

# Wheel Type Incremental Rotary Encoders

## ENC Series



### Features

- Wheel type encoders ideal for measuring length or speed of continuously moving objects
- Output waveform of measured distance is proportional to International Weights and Measures (meters / inches)
- Power supply:  
5 VDC $\pm$  5%, 12 - 24 VDC $\pm$  5%

### Specifications

Model	ENC-1-□-T-□-□	ENC-1-□-N-□-□	ENC-1-□-V-□-□
Min. measuring unit [pulse]	1 mm / 1 cm / 1 m / 0.01 yd / 0.1 yd / 1 yd model		
Control output	Totem pole output	NPN open collector output	Voltage output
Output phase	A, B	A, B	A, B
Inflow current	$\leq$ 30 mA	$\leq$ 30 mA	-
Residual voltage	$\leq$ 0.4 VDC $\pm$	$\leq$ 0.4 VDC $\pm$	$\leq$ 0.4 VDC $\pm$
Outflow current	$\leq$ 10 mA	-	$\leq$ 10 mA
Output voltage (5 VDC $\pm$ )	$\geq$ (power supply -2.0) VDC $\pm$	-	-
Output voltage (12 - 24 VDC $\pm$ )	$\geq$ (power supply -3.0) VDC $\pm$	-	-
Response speed <sup>01)</sup>	$\leq$ 1 $\mu$ s		
Max. response freq.	180 kHz		
Max. allowable revolution <sup>02)</sup>	5,000 rpm		
Starting torque	Dependent on the coefficient of friction		
Unit weight	$\approx$ 494 g		
Approval	CE EAC	CE EAC	CE EAC

01) Based on cable length: 2 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%) / 12 - 24 VDC $\pm$ 5% (ripple P-P: $\leq$ 5%) model
Current consumption	$\leq$ 80 mA (no load)
Insulation resistance	Between all terminals and case: $\geq$ 100 M $\Omega$ (500 VDC $\pm$ megger)
Dielectric strength	Between all terminals and case: 750 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	$\leq$ 75 G
Ambient temp.	-10 to 70 °C, storage: -25 to 85 °C (no freezing or condensation)
Ambient humi.	35 to 85%RH, storage: 35 to 90%RH (no freezing or condensation)
Protection rating	IP50 (IEC standard)
Connection	Axial cable type / Cable connector type model
Cable spec.	$\varnothing$ 5 mm, 4-wire, shield cable cable type: 2 m, cable connector type: 250 mm
Wire spec.	AWG24 (0.08 mm, 40-core), insulator diameter: $\varnothing$ 1 mm
Connector spec.	M17 6-pin socket type



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