

Easydic Series Shaft Incremental Encoder EB50A



Application

Small shaft encoder EB50 series are widely used in light industries. The compact structure could afford higher axial and radial load. The standard flange integrates clamp and synchro flanges. Various output types are available for customers, and adaptable with receivers or counters.

Characteristics

- Integrative synchro flange and clamp flange
- Stainless steel shaft $\Phi 8$ with axis shoulder promotes axial load
- Two sets of optional mounting screws
- Metal housing
- Protection class IP54
- Cable output, waterproof end rubber
- Reverse connection protection Short circuit protection

Mechanical Characteristics

Shaft diameter (mm)	$\Phi 6/\Phi 8$ g6
Protection acc.to EN 60 529	IP54
Speed	6000rpm, continuous
Max load capacity of the shaft	30N axial, 60N radial
Shock resistance	50G/11ms
Vibration resistance	10G 10~2000HZ
Bearing life	10^9 revolution
Moment of inertia	approx. 1.8×10^{-6} kgm ²
Starting torque	<0.01Nm
Body material	AL-alloy UNI9002-5
Housing material	AL-alloy UNI9002-5
Operating temperature	-20~+80 °C
Storage temperature	-35~+85 °C
Weight	155g

Resolution: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 360, 400, 500, 512, 600, 800, 1000, 1024, 1200, 1440, 1500, 2000, 2500

Electrical Characteristics

Output circuit	Push-Pull	RS422	RS422	NPN	NPN OC
Resolution	Max.2500ppr	Max.2500ppr	Max.2500ppr	Max.2500ppr	Max.2500ppr
Supply voltage (VDC)	10-30V/5-30V	5V	10-30V	5-30V	5-30V
Power consumption (no load)	≤125mA	≤80mA	≤80mA	≤80mA	≤80mA
Permissible load (channel)	±80mA	±50mA	±50mA	±50mA	±50mA
Pulse frequency	Max.300 kHz	Max.300 kHz	Max.300 kHz	Max.300 kHz	Max.300 kHz
Signal level high	Min.Ub-1.5V	Min.3.4V	Min.3.4V	Min.Ub-2.5V	Min.Ub*70% ^{*)}
Signal level low	Max.0.8V	Max.0.4V	Max.0.4V	Max.0.4V	Max.0.4V ^{*)}
Rise time Tr	Max 1μs	Max 200ns	Max 200ns	Max 1μs	Max 1μs ^{**)}
Fall time Tf	Max 1μs	Max 200ns	Max 200ns	Max 1μs	Max 1μs ^{**)}

*)NPN OC depends on pull-up resistor, 4.7kΩ for recommended resistance

**)NPN OC depends on pull-up resistor and cable length

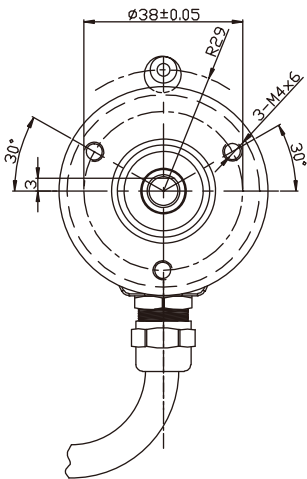
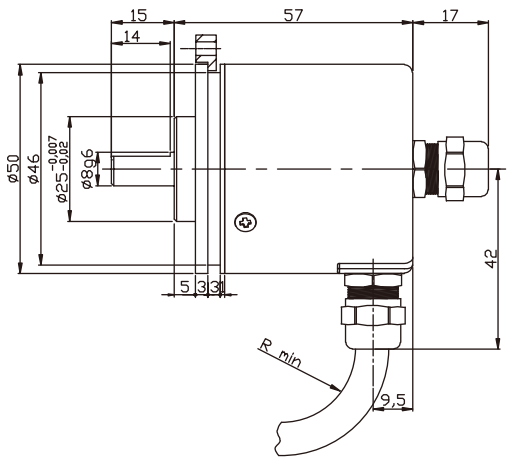
Terminal Assignment

Signal	0V	+U _b	A	\bar{A}	B	\bar{B}	Z	\bar{Z}	Shield
Color	WH	BN	GN	YE	GY	PK	BU	RD	⊥

