



## APS028M

Angle sensor

**VOLBUFF**  
SENSORS

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## 1 Product Description

The APS028M series Hall effect rotation position sensor can monitor angle monitoring in the harsh transportation system and industrial application environment. This product uses a magnetic bias Hall effect integrated circuit (IC) to detect the rotation of the drive shaft of the drive shaft within the scope of 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 sturdy packaging that meets the IP67 level, ensuring that it also has good durability in the worst environment.

The impact of the typical EMI/RFI in extreme temperature, vibration, impact, and walking mechanical operation environment is mainly used in fields such as forklifts, industrial machinery, and wireless remote controls.

The main features are as follows:

- Can be calibrated by various working angle strokes
- Support wide voltage input: 8-35VDC
- Linear precision:  $\pm 1\%$
- High service life: full stroke greater than 10 million times
- Protection level: IP67
- Output: 0.5V to 4.5V

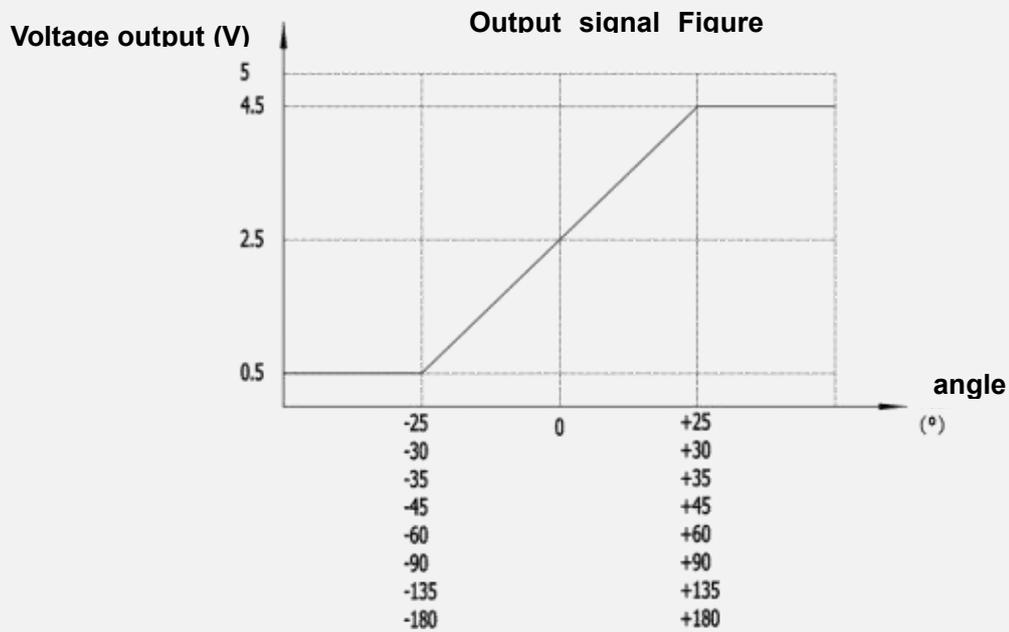
## 2 technical specifications

Electrical parameter	
Rated voltage	DC8V to DC35V
Working current	15MA MAX(under 24VDC conditions)
Temperature coefficient	≤100ppm/°C
Electrical angle	50°、60°、70°、90°、120°、180°、270°、360°
Linearity	±1%FS
Repetition	±1%FS
Resolution	12bit
The minimum load resistance of the output end	10kΩ
The maximum load capacitance of the output end	100nF

Mechanical parameters	
Work life	≥10 million times
Mechanical itinerary	360 °

Environmental parameters	
Working temperature	-40 to+85°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 shaft 2 hours x axis,y axis,Z axis
Shock	50g,11ms impact per shaft 100 times X-axis,Y axis,Z axis
Protection level	IP67

