

E100H

∅ 100mm/Hollow type encoder (INCREMENTAL TYPE)

■ Features



■ Ordering information

E100H	1024	4	2
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Series	Pulses/Revolution	Output phase	Output method	Power supply
∅ 100mm/ Hollow type encoder (INCREMENTAL TYPE)	0256, 1024	4:A, B, C, D Phase 6:A, B, Z, \bar{A} , \bar{B} , \bar{Z}	2:NPN open collector output 3:Voltage output L:Line Driver output	5VDC \pm 5%

■ Specification

Item		∅ 100mm/Hollow type encoder(INCREMENTAL TYPE)		
Model	NPN open collector output	E100H-0256-4-2, E100H-1024-4-2		
	Line driver output	E100H-1024-6-L (※)		
Pulses/Revolution		A,B = 256 P/R, 1024P/R C,D = 30P/R		
Electrical specification	Output phase	A Phase, B Phase, C Phase, DPhase	A Phase, B Phase, Z Phase, \bar{A} Phase, \bar{B} Phase, \bar{Z} Phase	
	Output of phase difference	Output between A and B: $\frac{T}{4} \pm \frac{T}{10}$ (T=1 cycle of A phase)		
		Output between C and D: $\frac{T_1}{4} \pm \frac{T_1}{10}$ (T1=1 cycle of C phase)		
	Control output	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	NPN open collector output	A, B:Max. 1 μ s (Cable:1m, at Isink = 30mA) C, D:Max. 5 μ s (Cable:1m, at Isink = 30mA)	
		Line driver output	Max. 1 μ s (Cable:1m, at Isink = 20mA)	
	Max.Response frequency	25KHz		
	Power supply	DC5V \pm 5%(Ripple P-P:Max. 3%)		
	Current consumption	NPN open collector output:Max. 70mA(disconnection of the load) Line driver output:Max. 100mA(disconnection of the load)		
Connection	Cable connection			
Mechanical specification	Starting torque	Max. 200gf · cm(19600 μ · m)		
	Moment of inertia	Max. 800g · cm ² (8 \times 10 ⁻⁶ Kg · m ²)		
	Shaft loading	Radial:4Kg, Thrust:2Kg		
	Deviation of shaft position	Radial:Max. 0.1mm, Thrust:Max. 0.2mm		
Mechanical revolution(rpm)	5000rpm ★(Note2)			
Insulation resistance	Min. 50M Ω (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. 30G			
Ambient temperature	-10 to 70 $^{\circ}$ C(non-freezing condition), Storage:-25 to 85 $^{\circ}$ C			
Ambient humidity	35 to 85%RH, Storage:35 to 90%RH			
Protection	IP50(IEC Specification)			
Cable	7P, ϕ 7mm, Length:5m or 10m, Shield cable			
Weight	About 1.2Kg			
Accessory	Spring bracket			
Approval	CE (except models of ※ mark)			

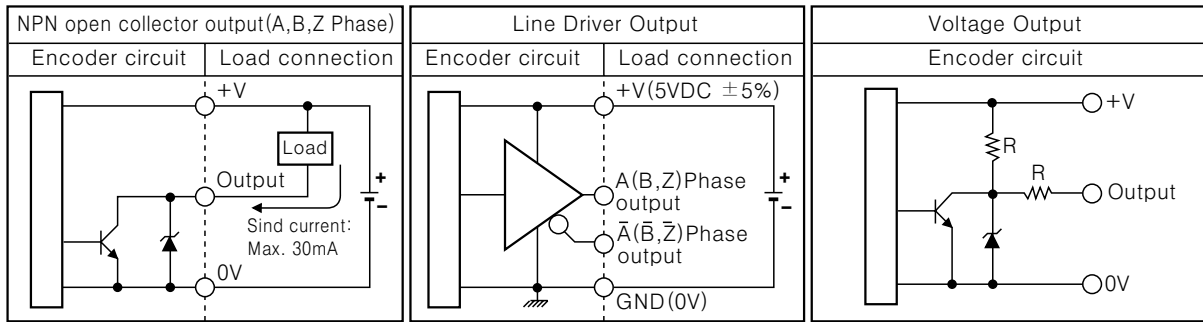
※ Option except above spec. & rate.

※ The weight of above chart is not weight.