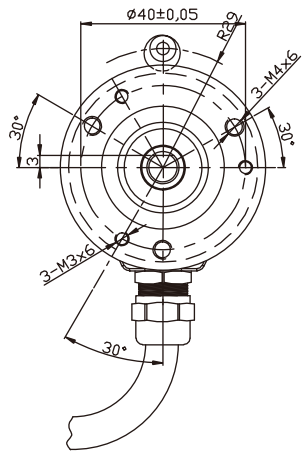
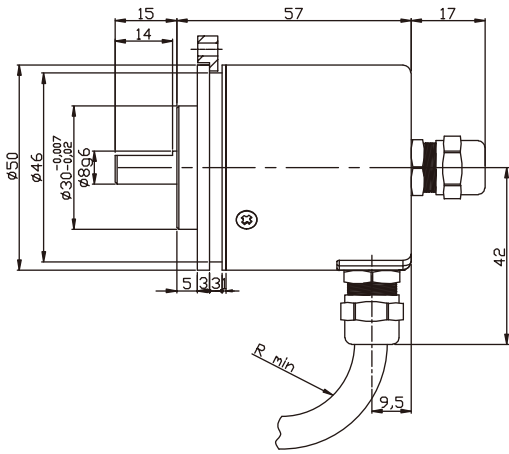
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Dimensions:

EB50A

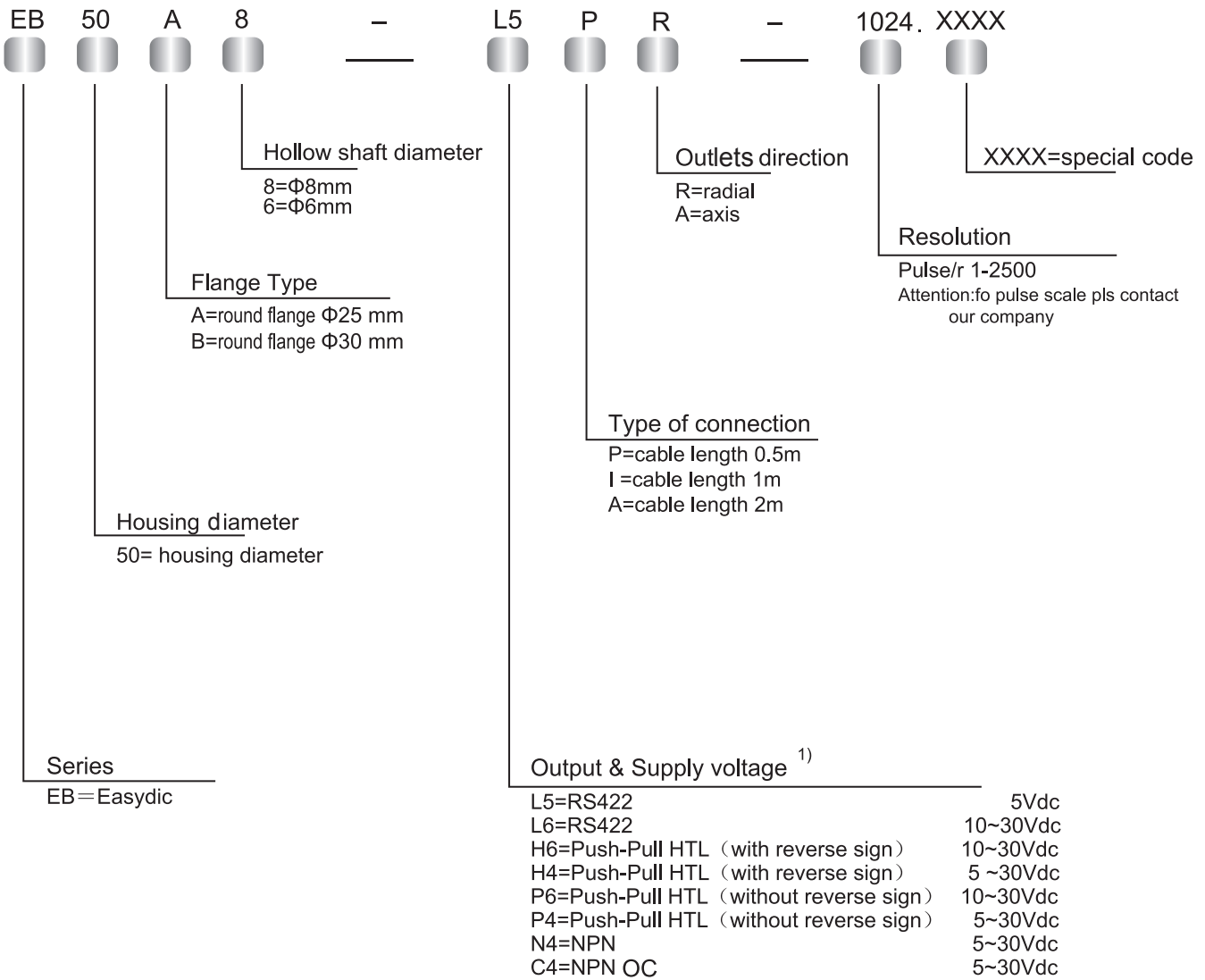


EB50B



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Order Code:



Pls refer to electrical structure and wiring manual for output configuration.

¹⁾ Only one channel allowed to be shorted-out
 (if $U_B=5V$, short-circuit to channel, 0V, or $+U_B$ is permitted)
 (if $U_B=10...30V$ short-circuit to channel or 0V is permitted)