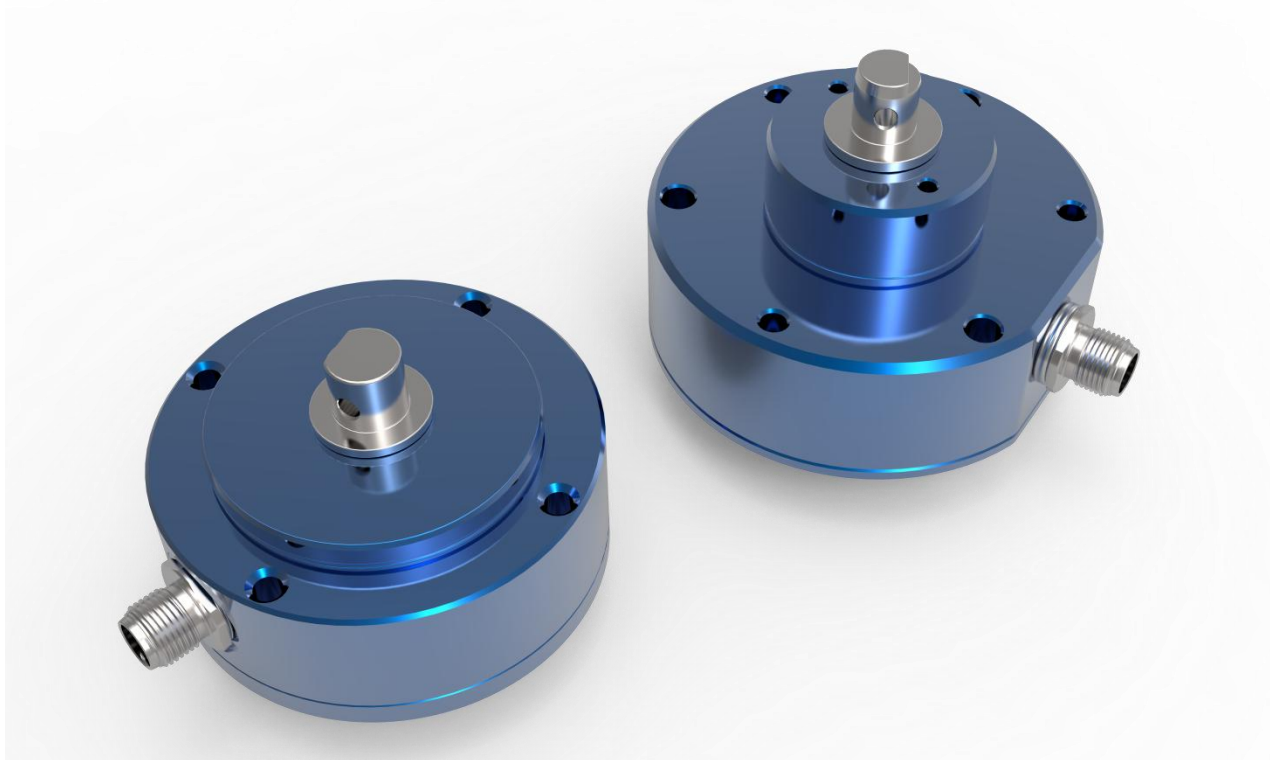


APS-366 系列角度传感器

APS-366 Series of Angle Sensor



➤ 产品介绍 Product Description

APS-366 角度传感器为极端环境条件下的操作而设计, 主要应用于移动设备的电液转向角度测量。

366 Angle Sensor is developed for rough operation under extreme environmental conditions. Its main application is angle measurement for electronic-hydraulic steering systems of mobile equipments.

➤ **产品特点 Product Features**

- 外壳直径Ø79、Ø88mm 可选
The housing size of Ø79 or Ø88mm optional
- 外壳材质: 铝或不锈钢可选
Aluminium or stainless steel material optional for housing
- 非接触式霍尔效应技术
Contactless Hall-effect technology
- 无限机械连续旋转
Unlimited mechanical rotation
- 电气测量范围 0-360°
Electrical measure range 0-360°
- 5Vdc 或 8-35Vdc 电源
5Vdc or 8-35Vdc supply
- 电流、电压、PWM 或 CAN 总线输出
Available with voltage,current,PWM or CAN bus output signals.
- 单路、双路输出 (半冗余)、完全冗余输出 (两个独立接口, 满足 IEC61508 SIL3 规定)
Single, dual output channels (semi-redundant) or full-redundant with two independent interfaces which meet the SIL3 specification in IEC61508
- 线性优异
Excellent linearity
- 选定测量范围内的 12 位分辨率
12-bit resolution over selected measuring range
- 工作温度-40 至+85° C
Operating temperature -40 to +85°C
- 高震动环境下的高使用寿命
Very long service life at vibration-rich applications
- 电子部分完全灌封, 防护等级 IP67
Electronic part sealed up to IP67

