


L15 Incremental Optical Encoder

BEISENSORS

The L15 provides the industrial marketplace with a rugged high-resolution encoder in a compact size 15 servo package. Engineered with robust interpolative electronics, the L15 offers up to 40,640 cycles per turn. Ideal for space or weight limited applications, these compact encoders discount size without compromising performance.

The L15 encoder features 1/4-inch diameter stainless steel shaft and can accommodate up to 5 pounds radial or axial load. The L15 encoder package has field-proven ASIC electronics, sealed dual bearings and BEI's accurate code disk in an all metal housing to ensure ruggedness and reliability.

The L15 Incremental Encoder is available with the following certifications:

 EN 55011 and EN 61000-6-2

Mechanical Specifications

Shaft Diameter: 1/4 inch nominal
Shaft Loading: Up to 5 pounds axial and 5 pounds radial
Shaft Runout: 0.002 T.I.R. at midpoint of shaft
Starting Torque at 25°C: 0.20 in-oz (max)
Bearings: Sealed, instrument grade
Shaft Material: 416 stainless steel
Bearing Housing: Aluminum with protective finish
Cover: Drawn aluminum
Bearing Life: 1 X 10⁶ revs (10,000 hrs at 1500 RPM)
Maximum RPM: 5,000 RPM nominal (see Frequency Response, below)
Moment of Inertia: 1.0 X 10⁻⁴ oz-in-sec²
Weight: 6 oz (max)

Electrical Specifications

Output Format: 2 channels in quadrature, 1/2 cycle index gated with negative B channel
Cycles Per Shaft Turn: 24 to 40,640 (see Table 2 back page)
Supply Voltage: 5-28 VDC
Current Requirements:
100mA typical + output load 250mA (max), 150mA (max) with 28V/5
Voltage/Output:
28V/V: Line Driver, 5-28VDC_{in}, V_{out}=V_{in}
28V/5: Line Driver, 5-28VDC_{in}, V_{out}=5VDC
28V/OC: Open Collector, 5-28VDC_{in}, OC_{out}
Protection Level: Reverse, overvoltage and output short circuit
Frequency Response: 100kHz (non-interpolated), Up to 1 MHz interpolated
Output Termination Pinouts: see table on back page

Environmental Specifications

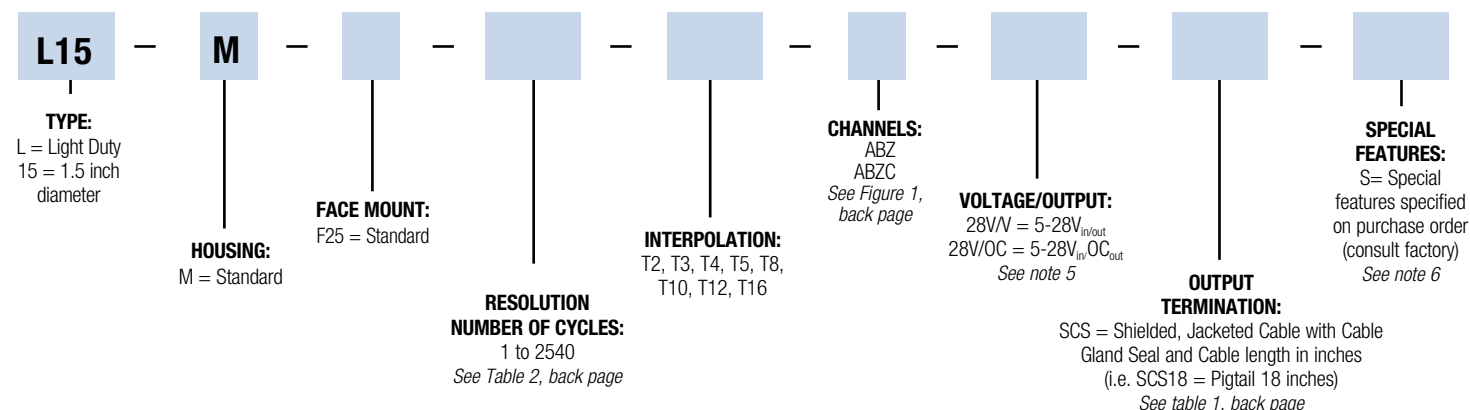
Enclosure Rating: NEMA 3. (IP53)
Temperature: Operating, 0° to 70° C; extended temperature testing available, -40° to 85°; storage, -40° to 90° C
Shock: 50 G's for 11 msec duration (1/2 Sine)
Vibration: 20 to 2000 Hz @ 20 g's
Humidity: 98% RH non-condensing

NOTES & TABLES: All notes and tables referred to in the text can be found on the back of this page.

L15 Incremental Ordering Options

FOR ASSISTANCE CALL 800-350-2727

Use this diagram, working from left to right to construct your model number (example: L15M-F25-256-ABZC-28V/V-SC18)

**BEI**SENSORS

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