Handle type INCREMENTAL Rotary encoder

▣Features

- ●Suitable for manual pulse input type such as NC or Milling machinery
- ●Terminal connection type
- ●Power supply : 5VDC ±5%, 12-24VDC ±5%

▣Application

- ●Industrial tooling machinery

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

▣Ordering information

ENH	—	100	—	1	—	1	—	24

Series	Pulse/1Revolution	Click stopper position	Output	Power supply
Handle type	25 100	1 : Normal "H" 2 : Normal "L"	1 : Totem pole output 3 : Voltage output L : Line driver output(※)	5 : 5VDC ±5% 24 : 12-24VDC ±5%

※The power of Line driver is only for 5VDC

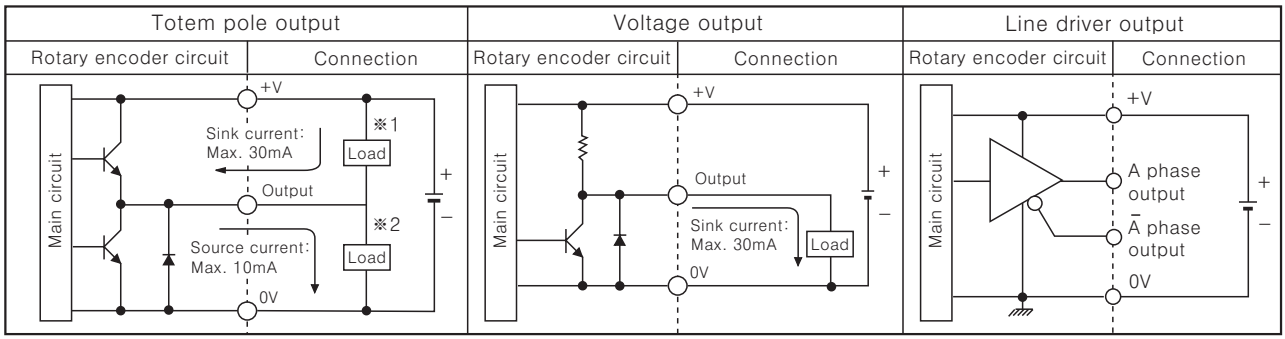
▣Specifications

Item			Handle type Incremental Rotary Encoder	
Resolution(P/R)			25P/R, 100P/R (Not indicated type is available to customize)	
Electrical specification	Output phase		A, B phase (Line driver output A, $\overline{A}$, B, $\overline{B}$ phase)	
	Phase difference of output		Output between A and B phase : $\frac{T}{4} \pm \frac{T}{8}$ (T=1cycle 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 : Min. (Power supply-1.5)VDC	
		Voltage output	Load current : Max. 30mA, Residual voltage : Max. 0.4VDC	
		Line driver output	Low ☞ Load current : Max. 20mA, Residual : Max. 0.5V High ☞ Load current : Max. -20mA, Output voltage : Min. 2.5V	
	Response time (Rise/Fall)	Totem pole output	Max. 1㎲	• Measuring condition ☞ Cable length : 1m, I sink = Max. 20mA
		Voltage output	Max. 1㎲	
		Line driver output	Max. 0.2㎲	
	Power supply	Totem pole output	• 5VDC ±5%(Ripple P-P : Max. 5%) • 12-24VDC ±5%(Ripple P-P : Max. 5%)	
		Voltage output		
		Line driver output	5VDC ±5%(Ripple P-P : Max. 5%)	
	Current consumption		Max. 40mA(disconnection of the load), Line driver output:Max. 50mA(disconnection of the load)	
	Max. Response frequency		10kHz	
	Insulation resistance		Min. 100MΩ(at 500VDC)	
	Dielectric strength		750VAC 50/60Hz for 1 minute(Between all terminals and case)	
	Connection		Terminal block type	
Mechanical specification	Starting torque		Max. 1kgf · cm(0.098N · m)	
	Shaft loading		Radial : 2kgf, Thrust : 1kgf	
	Max. allowable revolution		**(★Note1)** 600rpm	
Vibration			1.5mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 2 hours	
Shock			Max. 50G	
Ambient temperature			-10 ~ 70℃(at non-freezing status), Storage:-25 ~ 85℃	
Ambient humidity			35~85%RH, Storage: 35~90%RH	
Weight			Approx. 300g	

※**(★Note1)** Max. allowable revolution ≧ Max. response revolution 【Max. response revolution(rpm) = $\frac{\text{Max. response frequency}}{\text{Resolution}} \times 60$ sec】

