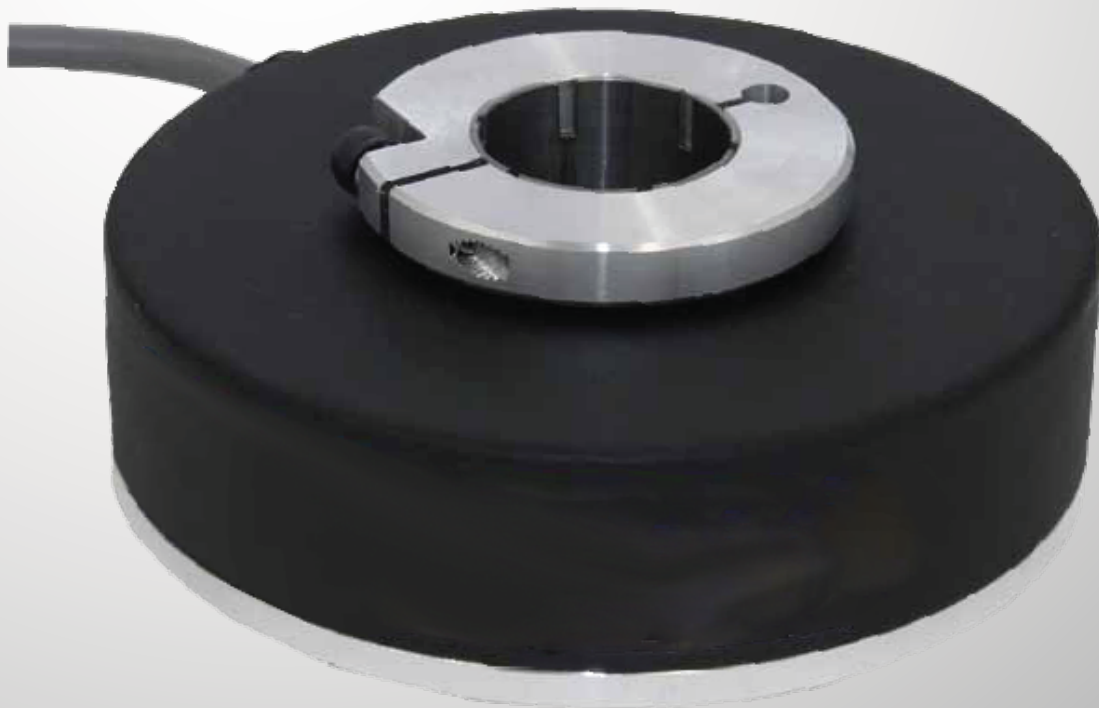


HOLLOW SHAFT ENCODER **ERA100B30** Series

Product selection guide

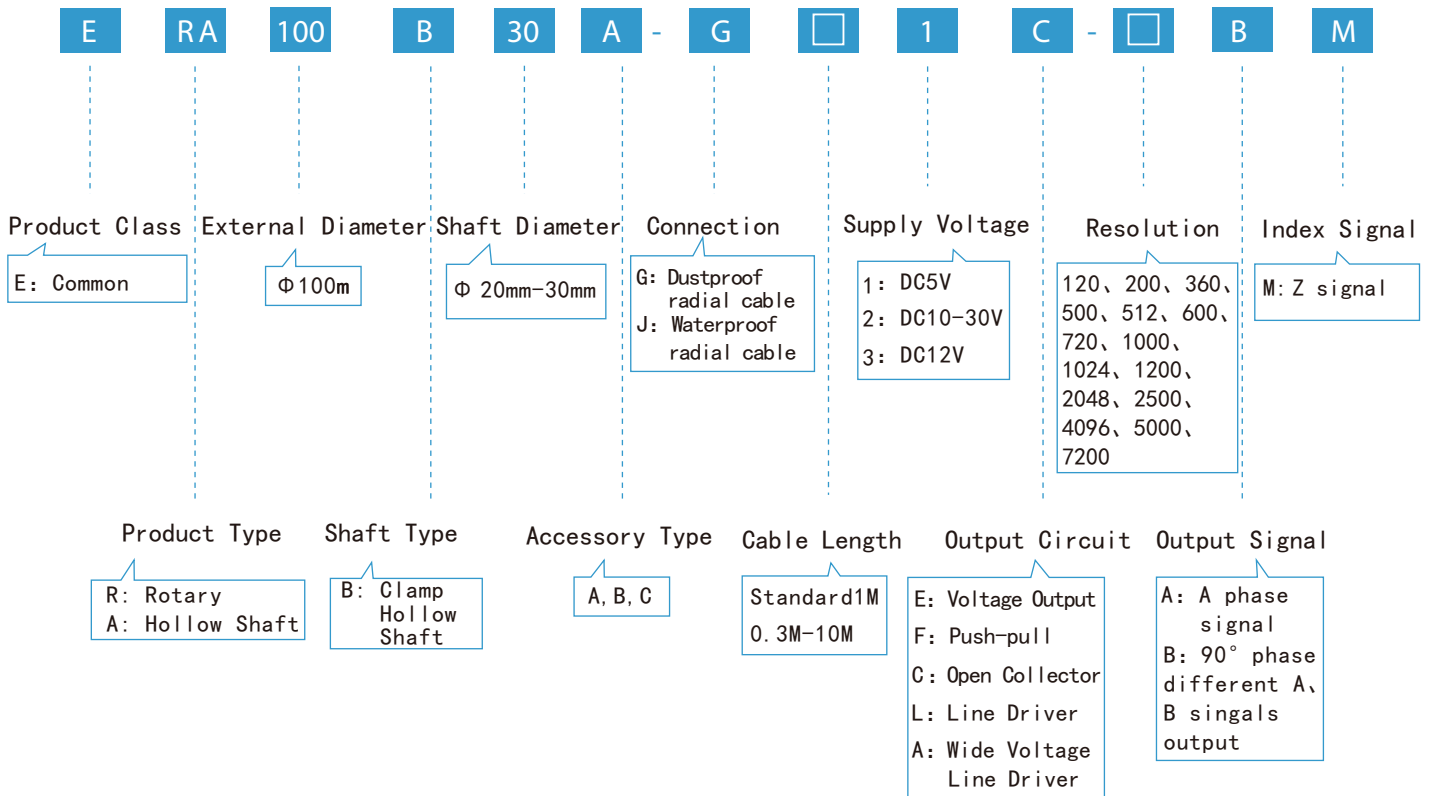


Applications & Features



ERA100B30 is ultra-thin design to save space. Multiple mounting brackets are available for easy installation. The product is widely used for automatic control, automatic measurement, remote control, computer technology as well as for measuring the angle and the vertical axis on CNC machine tools, especially for the use of the elevator industry. Imported optoelectronic devices with high reliability, long life, strong anti-interference ability, wide range of operating temperature.

Part Number



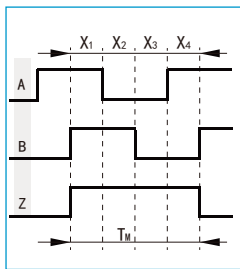
Electrical Specifications

Output Circuit	Supply Voltage DC (V)	Current Requirement (mA)	(Output Voltage V)		Rise Time (ns)	Fall Time (ns)	Frequency Response (kHz)
			V _H	V _L			
E (Voltage)	10-30	≤120	>VCC-2.5	≤0.7	≤500	≤100	0-300
	12						
F (Push-pull)	5±0.25	≤80	>3.5	≤0.7	≤500	≤100	0-300
	8-26	≤120	>VCC-2.5	≤0.7	≤500	≤100	0-300
	10-30						
	12						
C (Open Collector)	5±0.25	≤60	>VCC-2.5	≤0.7	≤500	≤100	0-300
	8-26						
	10-30						
	12						
L (Line Driver)	5±0.25	≤100	>3.5	≤0.7	≤200	≤200	0-300
A (Wide Voltage Line Driver)	8-26	≤60	>VCC-2.5	≤0.7	≤500	≤100	0-300
	10-30						
	12						

