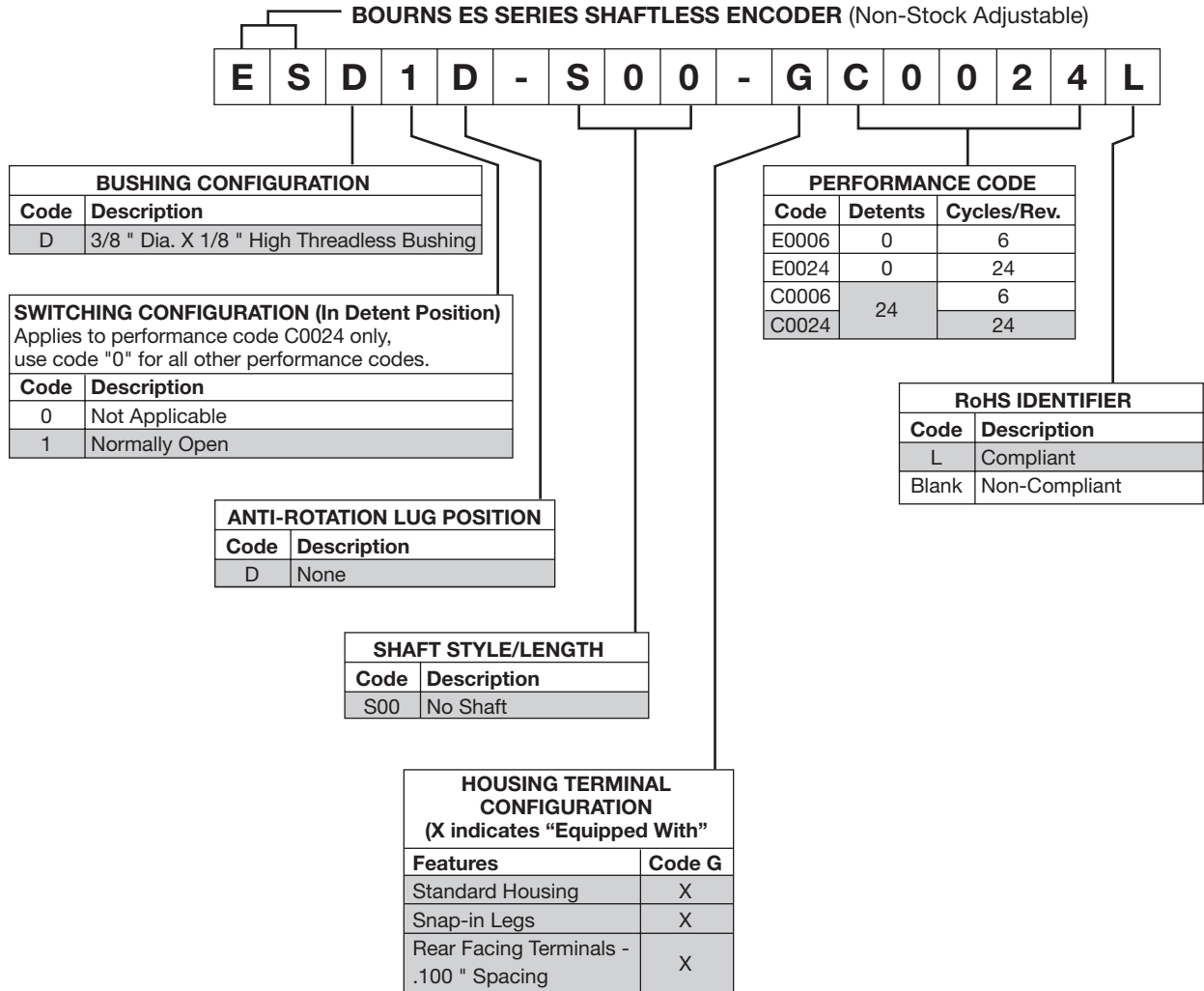
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ES Series - Shaftless Contacting Encoders

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How To Order



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Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com

Europe: Tel: +36 88 885 877 • Email: eurocus@bourns.com

Mexico: Tel: +52 614 478 0400 • Email: mexicus@bourns.com

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