



## APS024

Angle sensor

**VOLBUFF**

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## 1 Product Description

The APS024 series is a solid,durable,high-precision,and programmable Hall effect rotating position sensor.It is designed for the application of long cycle life,high accuracy,and high reliability.Monitor the angle.This product uses a magnetic bias Hall effect integrated circuit(IC)to detect the rotation movement of the drive shaft within the working range.The rotation of the actuator's shaft makes the magnet's position relative to the position of the IC.The changes in magnetic flux density caused by the above are finally converted into linear output.

Induction chips,conditioning and protection circuits and permanent magnet are sealed in solid packaging that meets the 67 level,ensuring that it also has good durability in the worst environment.

Can resist the effects of typical EMI/RFI in extreme temperature,vibration, impact,and walking mechanical operation environment.

The main features are as follows:

- High reliability and stable structure
- Voltage input:5VDC
- Linear accuracy:±1.0%
- High service life:full stroke greater than 10 million times
- Work temperature:-40~+125°C
- Protection level:IP67
- Voltage output:0.5V to 4.5V

## 2 Technical parameters

### Electrical parameters

Rated voltage	DC5V
Operating current	30mA Max
Temperature coefficient	≤10ppm/°C
Electrical angle	-180°~ + 180°
Linearity	±1%FS
Maximum repeatability	0.25°
Maximum hysteresis	0.25°
resolution	12bit

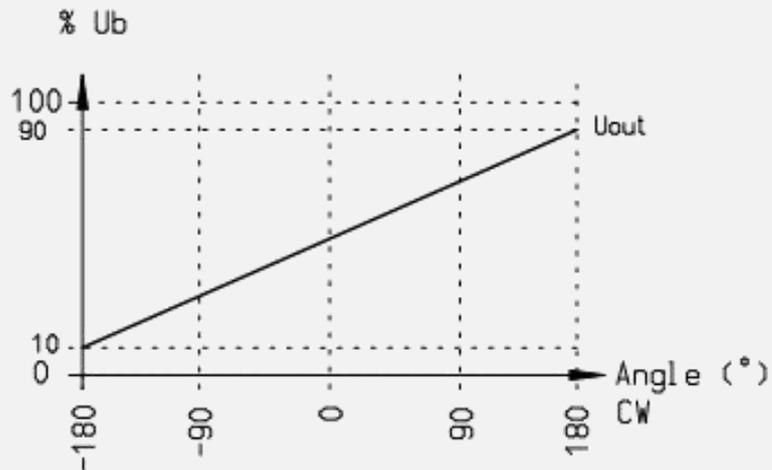
### Mechanical parameters

work life	≥10 million times
Mechanical stroke	360°

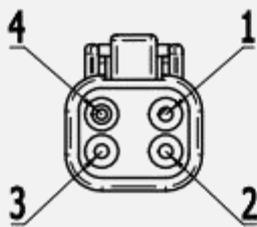
### Environmental parameters

Operating temperature	-40~+125°C
Humidity environment	The temperature is 40°C,the relative humidity is 93%,and the test is 48h
Anti-vibration	10...2000 Hz,peak 20g per axis for 2 hours X-axis,Y-axis,Z-axis
Shock	50g,11ms,100 times per axis,X-axis,Y-axis,Z-axis
Protection level	IP67