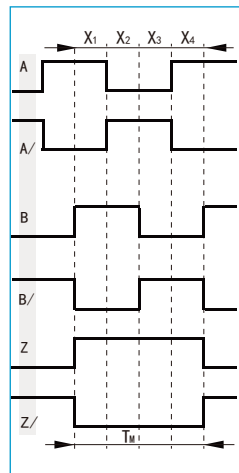
Output Circuit

E (Voltage)		F (Push-pull)		C (Open Collector)	L, A (Line Driver)
5V	10-30V	5V	10-30V		

Output Waveform



Waveform for C, E, F output



Waveform for L, A output

Wave Ratio : $X1+X2=0.5T \pm 0.1T$

$X2+X3=0.5T \pm 0.1T$

Phase Different : $Xn \geq 0.125T$ ($n=1, 2, 3, 4$)

Absolute Angle Error: $\leq 0.2T$

Cycle Error : $\leq 0.05T$

$T=360^\circ / N$ (N =lines count per revolution)

Width of Z signal

1、 $T_m=1T \pm 0.5T$

$T_m=nT \pm 0.1T$ ($n \geq 2$)

The phase relationship of Z signal and A, B signal is not stipulated.

2、 $T_m=0.5T \pm 0.25T$

$T_m=0.25T \pm 0.125T$

$T_m=0.25T \pm 0.125T$

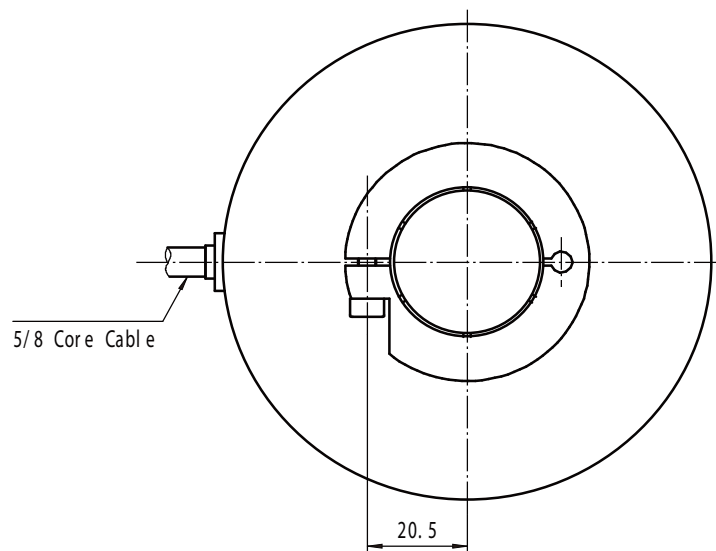
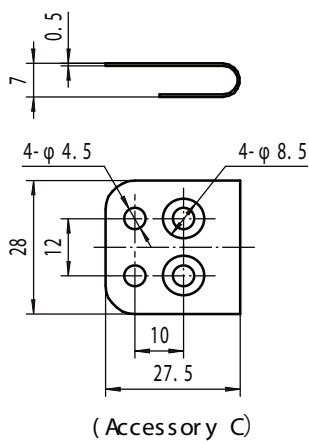
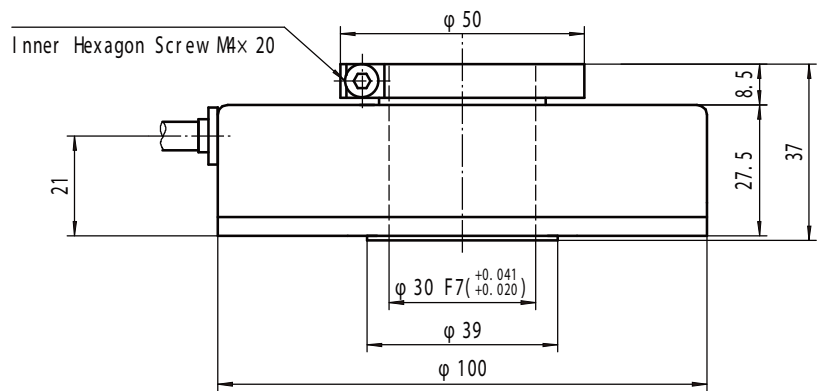
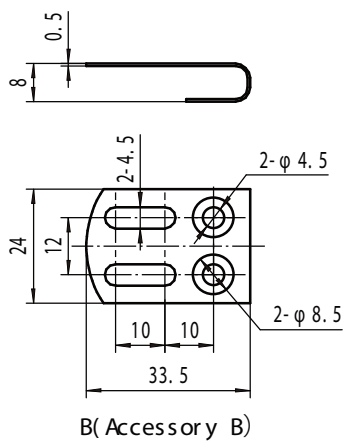
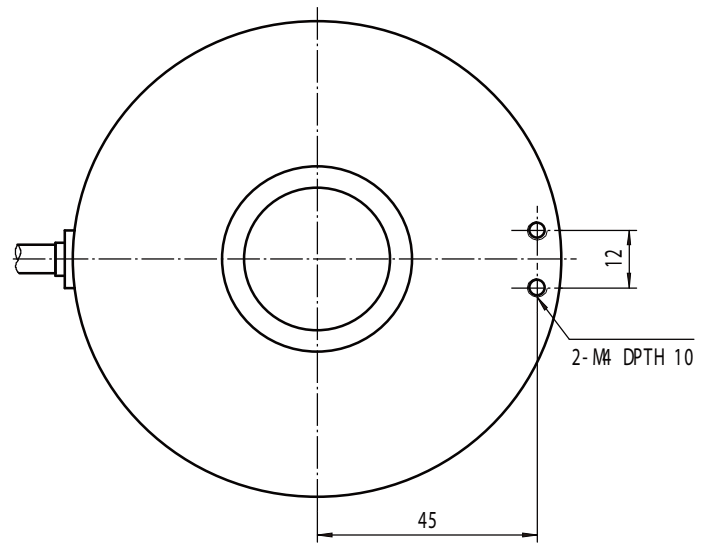
