

Side-Mounting Shaft Type Incremental Rotary Encoder

■ Features

- Strong die cast structure against external impact
- Convenient structure for direct mounting on the frame
- Connector type
- Power supply: 5VDC, 12-24VDC $\pm 5\%$

⚠ Please read "Safety Considerations" in the instruction manual before using.



■ Ordering Information

ENA	5000	3	N	24
Series	Pulses/revolution	Output phase	Control output	Power supply
Side-mounting shaft type (external diameter of shaft: $\varnothing 10\text{mm}$)	Refer to resolution	2: A, B 3: A, B, Z	T: Totem pole output N: NPN open collector output V: Voltage output	5 : 5VDC $\pm 5\%$ 24: 12-24VDC $\pm 5\%$

■ Specifications

Item		Side-mounting Shaft Type Incremental Rotary Encoder	
Resolution (PPR) ^{※1}		*1, *2, *5, 10, 12, 15, 20, 23, 25, 30, 35, 40, 45, 50, 60, 75, 100, 120, 150, 192, 200, 240, 250, 256, 300, 360, 400, 500, 512, 600, 800, 1000, 1024, 1200, 1500, 1800, 2000, 2048, 2500, 3000, 3600, 5000	
Electrical specification	Output phase		•ENA-□-2-□-□: A, B phase

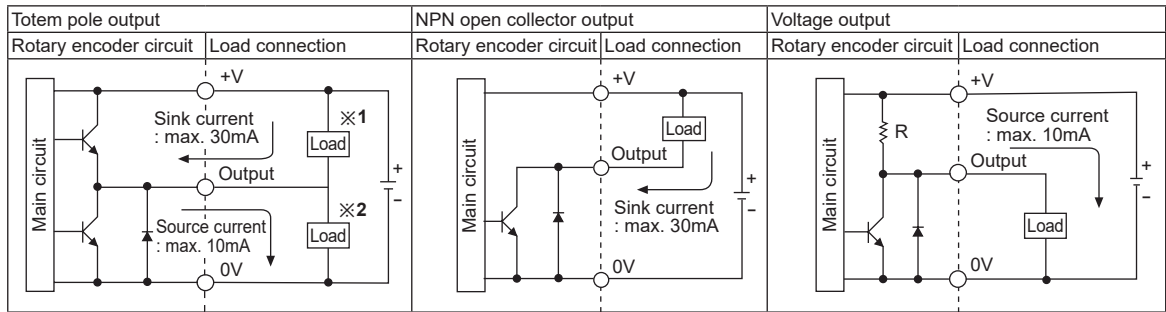
※1: '*' pulse is only for A, B phase. Not indicated resolutions are customizable.

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

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

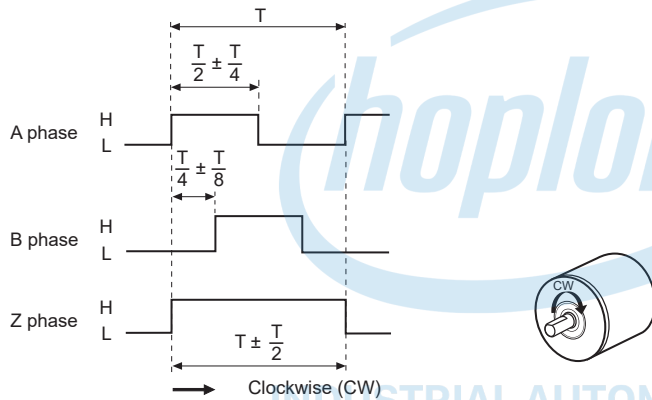
※Environment resistance is rated at no freezing or condensation.

Control Output Diagram



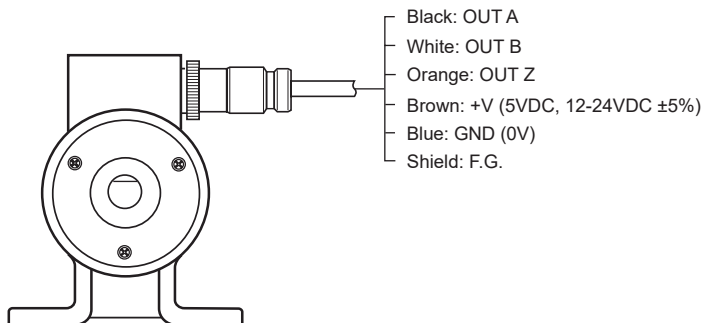
- The output circuits of A, B, Z phase are same.
- Totem pole output type can be used for NPN open collector type (※1) or voltage output type (※2).

Output Waveform



※In case of ENA-□-3-□-□ model, Z phase is output.

