

E80H Series Incremental Ø80mm Hollow Shaft Type

Diameter Ø80mm Hollow Shaft Type Incremental Rotary Encoder

■ Features

- Diameter Ø80mm, Inner diameter of shaft Ø30mm, Ø32mm
- No coupling needed with direct installation at motor or rotation shaft of machine
- Power supply: 5VDC, 12-24VDC ±5%
- Various output types

⚠ Please read "Caution for your safety" in operation manual before using.



■ Ordering Information

E80H	30	3200	3	N	24	
Series	Shaft diameter	Pulse/1 Revolution	Output phase	Control output	Power supply	Cable
Diameter Ø80mm, hollow shaft type	Ø30mm Ø32mm	60, 100, 360, 500, 512, 1024, 3200	3: A, B, Z 6: A, $\bar{A}$, B, $\bar{B}$, Z, $\bar{Z}$	T: Totem pole output N: NPN open collector output V: Voltage output L: Line driver output	5: 5VDC ±5% 24: 12-24VDC ±5%	No mark: Radial cable type C: Radial cable connector type

■ Specifications

Item		Diameter Ø80mm hollow shaft type of incremental rotary encoder		
Resolution (P/R) ^{※1}		60, 100, 360, 500, 512, 1024, 3200		
Electrical specification	Output phase		A, B, Z phase (line driver output A, $\bar{A}$, B, $\bar{B}$, Z, $\bar{Z}$ phase)	
	Phase difference of output		Output between A and B phase: $\frac{T}{4} \pm \frac{T}{8}$ (T=1 cycle of A phase)	
	Control output	Totem pole output	• [Low] - Load current: Max. 30mA, Residual voltage: Max. 0.4VDC • [High] - Load current: Max. 10mA, Output voltage (power voltage 5VDC): Min. (power voltage-2.0)VDC, Output voltage (power voltage 12-24VDC): Min. (power voltage-3.0)VDC	
		NPN open collector output	Load current: Max. 30mA, Residual voltage: Max. 0.4VDC	
		Voltage output	Load current: Max. 10mA, Residual voltage: Max. 0.4VDC	
		Line driver output	• [Low] - Load current: Max. 20mA, Residual voltage: Max. 0.5VDC • [High] - Load current: Max. -20mA, Output voltage (power voltage 5VDC): Min. (power voltage-2.5)VDC, Output voltage (power voltage 12-24VDC): Min. (power voltage-3.0)VDC	
	Response time (rise, fall)	Totem pole output	Max. 1μs (cable length: 2m, I sink = 20mA)	
		NPN open collector output		
		Voltage output		
		Line driver output	Max. 0.5μs (cable length: 2m, I sink = 20mA)	
	Max. Response frequency		200kHz	
	Power supply		• 5VDC ±5% (ripple P-P: Max. 5%) • 12-24VDC ±5% (ripple P-P: Max. 5%)	
	Current consumption		Max. 80mA (disconnection of the load), Line driver output: Max. 50mA (disconnection of the load)	
	Insulation resistance		Over 100MΩ (at 500VDC megger between all terminals and case)	
	Dielectric strength		750VAC 50/60Hz for 1 minute (between all terminals and case)	
	Connection		Radial cable type, Radial cable connector type	
Mechanical specification	Starting torque		Max. 200gf·cm (0.0196N·m)	
	Moment of inertia		Max. 800g·cm ² (8×10 ⁻⁵ kg·m ²)	
	Shaft loading		Radial: Max. 5kgf, Thrust: Max. 2.5kgf	
	Max. allowable revolution ^{※2}		3,600rpm	
Vibration		1.5mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours		
Shock		Approx. Max. 75G		
Environment	Ambient temperature		-10 to 70°C, storage: -25 to 85°C	
	Ambient humidity		35 to 85%RH, storage: 35 to 90%RH	
Protection structure		IP50 (IEC standard)		
Cable		Ø5mm, 5-wire (line driver output: 8-wire), 2m, Shield cable (AWG24, core diameter: 0.08mm, number of cores: 40, insulator out diameter: Ø1mm)		
Accessory		Spring bracket		
Approval		CE (except for line driver output)		
Unit weight		Approx. 560g		

※1: Not indicated resolutions are customizable.

※2: Make sure that. Max response revolution should be lower than or equal to max. allowable revolution when selecting the resolution.

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

※Environment resistance is rated at no freezing or condensation.

(A) Photoelectric Sensors

(B) Fiber Optic Sensors

(C) Door/Area Sensors

(D) Proximity Sensors

(E) Pressure Sensors

(F) Rotary Encoders

(G) Connectors/ Connector Cables/ Sensor Distribution Boxes/ Sockets

(H) Temperature Controllers

(I) SSRs / Power Controllers

(J) Counters

(K) Timers

(L) Panel Meters

(M) Tacho / Speed / Pulse Meters

(N) Display Units

(O) Sensor Controllers

(P) Switching Mode Power Supplies

(Q) Stepper Motors & Drivers & Controllers

(R) Graphic/ Logic Panels

(S) Field Network Devices

(T) Software