

Angle / Angle Displacement Sensor

—Aluminum shell, non-contact, Low prices

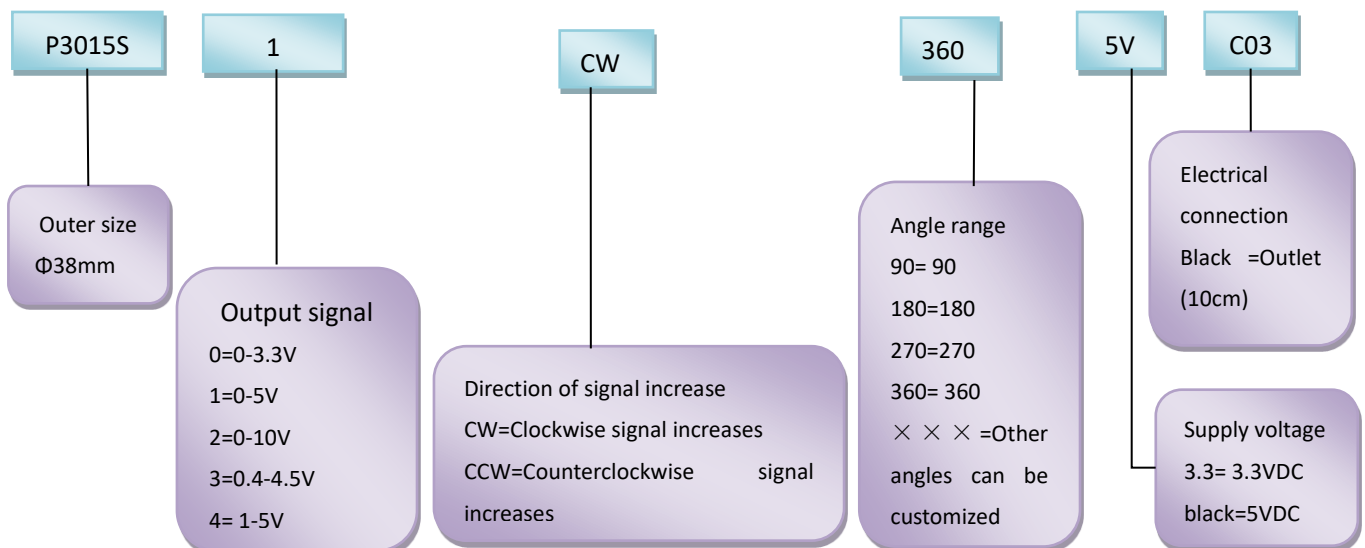
Model P3015S series

Feature

- Measuring range: 0 ° 360 ° (customizable angle)
- Analog type resolution up to 0.088 degrees
- Linear accuracy: 0.3% F.S.,
- Rotation life exceeds 100000000 times
- Low rotation damping
- Continuous rotation without mechanical limit
- Various signal output options: 0-3.3V, 0-5V, 1-5V, 0.4-4.5V output



Model



Application

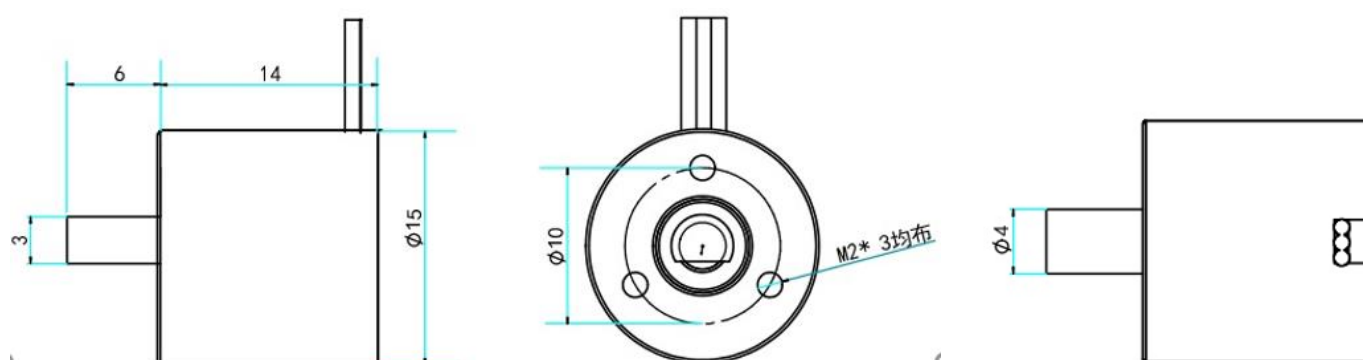
- Position feedback in servo systems
- Tension feedback control of variable frequency motor in cable and textile industry
- Valve position feedback
- Robot arm joint angle measurement feedback
- Position feedback of medical equipment
- Pendulum swing angle measurement feedback
- Position measurement feedback of construction Machinery
- Wind direction measurement
- 3D motion mechanism positioning
- Crane torque test (trigonometric function)

Description

The core of the non-contact angular displacement sensor is an array of Hall elements. The Hall element is a magnetic field-sensitive sensor device. The array detects the phase and intensity of the rotating magnetic field. After the signal is amplified, it is sampled by the ADC and the data is transmitted to the DSP for calculation. Obtain the position where the magnetic field rotates, and then convert it to analog signal output through DA, or directly output digital signal through communication. This solution can not only be used in fields such as testing, industrial engineering equipment, operating handles, automotive electronic accelerator pedals that require angle measurement, but also can replace grating encoders and potentiometers to a certain extent. The comparative advantages are shock resistance and long life. More suitable for motor motion position control.

This product can accept user requirements to customize the appearance, dimensions, power supply voltage, measurement range and output signal.

Dimensions (Unit: mm)



Electrical parameters

Update Speed	0.6m(standard); 0.2ms (high-speed)
Resolution	12 位 ($\approx 0.088^\circ$)
Linearity	0.3%F.S.,
Operating voltage	5VDC $\pm 10\%$,
Output signal	0-3.3V、0-5V、0.5-4.5V、1-5V、
Operating Current	< 10.5mA
Maximum and minimum output deviation	0.5% X VCC
Load resistance	>10K Ω

Mechanical parameters

Mechanical angle	360° (No stop)
Protection class	IP40
Working temperature	-30℃ ~ +85℃
Storage temperature	-30℃ ~ +85℃
The rotational torque	<5mN·m
Mechanical life	>100 million transfer
Weight	About 15g
Housing	Anodized aluminum surface

Shaft	Stainless steel
Electrical terminals	Thick gold plated brass terminals

Terminal Definition

VCC	OUT	GND
Positive power supply	Signal output	Negative public