### 3 output characteristics

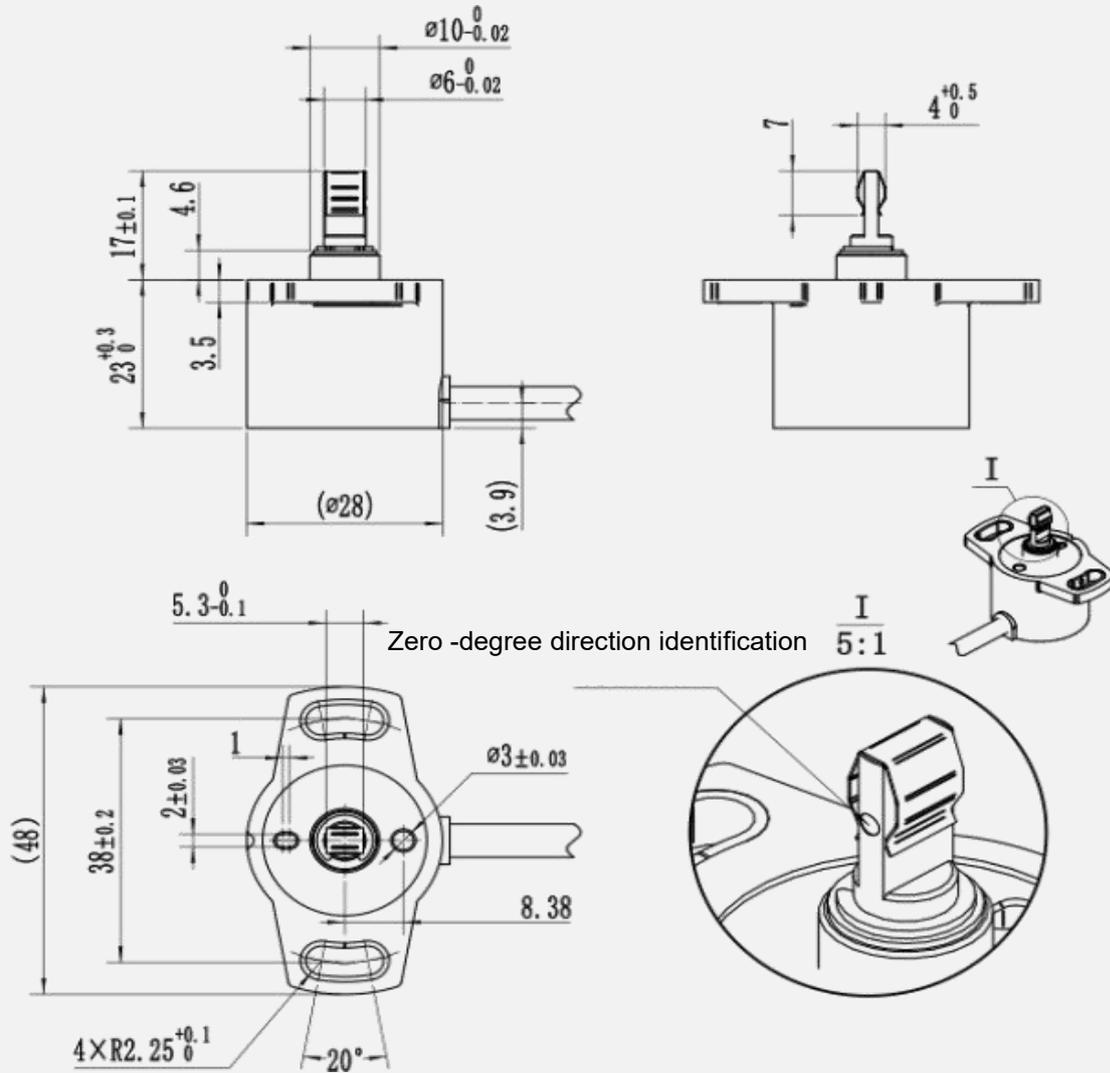


### 4 interface definition

**Interface definition (standard three -line)**

Wire color	Definition description
Red	VCC
White	OUT
Blank	GND

## 5 Outline installation drawing



## 6 Precautions

(1)The power supply of this product uses an independent power supply.It is recommended not to connect with other loads.use In the process,the power supply does not allow serious safety hazards or instability,otherwise As a result,the product fails!



(2)When using this product,please work strictly according to the specified wiring method under the specified power supply voltage to prevent short circuit caused by errors and damage the power and sensor.

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

(4)This sensor is a precision device.Please bring it lightly during use.

