

Miniature Absolute Singleturn Encoder EAC50

Description

Miniature absolute singleturn encoder EAC50 series can withstand a higher axial and radial load with its reasonable and compact structure. The standard flange combined the clamping and synchronous flanges together, while leaving multiple types of pre-screwed holes for easy installation. The EAC50 series can be widely used in angular and positioning measurement, particularly in the textile industry.



Features

- Pre-screwed holes for easy installation
- Clamping and synchronous flanges combined
- Durable stainless steel shaft
- Metal housing for shock resistance
- Waterproof metal wiring for higher IP level
- Protection class IP64
- Reverse connection protection

Mechanical Characteristics

Shaft diameter (mm)	Φ6g6/Φ8g6
Protection acc. to EN 60529	IP64
Speed (r/m)	6000
Max. load capacity of the shaft	
Axial load capacity	40N
Radial load capacity	80N
Shock resistance	50G/ 11ms
Vibration resistance	10G 10...2000Hz
Bearing life	10 ⁹ revolution
Rotor moment of inertia	1.8×10 ⁻⁶ kgm ²
Starting torque	<0.01Nm
Body material	AL-alloy
Housing material	AL-alloy
Operating temperature	-20°C...+80°C
Storage temperature	-25°C...+85°C
Weight	330g

Resolution

2, 4, 8, 16, 32, 64, 90, 128, 180, 250, 256, 360, 500, 512, 720, 1024

Electrical Characteristics

Output circuit	PNP	PNP open collector	NPN	NPN open collector
Resolution	10 Bits	10 Bits	10 Bits	10 Bits
Supply voltage (Vdc)	10-30V/5V	10-30V/5V	10-30V/5V	10-30V/5V
Power consumption (no load)	≤125mA	≤125mA	≤80mA	≤80mA
Permissible load (channel)	±80mA	±80mA	±50mA	±50mA
Pulse frequency	Max. 300kHz	Max. 300kHz	Max. 300kHz	Max. 300kHz
Signal level high	Min. Ub-1.5V	Min. Ub-1.5V	Min. Ub-2.5V	Min. Ub*70%
Signal level low	Max. 0.4V	depends on pull-down resistor	Max. 0.4V	Max. 0.4V
Rise timeTr	Max. 1μs	Max. 1μs	Max. 1μs	Max. 1μs
Fall timeTf	Max. 1μs	Max. 1μs	Max. 1μs	Max. 1μs

*): NPN open collector is depending on the pull-up resistor. 4.7kΩ is the recommended resistance. 8.2kΩ is the recommended resistance for PNP open collector.

**): NPN (PNP) open collector is depending on pull-up (down) resistor and cable length.

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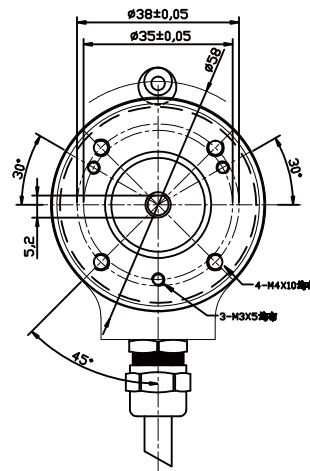
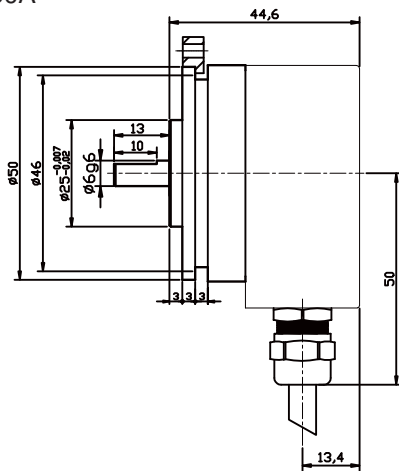
Terminal Configuration

Signal	0V	+U _b	bit0	bit1	bit2	bit3	bit4	bit5	bit6	bit7	bit8	bit9	V/R *
Color Code	WH	BN	GN	YE	GY	PK	BU	RD	BK	PL	GY/PK	RD/BU	YE/BN
Gray code	/	/	0	1	2	3	4	5	6	7	8	9	-

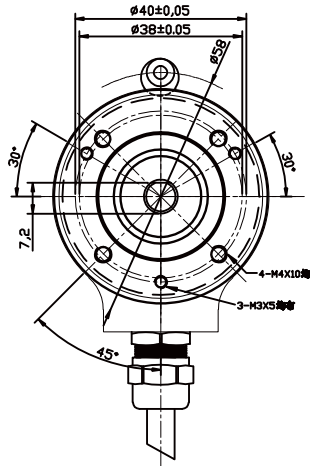
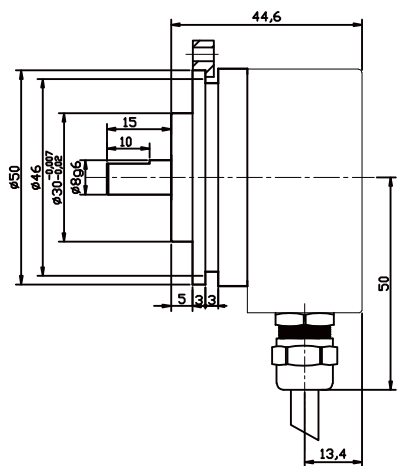
Attention
 Bit definition of parallel interface for an absolute encoder is: bit0=MSB, bit1=MSB-1, bit2=MSB-2,

Dimension (mm)

EAC50A



EAC50B



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Order Code:

