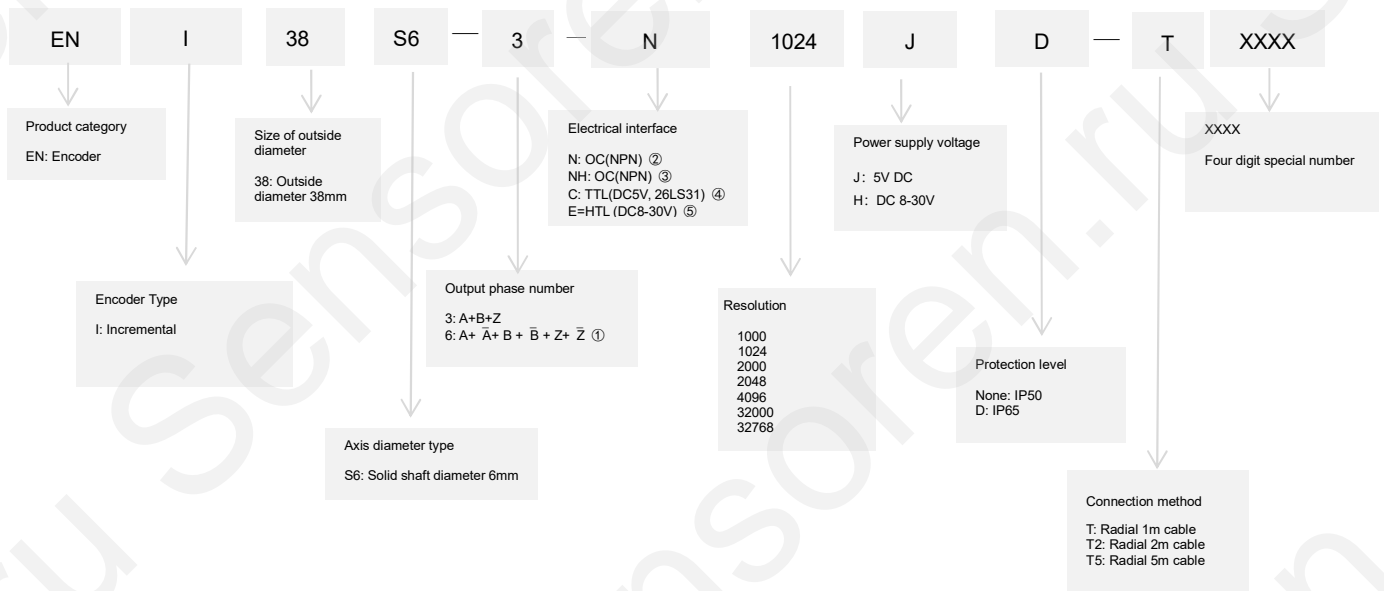


Incremental Optical Encoder **ENI38S** series

Feature

- ◆ Encoder diameter of 38mm, thickness of 28mm, standard shaft diameter of 6mm;
- ◆ Adopting non-contact photoelectric principle;
- ◆ Polarity reverse protection;
- ◆ Short circuit protection;
- ◆ Multiple electrical interfaces are available for selection;
- ◆ The maximum weekly resolution can reach 32768PPR.

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).

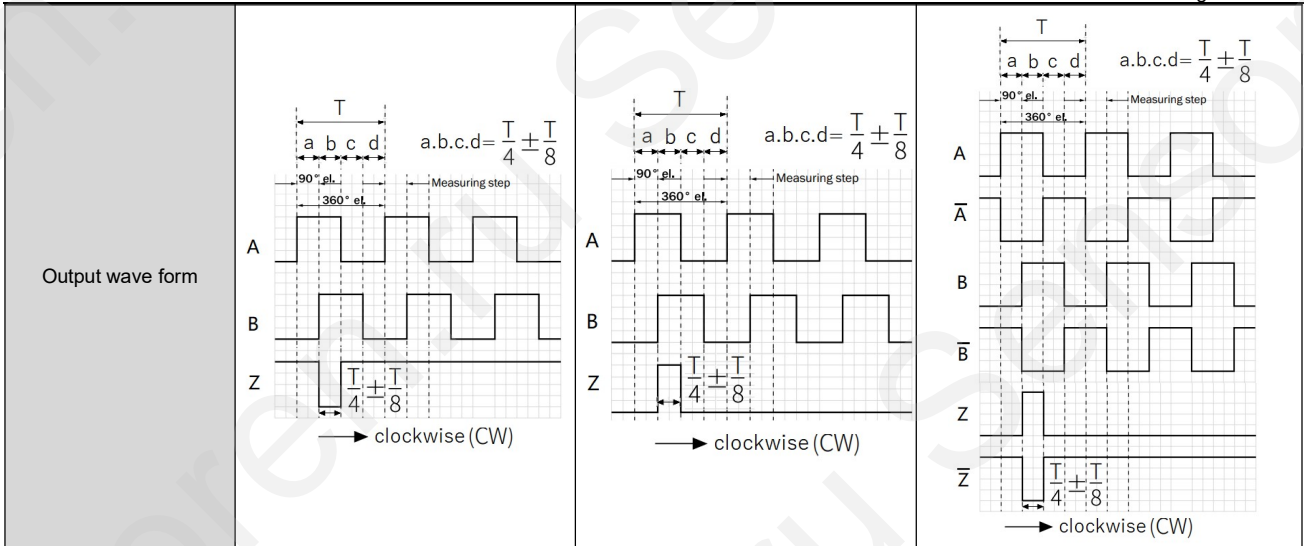
③ Z signal is high level active (The recommended resolution is less than 5000PPR).