★(note1) phase difference between A and B phase for 1 pulse Encoder is $\frac{T}{4} \pm \frac{T}{5}$ (T=1 cycle of A phase)

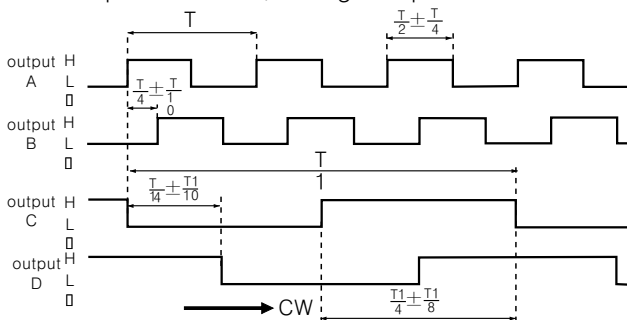
★(note2) Max. response frequency(rpm) = $\frac{\text{Max. rpm}}{\text{Revolution}} \times 60$ (but max. rpm \leq max. allowable rotation) □

Control output circuit



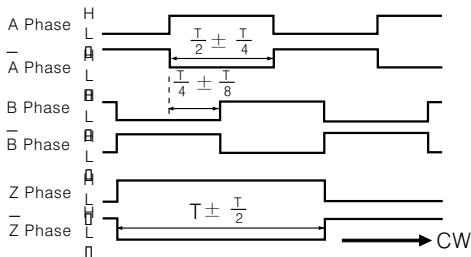
Output waveform

●NPN open collector / voltage output



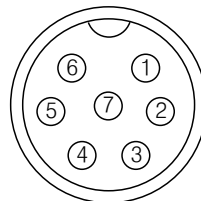
※ON/OFF means that of output transistor.
 ※The output waveform of NPN open collector is opposite of above waveform.

●Line Driver output



Connection

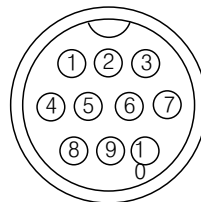
●NPN open collector output



SCN-16-7P

- ①Red:BP5A(VCC)
- ②Blue:BNC2(GND)
- ③White:A Phase
- ④Yellow:B Phase
- ⑤Orange:C Phase
- ⑥Green:D Phase
- ⑦Shield:F.G

●Line driver output

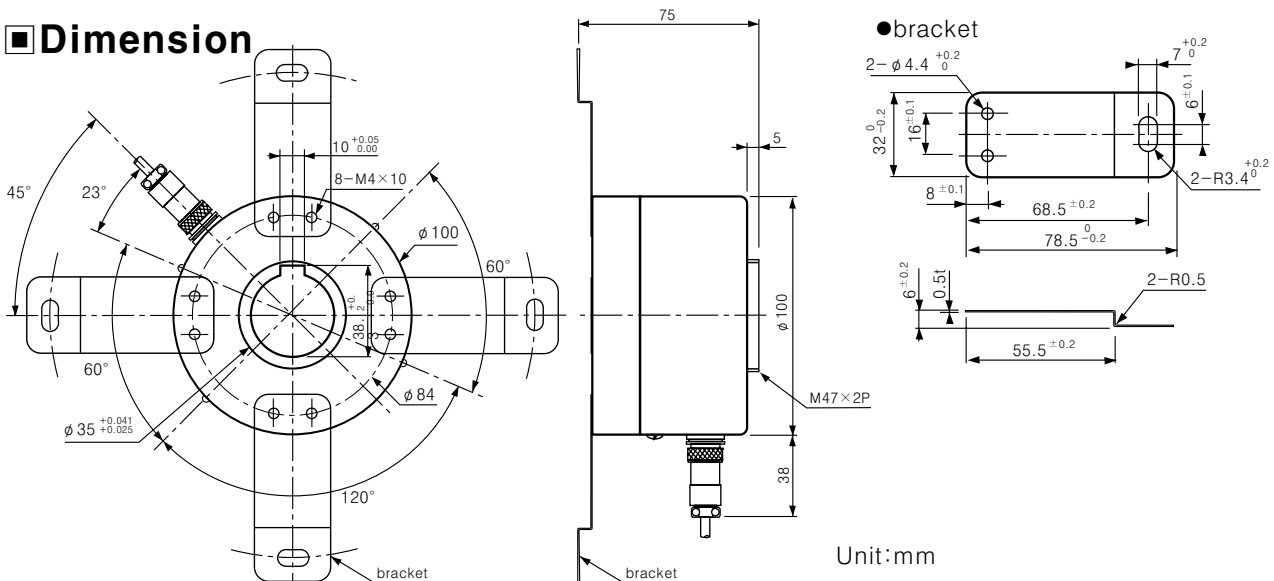


DC-20-10-RN

- ①Brown: +5V
- ②Blue:0V
- ③Black:OUT A
- ④Black/Red:OUT A
- ⑤Shield
- ⑥White:OUT B
- ⑦White/Red:OUT B
- ⑧Orange:OUT Z
- ⑨Orange/Red:OUT Z
- ⑩N.C

※Non-using wires must be insulated.

Dimension



Unit:mm