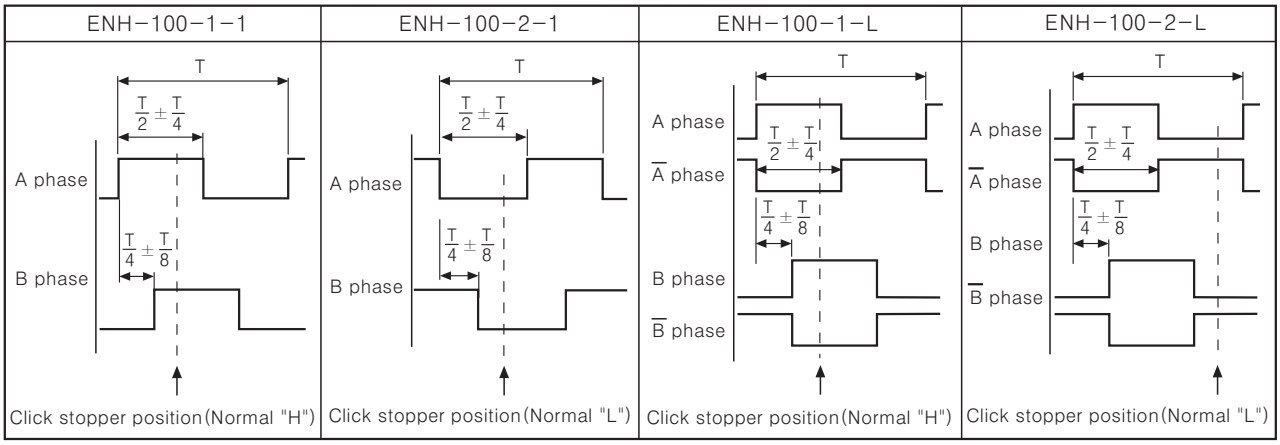
Please select the resolution to make lower max. revolution than max. allowable revolution.

▣Control output diagram



☞ The output circuit of A, B phase(Line driver output is A, Ā, B, B̄ phase) are the same.
☞ Totem pole output can be used for NPN opne collector type(※1) or voltage output type(※2).

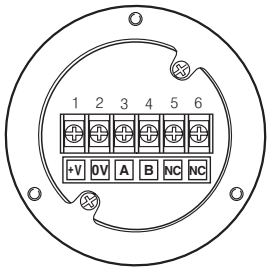
▣Output waveform



※Click stopper position Normal " H " or Normal " L " : It shows the wave from when the handles is not stopped.

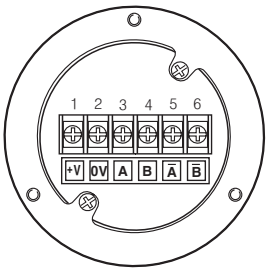
▣Connections

●Totem pole output / Voltage output

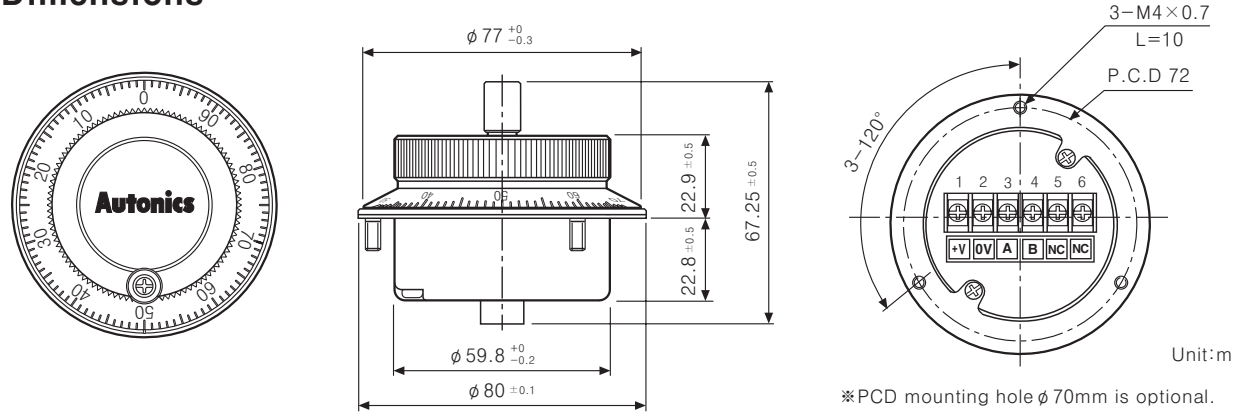


※Do not use terminals 5 and 6.

●Line driver output



▣Dimensions



Unit:mm

※PCD mounting hole ø70mm is optional.