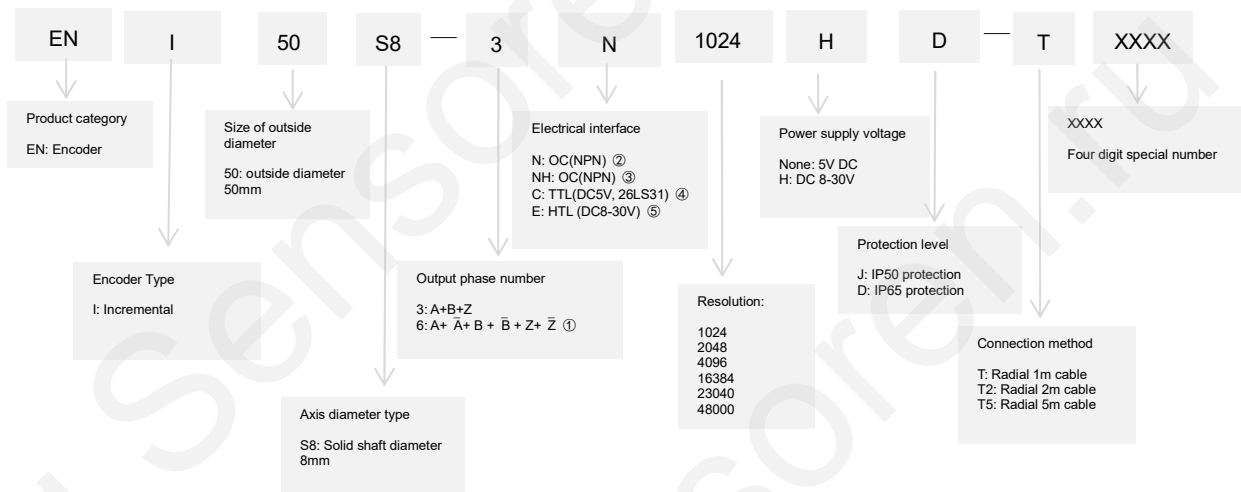


Incremental encoder **ENI50S** series

Feature

- ◆ Encoder diameter of 50mm, thickness of 30mm, shaft diameter of 8mm (D type);
- ◆ Adopting non-contact photoelectric principle;
- ◆ Polarity reverse protection;
- ◆ Short circuit protection;
- ◆ The resolution can reach up to 48000PPR.

Naming rules


① When the output phase number is 6: $A + \bar{A} + B + \bar{B} + Z + \bar{Z}$, the electrical interface can only choose C: TTL(DC5V, 26LS31) or E: HTL (DC8-30V).

② Z signal is low level active (The recommended resolution is less than 5000PPR).

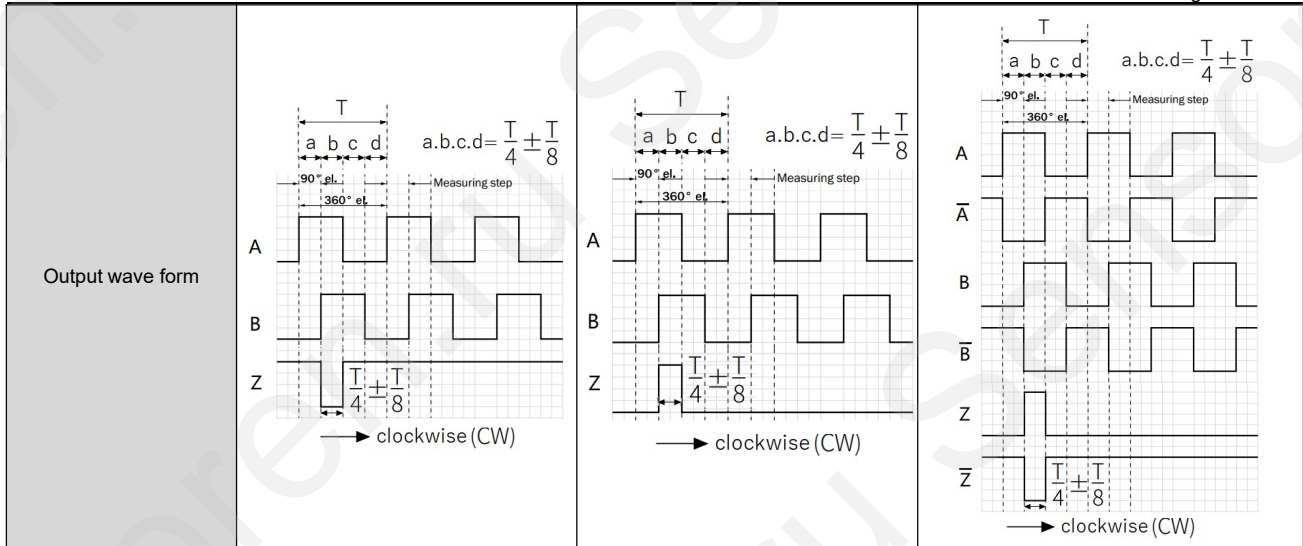
③ Z signal is high level active (The recommended resolution is less than 5000PPR).

