

15 mm Diameter Incremental Rotary Encoders



E15 Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- Ultra-compact (Ø 15 mm) housing and ultra-lightweight (14 g) design
- Easy installation in tight or limited spaces
- Low shaft moment of inertia
- Resolution: 36 pulses per revolution
- Power supply: 5 VDC \pm 5%

Product Components

- Product
- Bolt \times 4
- Instruction manual
- Coupling \times 1

Specifications

Model	E15S2-36-2-N-5-R
Resolution	36 PPR
Control output	NPN open collector output
Output phase	A, B
Inflow current	≤ 30 mA
Residual voltage	≤ 0.4 VDC
Response speed ⁽⁰¹⁾	≤ 1 μ s
Max. response freq.	10 kHz
Max. allowable revolution ⁽⁰²⁾	3,000 rpm
Starting torque	$\leq 10 \times 10^{-4}$ N m
Inertia moment	≤ 0.5 g \cdot cm ² (5×10^{-8} kg \cdot m ²)
Allowable shaft load	Radial: ≤ 200 gf, Thrust: ≤ 200 gf
Unit weight (packaged)	≈ 14 g (≈ 37 g)
Approval	UL

01) Based on cable length: 1 m, I sink: 20 mA

02) Select resolution to satisfy Max. allowable revolution \geq Max. response revolution

$$[\text{max. response revolution (rpm)}] = \frac{\text{max. response frequency}}{\text{resolution}} \times 60 \text{ sec}$$

Power supply	5 VDC \pm 5% (ripple P-P: $\leq 5\%$)
Current consumption	≤ 50 mA (no load)
Insulation resistance	Between all terminals and case: ≥ 100 M Ω (500 VDC \approx megger)
Dielectric strength	Between all terminals and case: 500 VAC \sim 50 / 60 Hz for 1 minute
Vibration	1 mm double amplitude at frequency 10 to 55 Hz (for 1 minute) in each X, Y, Z direction for 2 hours
Shock	≤ 50 G
Ambient temperature	-10 to 70 $^{\circ}$ C, storage: -20 to 80 $^{\circ}$ C (no freezing or condensation)
Ambient humidity	35 to 85%RH, storage: 35 to 90%RH (no freezing or condensation)
Protection rating	IP50 (IEC standard)
Connection	Axial wiring type
Cable spec.	Ø 3 mm, 4-wire, 500 mm, flexible PVC insulation shield cable
Wire spec.	AWG30 (0.102 mm, 7-core), insulator diameter: Ø 0.71 mm

Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.