Connections



	Pin No	Cable color	Function
	①	Black	OUT A
	②	White	OUT B
	③	Brown	+V
	④	Blue	GND
	①	Black	OUT A
	②	White	OUT B
	③	Orange	OUT Z
	④	Brown	+V
	⑤	Blue	GND

- ※In case of ENA-□-3-□-□ model, Z phase is output.
- ※Unused wires must be insulated.
- ※The metal case and shield cable of encoder must be grounded (F.G.).
- ※Do not apply tensile strength over 30N to the cable.

SENSORS

CONTROLLERS

MOTION DEVICES

SOFTWARE

(A) Photoelectric Sensors

(B) Fiber Optic Sensors

(C) LIDAR

(D) Door/Area Sensors

(E) Vision Sensors

(F) Proximity Sensors

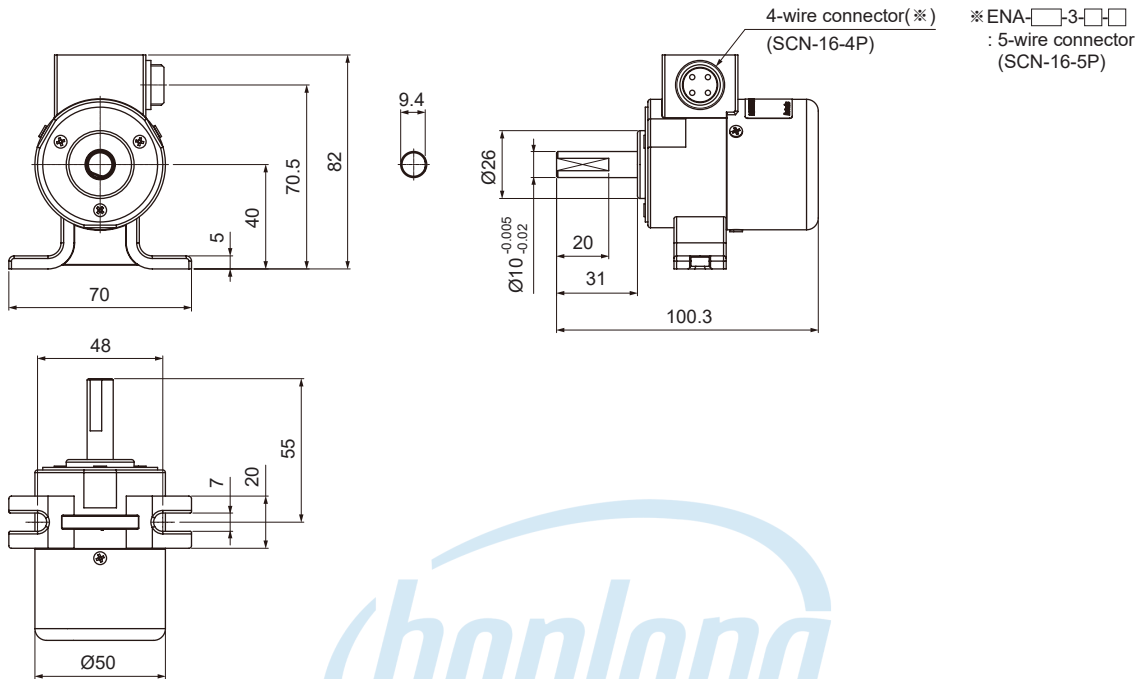
(G) Pressure Sensors

(H) Rotary Encoders

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

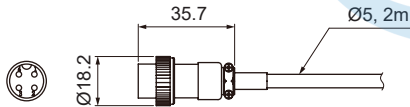
■ Dimensions

(unit: mm)

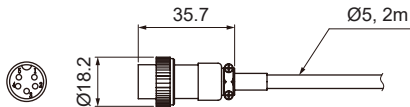


◎ Connector cable

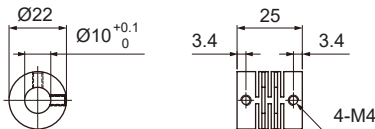
- ENA-□-2-□ (2m, 4-wire)



- ENA-□-3-□ (2m, 5-wire)



◎ Coupling



- Parallel misalignment: max. 0.25mm
- Angular misalignment: max. 5°
- End-play: max. 0.5mm

- ※ Do not load overweight on the shaft.
- ※ Do not put strong impact when insert a coupling into shaft. Failure to follow this instruction may result in product damage.
- ※ Fix the unit or a coupling by a wrench under 0.15N·m of torque.
- ※ When you install this unit, if eccentricity and deflection angle are larger, it may shorten the life cycle of this unit.
- ※ For parallel misalignment, angular misalignment, end-play terms, refer to the "Glossary" section of Technical Description.
- ※ For flexible coupling (ERB series) information, refer to the ERB series section.