④ If the electrical interface is TTL(DC5V, 26LS31), the corresponding power supply voltage type can only be 5V DC.

⑤ If the electrical interface is HTL(DC8-30V), the corresponding power supply voltage type can only be 8-30V DC.

Specification

Parameter		OC(N)	OC(NH)	TTL	HTL
Supply voltage		DC+5V±5%; DC8V-30V±5%		DC+5V±5%	DC8-30V±5%
Consumption current		100mA Max		120mA Max	
Allowable ripple		≤3%rms			
Top response frequency		100kHz		300kHz	500kHz
Output capacity	Output current	Input	≤30mA	≤±20mA	≤±50mA
		Output	—		
	Output voltage	“H”	—	≥2.5V	≥V _{CC} -3 VDC
		“L”	≤0.4V	≤0.5V	≤1V VDC
	Load voltage		≤DC30V		—
Rise & Fall time		Less than 2us (cable length: 2m)		≤100ns Less than 1us (cable length: 2m)	
Insulation strength		AC500V 60s			
Insulation resistance		10MΩ			
Mark to space ratio		45% to 55%			
Reverse polarity protection		√			
Short-circuit protection		—		√①	
Phase shift between A & B		90° ±10° (frequency in low speed)			
		90° ±20° (frequency in high speed)			
GND		Not connect to encoder			
Diameter of shaft		φ8mm (D type, stainless steel material)			
Starting torque		Less than 5×10 ⁻³ N·m			
Inertia moment		Less than 3×10 ⁻⁶ kgm ²			
Shaft load		Radial 40N; Axial 20N			
Slew speed		≤6000 rpm(IP50); ≤4000 rpm (IP65)			
Bearing Life		1.5X10 ⁹ revs at rated load (100000hrs at 2500RPM)			
Shell		Aluminium alloy			
Weight		about 190g			
Environmental temperature		Operating: -20~+90°C (repeatable winding cable: -10°C); Storage: -25~+95°C			
Environmental humidity		Operating and storage: 35~85%RH (non-condensing)			
Vibration (Endurance)		Amplitude 0.75mm, 5~55Hz, 2h for X, Y, Z direction individually			
Shock (Endurance)		490m/s ² 11ms three times for X, Y, Z direction individually			
Protection		IP50; IP65			
Output circuit					



① Short-circuit to another channel or GND permitted for max 30s.

