

# E80H

## ∅ 80mm/hollow type encoder(INCREMENTAL TYPE)

### ■ Feature

- ∅ 80mm/miniature type encoder
- It can be stalled at moter's shaft or revolving shaft of machining.
- Wide power voltage 5 to 24VDC ±5%. (5VDC ±5% at line driver type)



### ■ Ordering information

<b>E80H</b>	<b>30</b>	<b>100</b>	<b>3</b>	<b>1</b>	
Series	Hold diameter	Pulses/Revolution	Output phase	Output method	Power supply
Hollow type Encoder (INCREMENTAL TYPE)	∅ 30 ∅ 32	60, 100, 360, 512, 1024	3:A, B, ZPhase 6:A, B, Z, $\bar{A}$ , $\bar{B}$ , $\bar{Z}$	1:Totem Pole output 2:NPN open collector output 3:Voltage output 4:Compre mantal output L:Line Driver output	1, 2: 5 to 24VDC ±5% 3, 4:5VDC, 12VDC, 24VDC ±5% L:5VDC ±5%

### ■ Specification

Item		∅ 80mm/Hollow type encoder(INCREMENTAL TYPE)
Model	Totem Pole output	<b>E80H</b> □-□- <b>3-1</b>
	NPN open collector output	<b>E80H</b> □-□- <b>3-2</b>
	Line Driver output	<b>E80H</b> □-□- <b>6-L</b>
	Voltage output	<b>E80H</b> □-□- <b>3-3</b>
	Compre mantal output	<b>E80H</b> □-□- <b>3-4</b>
Pulses/Revolution		60, 100, 360, 512, 1024
Output phase		A Phase, B Phase, Z Phase(Line Driver : A, B, Z, $\bar{A}$ , $\bar{B}$ , $\bar{Z}$ )
Output of phase difference		Output between A and B phasw: $\frac{T}{4} \pm \frac{T}{8}$ (T=1 cycle of A phase) ★(Note1)
Electrical specification	Control output	Totem Pole output LOW⇒Load current:Max.30mA, Residual voltage:Max.0.4V HIGH⇒Load current:Max.10mA, Output voltage:Min.(Power supply-1.5)V
		NPN open collector output Load voltage:Max. 30V, Load current:Max. 30mA, Residual voltage:Max. 0.4V
		Line driver output LOW⇒Load current:Max.20mA, Residual voltage:Max.0.5V, HIGH⇒Load current:Max. -20mA, Output voltage:Min. 2.5V
	Rise & Fall	Totem pole output Max. 1μs (Cable:2m, at Isink = 10mA)
		NPN open collector output Max. 1μs (Cable:2m, at Isink = 30mA)
		Line driver output Max. 0.1μs (Cable:2m, at Isink = 30mA)
	Max.Response frequency	
Power supply		5 to 24VDC ±5%(Ripple P-P:Max. 3%), Line Driver output :DC5V ±5%(Ripple P-P:Max. 3%)
Current consumption		Max. 60mA(disconnection of the load), Line Driver output Max. 85mA
Connection		Cable connection
Mechanical specification	Starting torque Max. 200gf · cm(19600μ · m)	
	Moment of inertia Max. 800g · cm <sup>2</sup> (8×10 <sup>-5</sup> Kg · m <sup>2</sup> )	
	Shaft loading Radial:4Kg, Thrust:2Kg	
	Deviation of shaft position Radial:Max. 0.1mm, Thrust:Max. 0.2mm	
	Mechanical revolution(rpm) 3600rpm ★(Note2)	
Insulation resistance		Min. 50MΩ (at 500VDC)
Dielectric strength		500VAC 50/60Hz for 1 minute
Vibration		1.5mm amplitude at frequency of 10 to 55Hz in each of X,Y,Z directions for 2 hours
Shock		Max. 75G
Ambient temperature		-10 to 70℃ 쫘Line driver : 0 to 70℃ (non-freezing condition) 쫘, Storage: -25 to 85℃
Ambient humidity		35 to 85%RH, Storage:35 to 90%RH
Protection		IP50(IEC Specification)
Cable		5P, ∅ 5mm, Length:2m, Shield cable (Line dirver output: 8P)
Weight		About 600g
Accessory		Spring bracket