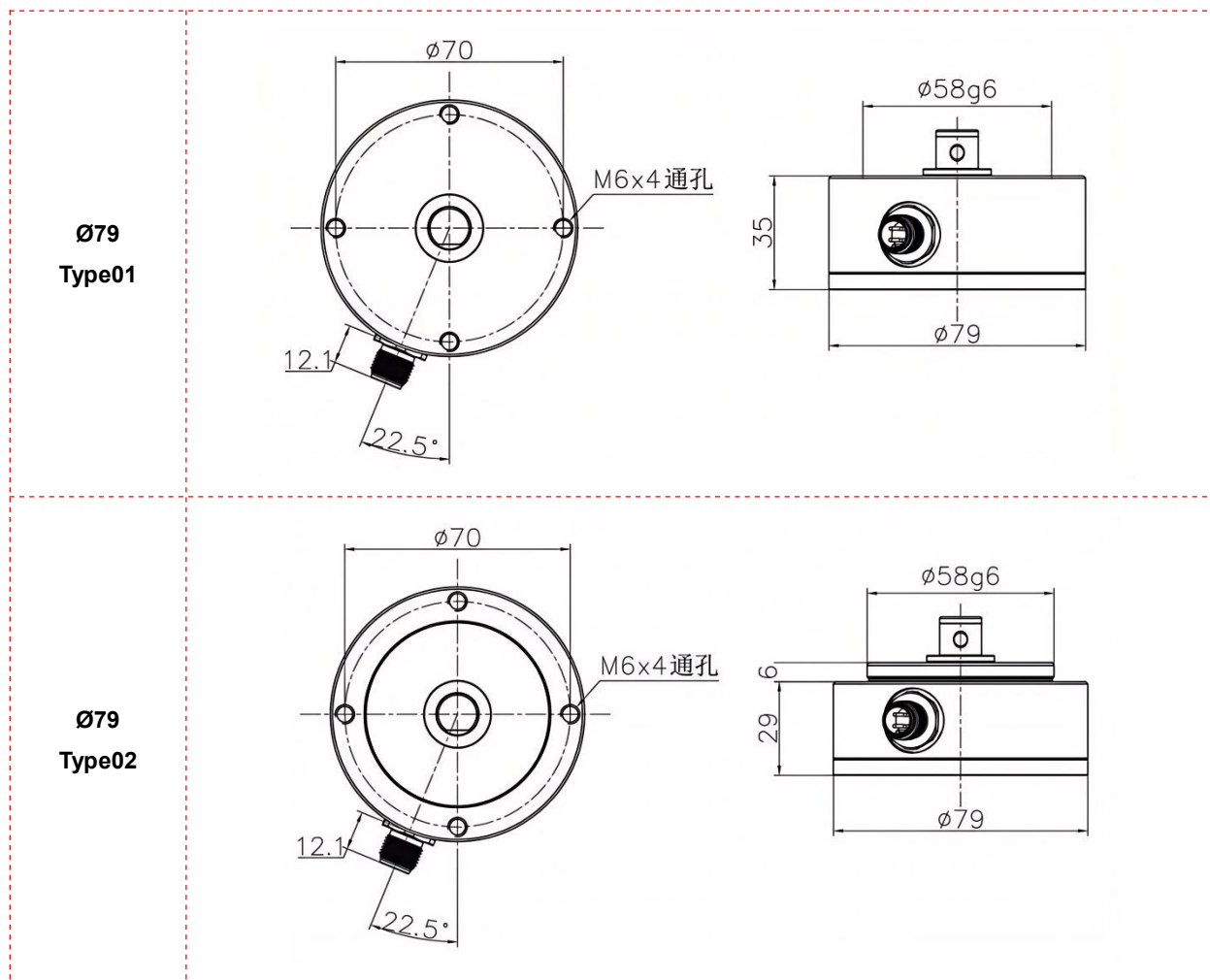
➤ **主要技术参数 Technical Specifications**

机械性能 Mechanical specifications		
旋转角度	Mechanical operating angle	Continuous 360 degree 连续 360 度
最大转速	Max. rotating speed	3000rpm
最大轴向载荷	Max. permitted axial shaft load	300N
最大径向载荷	Max. permitted radial shaft load	400N
最大扭矩		0.05Nm
使用寿命	Operation Life	>100 millions circles 1 亿转
重量	Weight	500g
电气性能 Electrical specifications		
传感类型	Sensor type	Hall-effect 霍尔
电气角度	Measuring range	0~360°
工作电压	Operating Voltage	5±10% Vdc or 8~35Vdc
