Diameter Ø100mm Hollow Shaft Type Incremental Rotary Encoder

■ Features

- Great environmental resistance
- High stability of output
- Exclusive for Elevator

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



■ Ordering Information

E100H — **35** — **10000** — **6** — **L** — **5**

Series	Shaft diameter	Pulse/1Revolution	Output phase	Control output	Power supply
Diameter Ø100mm hollow shaft type	Ø35mm	512, 1024, 10000	3: A, B, Z 6: A, $\overline{A}$, B, $\overline{B}$, Z, $\overline{Z}$	T: Totem pole output N: NPN open collector output V: Voltage output L: Line driver output (※)	5: 5VDC ±5% 24: 12-24VDC ±5%

■ Specifications

Item			Diameter Ø100mm hollow shaft type of incremental rotary encoder
Resolution (P/R)※1			512, 1024, 10000
Electrical specification	Output phase		A, B, Z phase (Line driver output A, $\overline{A}$, B, $\overline{B}$, Z, $\overline{Z}$ phase)
	Phase difference of output		Phase difference between A and B: $\frac{T}{4}\pm\frac{T}{8}$ (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. 2.5VDC, 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		300kHz
	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		Min. 100MΩ (at 500VDC megger between all terminals and case)
	Dielectric strength		750VAC 50/60Hz for 1 minute (Between all terminals and case)
	Connection		Connector type
Mechanical specification	Starting torque		Max. 300gf·cm (0.03N·m)
	Moment of inertia		Max. 800g·cm² (8×10^{-5} kg·m²)
	Shaft loading		Radial: 5kgf, Thrust: 2.5kgf
	Max. allowable revolution※2		3600rpm
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℃, storage: -25 to 85℃
		Ambient humidity	35 to 85%RH, storage: 35 to 90%RH
Protection structure			IP50 (IEC standard)
Cable			Ø5mm, 5-wire, Length: 2m, Shield cable (Line driver output: Ø6mm, 8-wire) (AWG24, Core diameter: 0.08mm, Number of cores: 40, Insulator out diameter: Ø1mm)
Accessory			Bracket 2EA
Approval			CE (Except for line driver output)
Weight※3			Approx. 1400g (approx. 1130g)

※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.

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

※3: The weight includes packaging. The weight in parentheses is for unit only. ※Environment resistance is rated at no freezing or condensation.