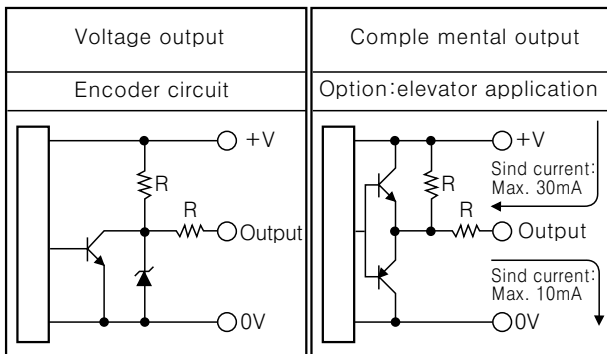
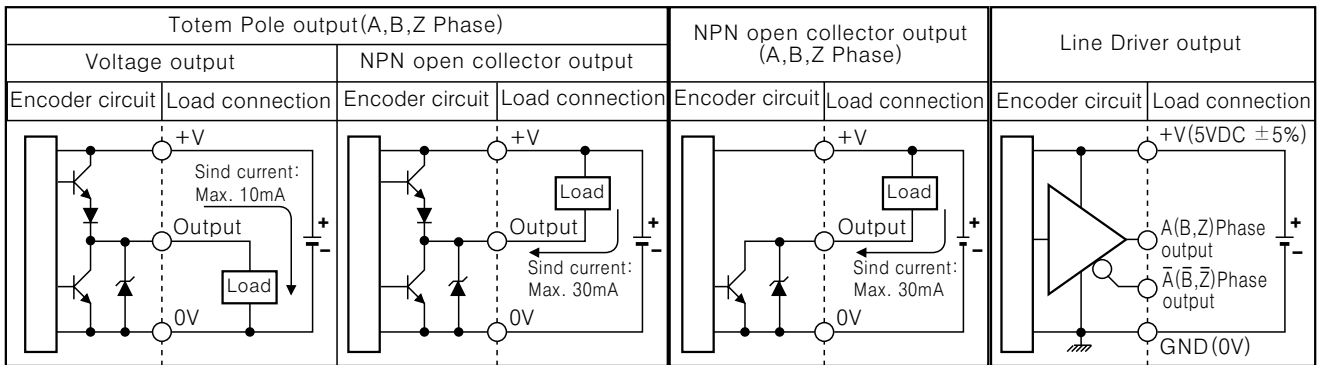
\*Option except above spec. & rate.

\*The weight of above chart is not weight.

★(note1) phase difference between A and B phase for 1 pulse Encoder is  $\frac{T}{4} \pm \frac{T}{8}$  (T=1 cycle of A phase)

★(note2) Max. response frequency(rpm)=  $\frac{\text{Max. rpm}}{\text{Revolution}} \times 60$  (but max. rpm ≤ max. allowable rotation) □

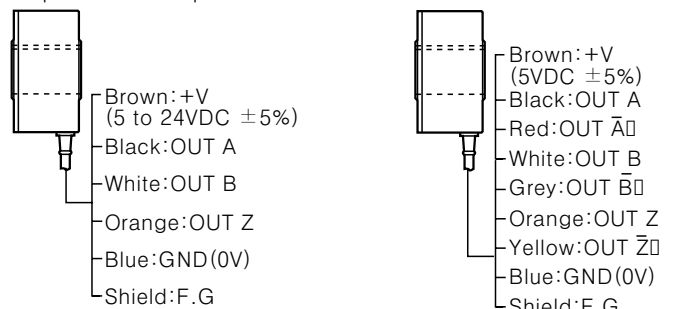
## Control output circuit



## Connection

● Totem Pole/open collector/Voltage/ Complemental output

● Line Driver output

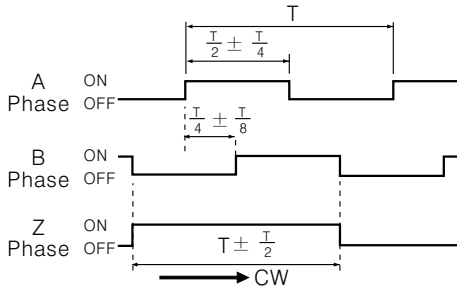


※ Non-using wires must be insulated.

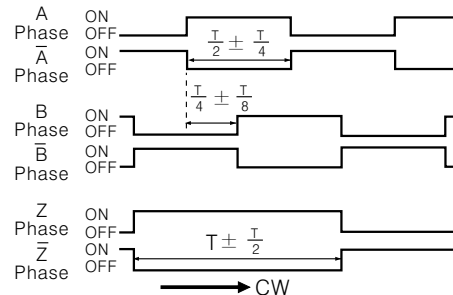
## Output waveform

● Totem Pole/open collector/Voltage/Complemental output

● Line driver output



※ ON/OFF means that of output transistor.  
 ※ The output waveform of NPN open collector is opposit of above waveform.



## Dimension

