



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 10<sup>6</sup> revs (10,000 hrs at 1500 RPM)
- Maximum RPM:** 5,000 RPM nominal (see Frequency Response, below)
- Moment of Inertia:** 1.0 X 10<sup>-4</sup> oz-in-sec<sup>2</sup>
- 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<sub>in</sub>, V<sub>out</sub>=V<sub>in</sub>  
28V/5: Line Driver, 5-28VDC<sub>in</sub>, V<sub>out</sub>=5VDC  
28V/OC: Open Collector, 5-28VDC<sub>in</sub>, OC<sub>out</sub>
- 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

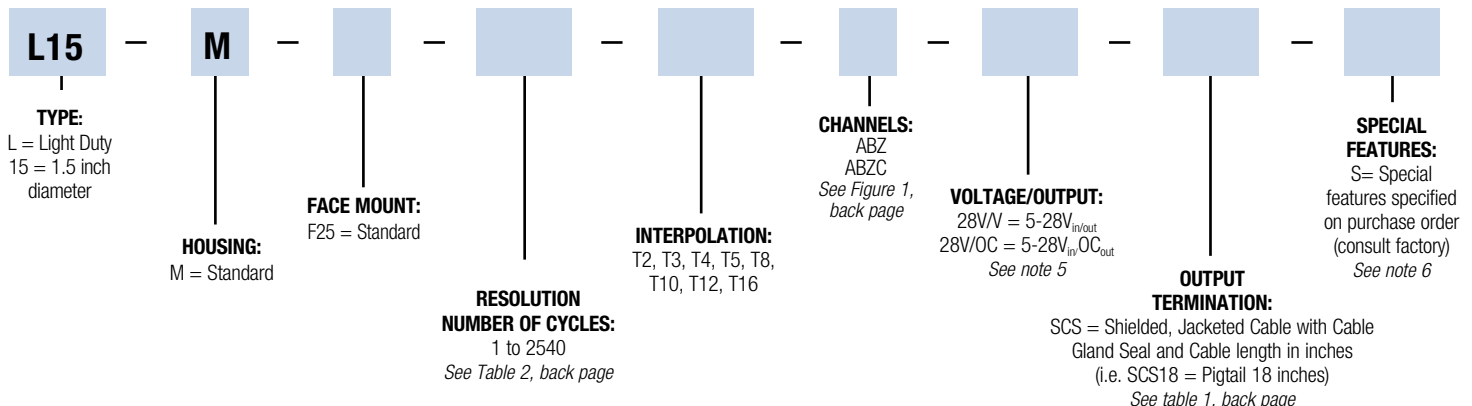
## Environmental Specifications

- 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)





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