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 parameters

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		100 kHz		300 kHz	500 kHz	
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		φ6mm; φ8mm (D type, stainless steel material)				
Starting torque		Less than 4.4×10 ⁻³ N·m				
Inertia moment		Less than 1.5×10 ⁻⁶ kg·m ²				
Shaft load		Radial 30N; 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 120g				
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 cable connection)

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

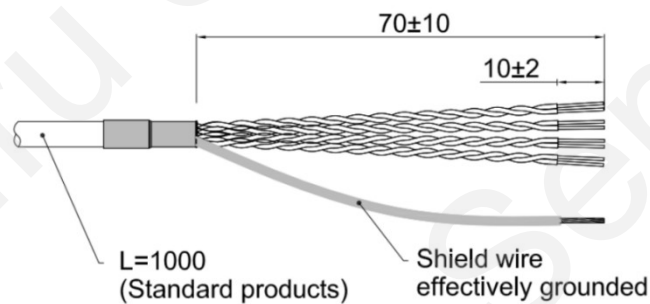
TTL/HTL(Wiring table for cable connection)

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

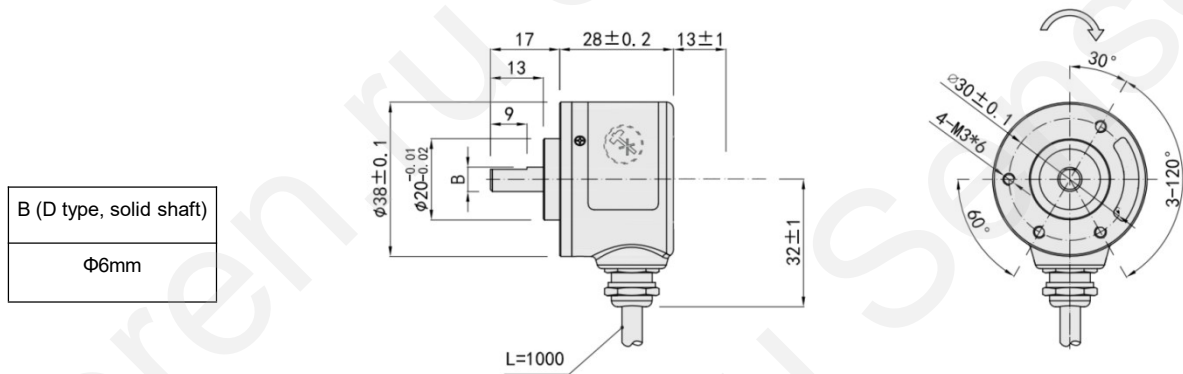
Up=Supply voltage.

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

Cable connection



Dimensional drawing

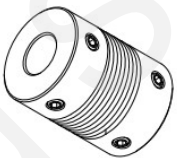
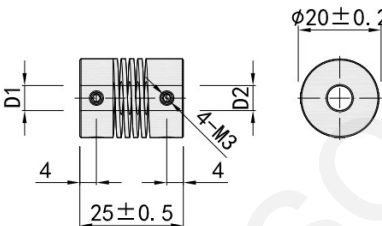
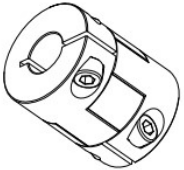
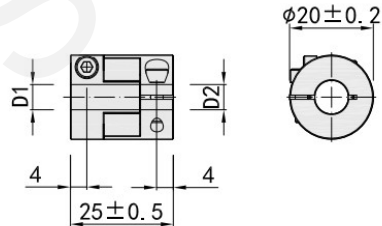


Unit: mm



↻ = Shaft rotation direction of the signal output

Accessories

Accessories	Dimensions	D1	D2	Model
Spring type H series coupling 	 Main body material: aluminum alloy	Φ6mm	Φ6mm	LB-H0606
		Φ6mm	Φ8mm	LB-H0608
Crossover type M series coupling 	 Main body material: aluminum alloy	Φ6mm	Φ6mm	LB-M0606
		Φ6mm	Φ8mm	LB-M0608