输出信号	Effective output	Analog, PWM, CAN J1939, CAN open
精度	Accuracy	Max 1.0% FS
过压保护	Over-voltage proof	yes
电源反接保护	Reverse polarity protection	yes
电气连接	Electrical connection	M12 connector male 圆形连接器(公端)
环境特性 Environmental specifications		
工作温度	Operating temp. range	-40°C~85°C

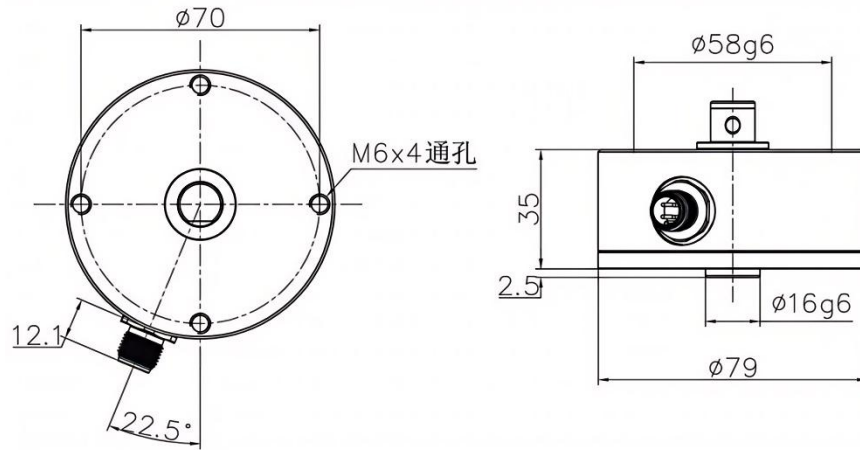
储存温度	Storage temp. range	-40°C~120°C
防护等级	IP Class	IP67
振动测试	Vibration	20g
机械冲击	Mechanical Shock	50g
电磁兼容性	EMI	100V/m
静电	ESD	±8kV (contact discharge) ±15kV (air discharge)

