

JS16 系列电控手柄
JS16 Series of Joystick

➤ **产品介绍 Product Description**

JS16是世通又一款匠心制作的产品。

JS16 is another craftsmanship works of Citoon.

合金底座及轴系等极其坚固的设计,适用于艰巨的应用。JS16可实现重载应用条件下500万次使用寿命。

Extremely robust design with alloy base and shafting is adapted to arduous applications. JS16 achieves rated 5 million cycles under heavy-duty application conditions.

功能丰富且强悍, JS16配得上**万能型底座**的称谓。

With rich, varied and doughty functions, JS16 deserves the title of the **Universal Base**.

双轴均可实现摩擦定位或弹簧复中模块的自由搭配,且不论弹簧复中或摩擦定位,均带有中位定位手感。

The modules of Friction-holding and Spring-return-to-centre can be free collocated on both X and Y axes, and either the Friction-holding or Spring-return-to-centre module has the Center detent for enhanced return-to-center performance.

JS16可以搭载全冗余电路:从霍尔传感器、电源、CPU、CAN芯片到信号输出,均可以实现完全冗余。

JS16 is capable of being equipped with fully redundant circuits, from hall sensors, power supplies, CPU, CAN chips to outputs, fully redundancy can be achieved on this joystick.

标配使能/在位开关。

Enable/presence switch comes as a standard.

多种轴运动轨迹随心定制:一字、十字、万向、Z字、T形、H形等。

Multiple axes motion traces are optional for customization: slot, cross-shaped, universal(squared), Z-shaped, T-shaped, H-shaped



巧妙的接线设计,使得JS16可以搭配功能最丰富的上端,上端可提供多种配置组合——最多3个指拨轮+6个按钮开关,或者12个按钮开关。

Ingenious wiring design allows JS16 to be paired with the most functional grips.

The grip is available in a variety of configurations - up to 3 thumbwheels+6 push button switches, or 12 push-button switches.

电子部分密封等级为IP69k.

Electronics sealed to IP69k.

➤ 主要技术参数 Technical Specifications

机械性能 Mechanical specifications

旋转角度	Mechanical operating angle	XY axis: $\pm 25^\circ$
操作力	Operating force	4~12N
使用寿命	Life expectancy	5 million cycles
重量	Weight	1.1kg

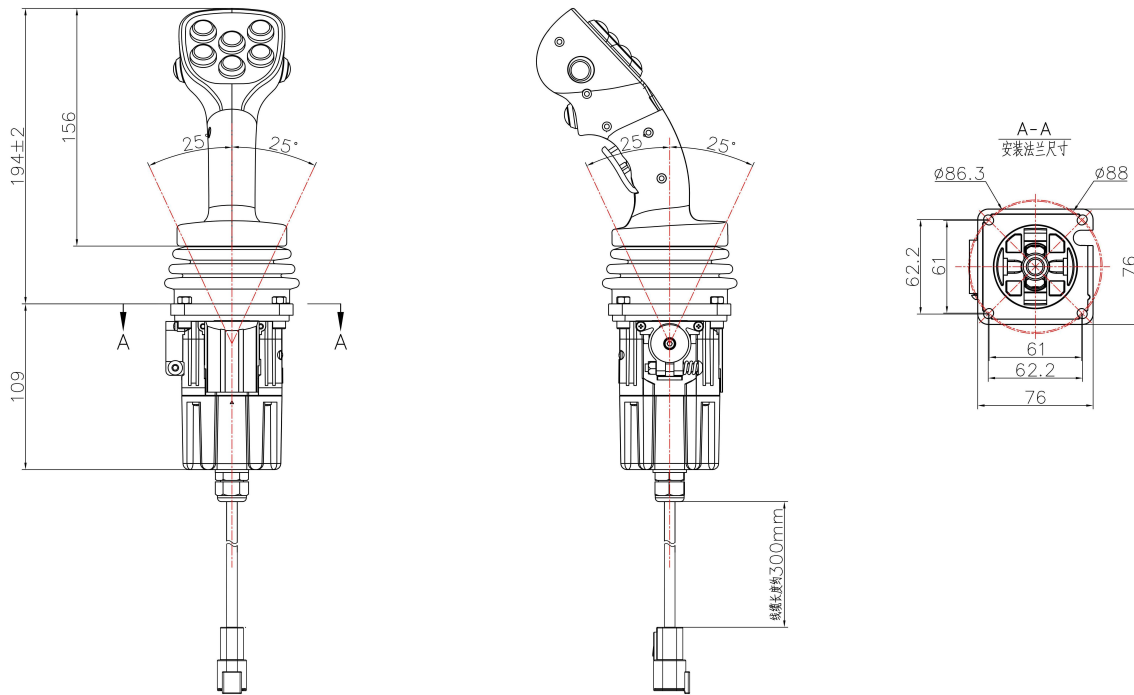
电气性能 Electrical specifications

传感类型	Sensor type	Hall-effect 霍尔
供电电压	Applied voltage	10-32 Vdc, $5\pm 10\%$ Vdc
输出信号	Effective output	模拟量、PWM、CAN
解析率	Resolution	12 bit
精度	Accuracy	Max 2.0% FS
输出迟滞	delay time of output signal	approx. 3ms
过压保护	Over-voltage proof	yes
电源反接保护	Reverse polarity protection	yes