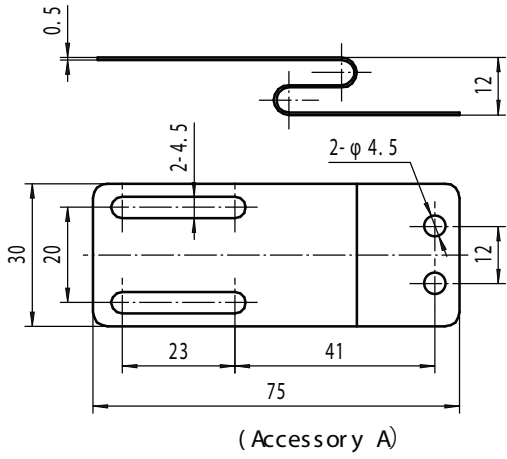
The picture shows the clockwise (CW) waveform from the shaft side.

Mechanical Specifications

Max Speed (r/min)	Starting Torque (N. M)	Max Load (N)		Rotary Inertia (kgm ²)	Weight (kg)
		Radial	Axial		
4000	$5 \cdot 10^{-2}$	40	20	$1 \cdot 10^{-5}$	≈ 0.585

Environmental Specifications

Operating Temperature (°C)	-20~+85
Storage Temperature (°C)	-30~+95
Relative Humidity	35~85%RH no condensation
Impact Resistance (m/s ²)	40(Three times each on x, y, z directions, each time lasts 6ms)
Vibration Resistance (m/s ²)	20 (10 ~200Hz, 2h on x, y, z directions)
Protection Class	Common IP52



Cable Color	Red	Black	Green	Brown	White	Gray	Yellow	Orange	Shield
E (Voltage)	Vcc	0V	A		B		Z		G
F (Push Pull)	Vcc	0V	A		B		Z		G
C (Open Collector)	Vcc	0V	A		B		Z		G
L, A (Line Driver)	Vcc	0V	A	A/	B	B/	Z	Z/	G