➤ **外壳和轴形式 Housing and shaft types**

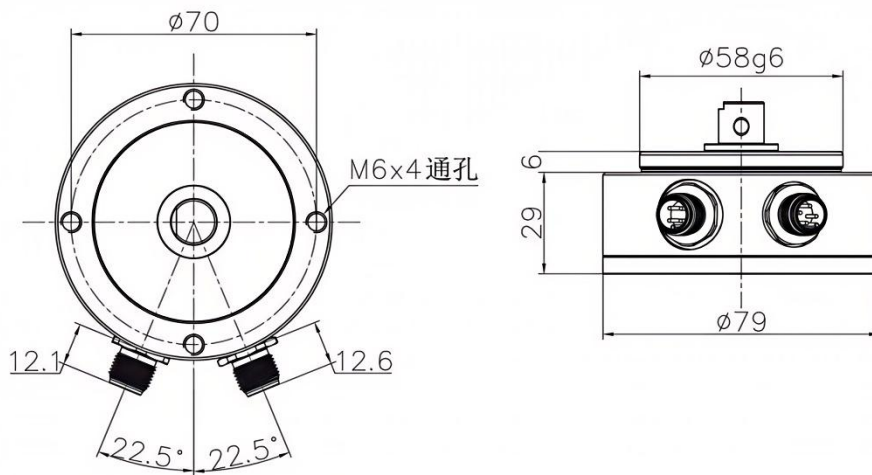
外壳结构形式 Housing Conyctual Types



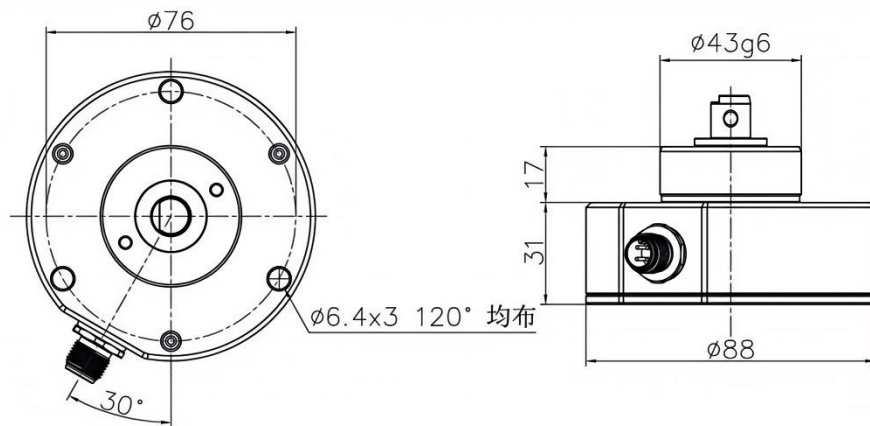
**Ø79
Type03**



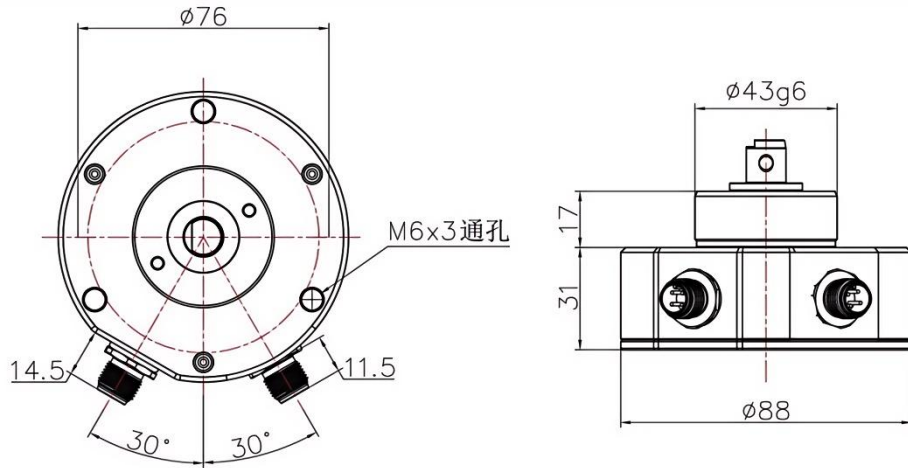
**Ø79
Type05**



**Ø88
Type06**

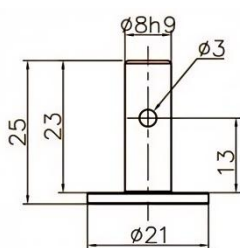
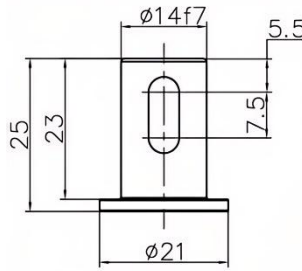
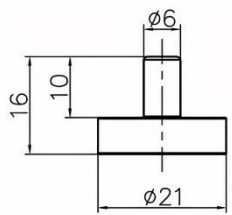


Ø88
Type09

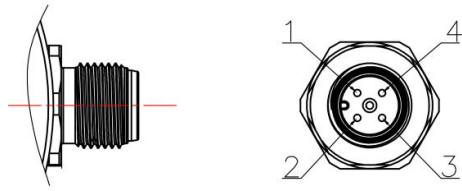
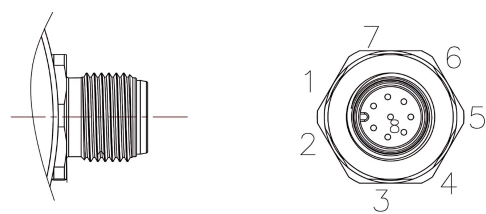