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~85°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	$\pm 8\text{kV}$ (contact discharge) $\pm 15\text{kV}$ (air discharge)

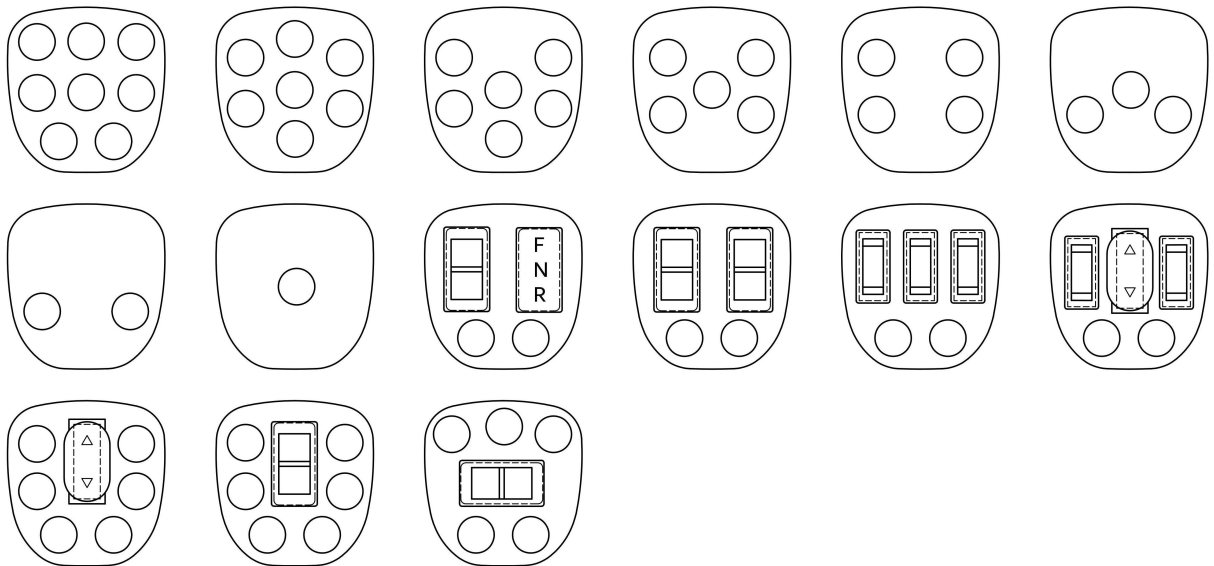
➤ 外形&安装尺寸 Mechanical Dimensions(mm)



➤ 面板及上端配置 Front Plate and Grip Designation

面板和上端可提供多种配置组合。

The front plate and grip are available in a variety of configurations.



面板配置示例 Front Plate Configuration Samples

➤ 编号规则 **Product Code Reference**

JS16	X1Y2	3	0	0
底座系列 <i>Base Family Name</i>	轴向 <i>Axis Options</i>	轴向约束 <i>Axial restraint</i>	弹簧回复力 <i>Spring Return Force</i>	摩擦力等级 <i>Friction Level</i>
JS16	X0Y1- Y axis spring return Y 轴,弹簧复位	0- Squared 方形限位	0- Standard spring force 标准弹力	0- Friction Level 1
	X0Y2- Y axis friction Y 轴,摩擦定位	1- Cross-shap 十字限位	1- Heavy spring force 加强弹力	1- Friction Level 2
	X1Y1- X&Y axis spring return XY 轴,弹簧复位	2- Slot 一字限位	2- Ultra high spring force 超强弹力	2- Friction Level 3
	X1Y2- X axis spring return, Y axis friction X 轴,弹簧复位;Y 轴,摩擦定位	3- Z-shaped Z 字限位		
	X2Y1- X axis friction, Y axis spring return X 轴,摩擦定位;Y 轴,弹簧复位	4- T-shaped T 形限位		
	X2Y2- X&Y axis friction XY 轴,摩擦定位	5- H-shaped H 形限位		

C	J	G006	L/R	00
信号输出形式 <i>Electronics Type</i>	信号输出 <i>Output</i>	上端系列 <i>Grip Type</i>	左右手或单手 <i>Left or Right hand or Unidirectional</i>	其它订制信息 <i>Other Customized Details</i>
A- analogue	1- 4-20 mA,dual	G001	L- Left hand grip	
C- CAN Bus	5- 0.5-4.5VDC ratiometric,single	G004	R- Right hand grip	
MR- Modbus RTU	6- 0.5-4.5VDC ratiometric,dual	G005	Blank- Unidirectional	
	J- CAN J1939	G006		
	O- CAN open	...		

➤ 应用Applications

适用于凿岩台车、压路机、正面吊、采棉机等各类隧道装备、路面机械、港机及农机装备。

It is suited for various of tunneling equipments, road, port and agricultural machinery such as tunneling jumbos, road rollers, container lift trucks and cotton pickers etc.

