

ROTARY ENCODER INCREMENTAL SHAFT TYPE CB Series Manual

Thank you for purchasing this Line Seiki product. Read this instruction manual carefully before using to ensure correct usage of this product. Keep this instruction manual for future reference.



WARNING

Misuse of this device may lead to injury to the user or damage to the device.

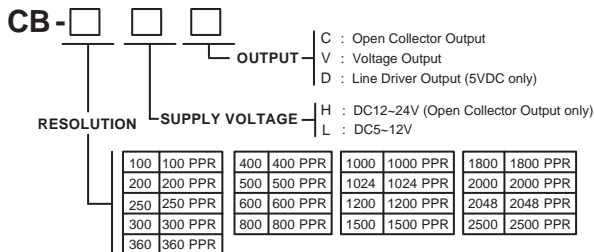
Customer Service



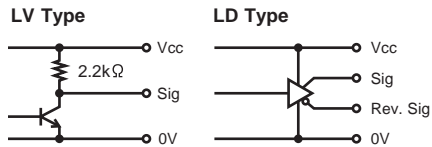
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Models



Circuit of Output Signal



• LC and HC Types are without Pull-up Resistor.

Specifications

	ELECTRICAL			
	Model	CB - □ HC	CB- □ LC	CB-□ LV
Power Supply (Ripple 3% max.)	DC12~24V±10%	DC5~12V±10%		DC5V±10%
Current Consumption	50 mA max.			
Output	Open Collector		Voltage	Line Driver
Output Signal	90° Quadrature + Zero Marking			
Output Phase	A,B,Z		A,B,Z,Ā,B̄,Z̄	
Output Capacity	Sink Current : 35 mA max. Residual Voltage : 0.5V max.	Sink Current : 20 mA max.	± 20 mA	
Max. Applied Voltage	30V max.			
Output Voltage	—		H : Supply Voltage -1V min. L : 0.5 V max.	H : 2.5 V min. L : 0.5 V max.
Max. Freq. Response	100 kHz			
Signal Rise/Fall Time (Pull-up resistor: 2.2kΩ, 1m Cable)	1 μs max.		0.1 μs max.	
Insulation Resistance	20M Ω min. (DC100V Megger)			
Output Impedance (Voltage Output only)	—		2.2k Ω	—
Cable Length	500 ⁺¹⁰ mm			
Outside Diameter	φ 5.1 mm			

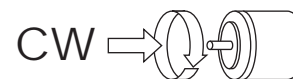
	MECHANICAL	
	Max. Speed of Shaft	6000 rpm
Moment of Inertia	6x10 ⁻⁷ kg·m ² max.	
Starting Torque	1.0x10 ⁻³ N·m max.	
Angular Acceleration	10 ⁵ rad/s ²	
Max. Shaft Loading	Radial	25N max.
	Axial	15N max.
Weight	Approx. 120g (with 0.5m Cable)	

	ENVIRONMENTAL	
	Operating Temperature	-10 ~ +70 °C (Non-Condensing, Non-Freezing)
Storage Temperature	-25 ~ +80 °C (Non-Condensing, Non-Freezing)	
Operating Humidity	35 ~ 95% (Non-Condensing)	
Vibration Resistance	10~55 Hz, Width (P-P) 1.5mm (2 hours each in X,Y,Z Direction)	
Shock Resistance	6 ms, 980 m/s ² (3 times each in X,Y,Z Direction)	
Protection	Equivalent to IP50	

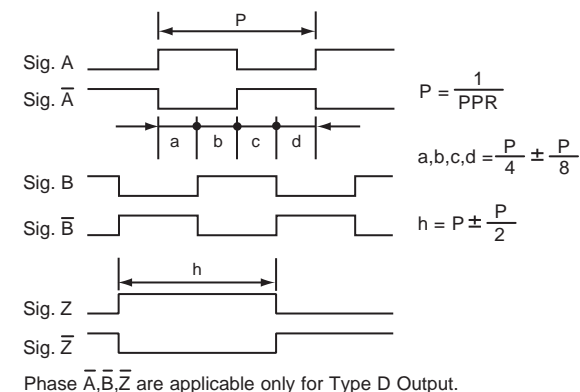
Connection

Signal	COLOR OF WIRE	
	D Type	C Type
Vcc	Brown	
0V	Blue	
A	Black	
Ā	Black/Red	—
B	White	
B̄	White/Red	—
Z	Orange	
Z̄	Orange/Red	—
Shield	—	

Waveform



These figures show the waveforms when the shaft is rotated Clockwise (CW) when viewing towards the encoder shaft. A pulse at Signal A should be completed within the period that Signal Z is at H-Level.



Dimensions