Wiring table

OC(Wiring table for socket and cable connection)

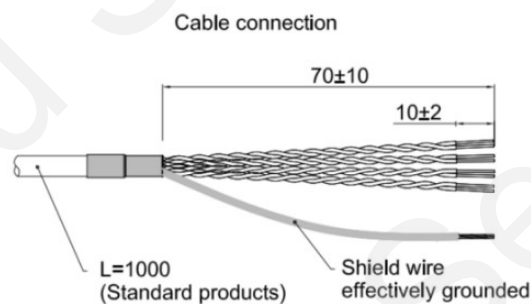
Wire color	Supply voltage		Incremental signal		
	Red	Black	White	Green	Yellow
Function	Up	0V	A	B	Z

TTL/HTL(Wiring table for socket and cable connection)

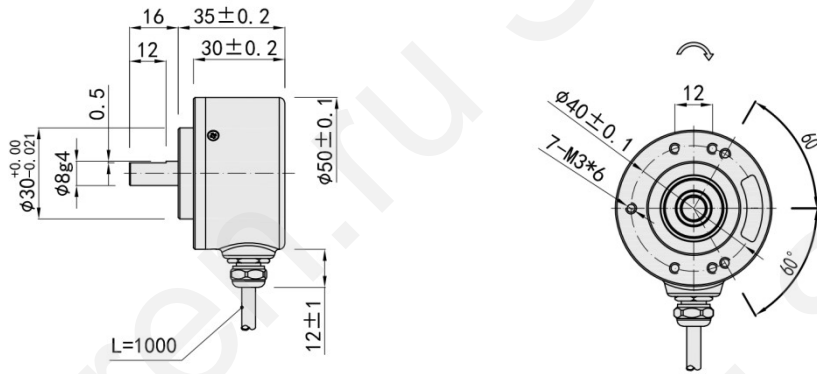
Wire color	Supply voltage		Incremental signal					
	Red	Black	White	White/ BK	Green	Green/ BK	Yellow	Yellow/ BK
Function	Up	0V	A+	A-	B+	B-	Z+	Z-
Twisted-paired cable								

Up=Supply voltage.

Shield wire is not connected to the internal circuit of encoder.



Dimensional drawing


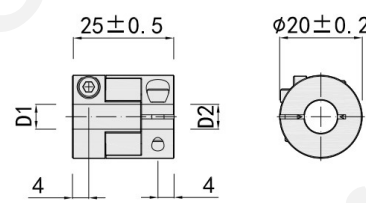

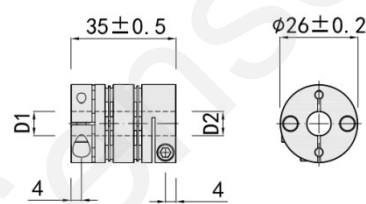
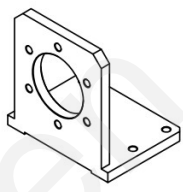
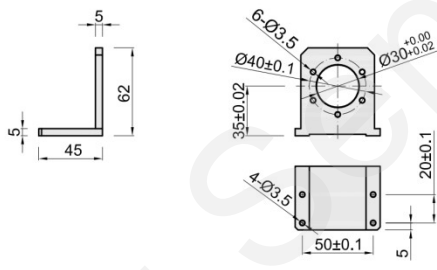


Unit: mm



↻ = Shaft rotation direction of incremental signal output

Accessories

Coupler	Dimensions	D1	D2	Model
Cross type: M series 	 <p>Main body material: aluminum alloy</p>	$\phi 6\text{mm}$	$\phi 8\text{mm}$	LB-M0608
		$\phi 8\text{mm}$	$\phi 8\text{mm}$	LB-M0808
		$\phi 8\text{mm}$	$\phi 10\text{mm}$	LB-M0810
Diaphragm type: W series 	 <p>Main body material: aluminum alloy</p>	$\phi 6\text{mm}$	$\phi 8\text{mm}$	LB-W0608
		$\phi 8\text{mm}$	$\phi 8\text{mm}$	LB-W0808
		$\phi 8\text{mm}$	$\phi 10\text{mm}$	LB-W0810
Mounting bracket	Dimensions			Model
	 <p>Material: aluminum alloy</p>			LB-L5030