### 3 Output signal(customizable)

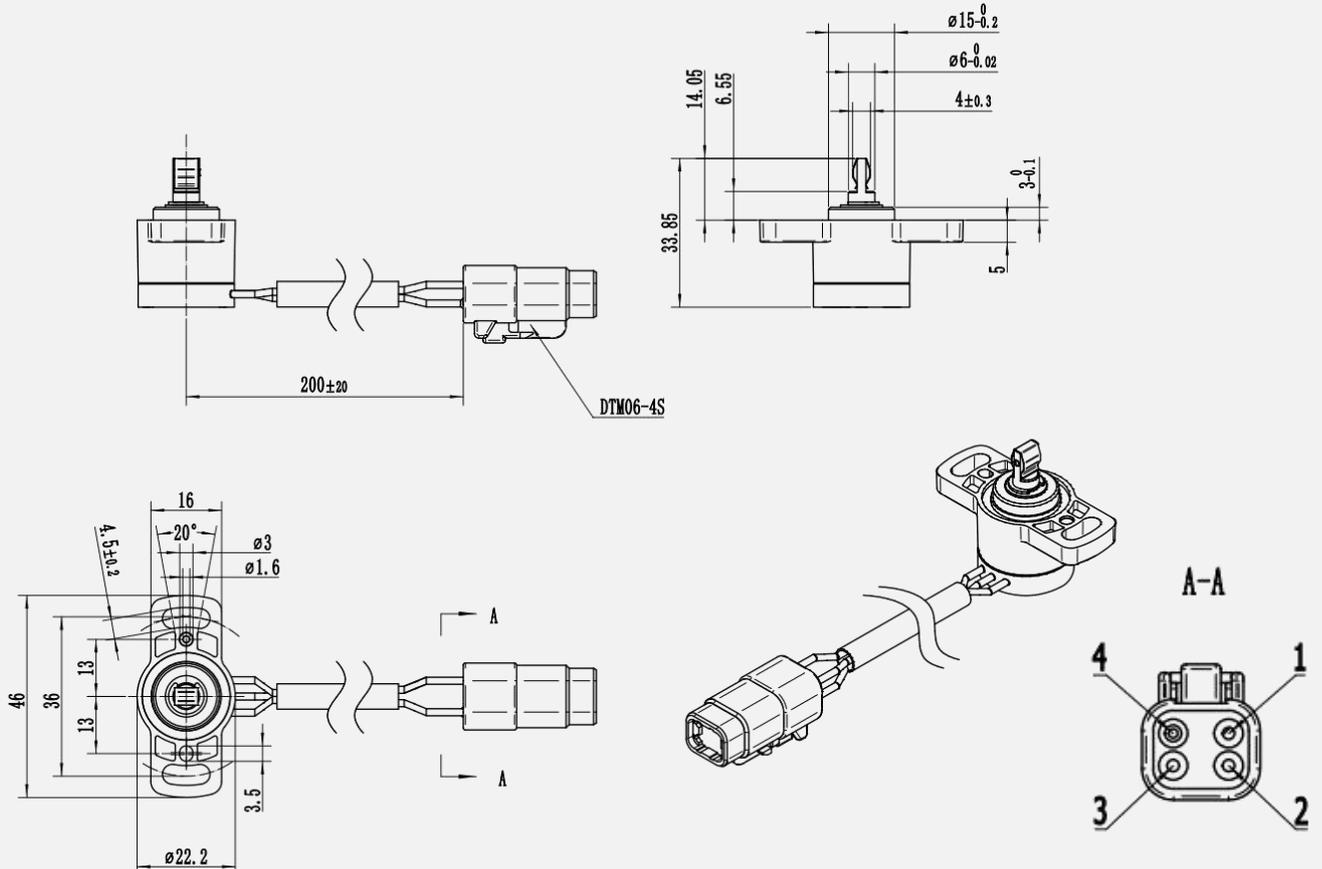


### 4 Interface Definitions



PIN	Function	Color
1	VCC	Red
2	GND	Black
3	OUT	White
4	NC	Plugs

**5 Outline installation drawing (unit: mm)**



## 6 Precautions for use

(1) The power supply of this product uses an independent power supply, and it is recommended not to be connected in parallel with other loads. Use, In the process, the power supply is not allowed to have serious safety hazards or instability, otherwise it will lead to production, The product is invalid!



(2) When using this product, please strictly follow the specified wiring under the specified power supply voltage, Prevent short circuits caused by misoperation and damage to power supplies and sensors.

(3) Do not disassemble the sensor without permission, so as not to cause the sensor to not work normally.

(4) This sensor is a precision device, please handle it with care during use.

(5) Do not use in a strong magnetic field environment.

