TCD210023AA Autonics

60 mm Diameter Incremental Rotary Encoders



E60 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

- Ø 60 mm housing, Ø 20 mm hollow shaft
- Accurate measurement of angle, position, revolution, speed, acceleration, and distance.
- \bullet Various resolutions: up to 8192 pulses per revolution
- Various control output options
- Power supply: 5 VDC== \pm 5%, 12 24 VDC== \pm 5%

Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

E60 H 20 - **0** - **2** - **3** - **3** - **5**

Resolution

Number: Refer to resolution in 'Specifications'

② Output phase

3: A, B, Z 6: A, \overline{A} , B, \overline{B} , Z, \overline{Z}

3 Control output

T: Totem pole output N: NPN open collector output

V: Voltage output L: Line driver output

Power supply

5: 5 VDC== ±5% 24: 12 - 24 VDC== ±5%

Connection

No mark: Radial cable type C: Radial cable connector type

Product Components

- Product (+ bracket)
- Instruction manual

• Bolt \times 4

Specifications

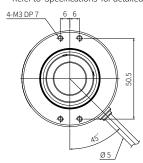
Model	E60H20-□- 3-T-□-□	E60H20-□- 3-N-□-□	E60H20-□- 3-V-□-□	E60H20-□- 6-L-□-□
Resolution	100 / 1,024 / 5,000 / 8,192 PPR model			
Control output	Totem pole output	NPN open collector output	Voltage output	Line driver output
Output phase	A, B, Z	A, B, Z	A, B, Z	$A, \overline{A}, B, \overline{B}, Z, \overline{Z}$
Inflow current	≤ 30 mA	≤ 30 mA	-	≤ 20 mA
Residual voltage	≤ 0.4 VDC=	≤ 0.4 VDC==	≤ 0.4 VDC==	≤ 0.5 VDC==
Outflow current	≤ 10 mA	=	≤ 10 mA	≤ -20 mA
Output voltage (5 VDC==)	≥ (power supply -2.0) VDC==	-	-	≥ 2.5 VDC==
Output voltage (12 - 24 VDC==)	≥ (power supply -3.0) VDC==	-	-	≥ (power supply -3.0) VDC=
Response speed 01)	≤ 1 μs			≤ 0.5 µs
Max. response frequency	300 kHz			
Max. allowable revolution 02)	6,000 rpm			
Starting torque	≤ 0.0147 N m			
Inertia moment	$\leq 110 \mathrm{g\cdot cm^2} (11 \times 10^{-6} \mathrm{kg\cdot m^2})$			
Allowable shaft load	Radial: \leq 5 kgf, Thrust: \leq 2.5 kgf			
Unit weight (packaged)	≈ 300 g (≈ 397 g)			
Approval	C € EHI	C € ERI	C € ERI	EAC

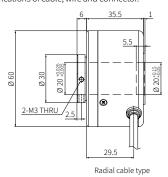
- 01) Based on cable length: 2 m, I sink: 20 mA
- 02) Select resolution to satisfy Max. allowable revolution \geq Max. response revolution [max. response revolution (rpm) = $\frac{\text{max. response frequency}}{\text{resolution}} \times 60 \text{ sec}$]

Power supply	5 VDC== ± 5% (ripple P-P: ≤ 5%) / 12 - 24 VDC== ± 5% (ripple P-P: ≤ 5%) model		
Current consumption	Totempole, NPN open collector, Voltage output: ≤ 80 mA (no load) Line driver output: ≤ 50 mA (no load)		
Insulation resistance	Between all terminals and case: $\geq 100~\text{M}\Omega$ (500 VDC== megger)		
Dielectric strength	Between all terminals and case: 750 VAC ~ 50 / 60 Hz for 1 minute		
Vibration	$1\mathrm{mm}$ double amplitude at frequency 10 to $55\mathrm{Hz}$ (for $1\mathrm{minute})$ in each Y, Z direction for $2\mathrm{hours}$		
Shock	≲ 100 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	Radial cable type / Cable connector type model		
Cable spec.	Ø 5 mm, 5-wire (line driver output: 8-wire), shield cable cable type: 2 m, cable connector type: 250 mm		
Wire spec.	AWG24 (0.08 mm, 40-core), insulator diameter: Ø 1 mm		
Connector spec.	Totempole, NPN open collector, Voltage output: M17 6-pin socket type Line driver output: M17 9-pin socket type		

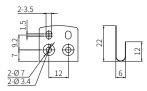
Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.
 Following items are based on cable type.
 Refer to 'Specifications' for detailed specifications of cable, wire and connector.





■ Bracket



Sold Separately

• Connector cable: CID6S-□, CID9S-□