轴形式 Shaft Types

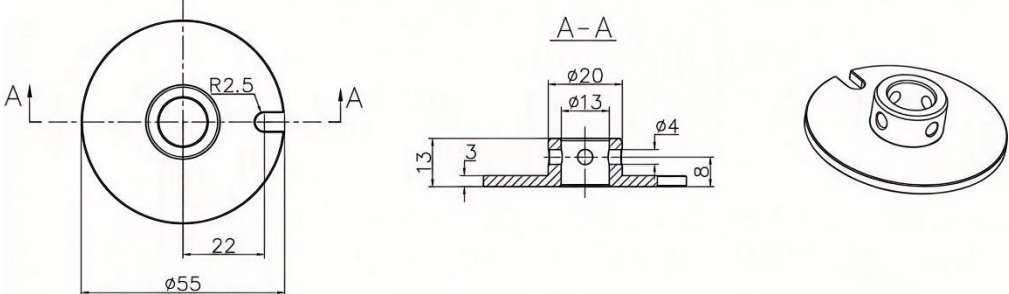
<p>Shaft 01</p>		<p>Shaft 02</p>	
<p>Shaft 03</p>		<p>Shaft 04</p>	
<p>Shaft 05</p>		<p>Shaft 06</p>	

<p>Shaft 07</p>		<p>Shaft 08</p>	
<p>Shaft 09</p>			

➤ **电气连接 Electrical Connection**

<p>M12 Connector 4-Pole</p> 	<p>1</p> <p>1- Vcc 2- Out 1 3- GND 4-</p>	<p>2</p> <p>1- Vcc 2- 3- GND 4- Out 1</p>	<p>3</p> <p>1- Vcc 2- Out 1 3- GND 4- Out 2</p>
<p>M12 Connector 8-Pole</p> 	<p>9</p> <p>1- Vcc 1 2- GND 1 3- Out 1 4- 5- Out 2 6- GND 2 7- Vcc 2 8-</p>		

➤ **安装附件 Mounting Accessories**

<p>盘摆臂 $\phi 55$ mm 产品编号: 501-53-04</p>	
---	--

➤ **编号规则Product Code Reference**

366	A	2	01	LV	1
产品类别 <i>Product type</i>	外壳直径 <i>Housing Diameter</i>	外壳形式 <i>Housing Type</i>	旋转轴 <i>Shaft Type</i>	供电电压 <i>Supply Voltage</i>	电气连接 <i>Electrical connection</i>
366	A- Ø79 B- Ø88 C- Ø50	1- Type 01 2- Type 02 3- Type 03 5- Type 05 6- Type 06 9- Type 09	01 - Ø13x12 02 - Ø13x27 03 - Ø13x13 04 - Ø13x12 05 - Ø10x16 06 - Ø8x180 07 - Ø8x23 08 - Ø14x23 09 - Ø6x10	LV- 5±10% V dc HV- 12/24V dc	1 - M12 (Pin 1-2-3) 2 - M12 (Pin 1-3-4) 3 - M12 (Pin 1-2-3-4) 9- M12(Pin 1-2-3,5-6-7)

48	300	X
输出信号 <i>Signal Output</i>	测量角度 <i>Rotary Angle</i>	旋转方向 <i>Rotary Oriation</i>
01- 0.25~4.75V dc	3 digits, eg.: 090-90°	Blank- counter clockwise
02- 4.75~0.25V dc	300- 300°(-150°~+150°)	X- clockwise 顺时针
03- 0.5~4.5V dc		
04- 4.5~0.5V dc		
16- 1-5V		
17- 3-5V		
18- 1-9V		
19- 0.1-10V		
31- 0.25~4.75V dc		
dc,0.25~4.75V dc		
32- 4.75~0.25V dc		
dc,4.75~0.25V dc		
33- 0.5~4.5V dc, 0.5~4.5V dc		
34- 4.5~0.5V dc,4.5~0.5V dc		
46- 0.25~4.75V dc		
dc,4.75~0.25V dc		
47- 4.75~0.25V dc		
dc,0.25~4.75V dc		
48- 0.5~4.5V dc, 4.5~0.5V dc		
49- 4.5~0.5V dc,0.5~4.5V dc		
61- PWM 5~95%,500HZ		
62- PWM 95~5%,500HZ		
63- PWM 10~90%,500HZ		

64- PWM 90~10%,500HZ

71- 4-20 mA

81- CAN J1939

82- CAN open

➤ **应用Applications**

APS-366 系列角度传感器可应用于汽车起重机、轮式装载机、自行式模块运输车(SPMT)等移动设备的电液转向角度测量。

The main application of the APS-366 series of Angle Sensor is in electronic-hydraulic steering systems angle measurement for mobile equipment such as automobile cranes, wheel loaders, and self-propelled modular transport vehicles (SPMT).

