

JS02 系列电控手柄 JS02 Series of Joystick

➤ 产品介绍 Product Description

集几乎所有机械功能及输出信号类型于一身, JS02 配得上**万能型底座**的称谓。

JS02 deserves the title of the **Universal Base** with almost all possible variations of mechanics and electronics.

弹簧复中、摩擦定位、位置反馈、多档位（三档或五档）的各种机械功能及其在双轴的组合，使得JS02有执行任何任务的灵活性：土方机械主控手柄、塔吊主令控制器、矿卡换挡器等。

Capability of combining different mechanics provides JS02 flexibility of carrying many different tasks eg. main joystick for earthmoving machinery, master controller for tower cranes, and even gearbox shifter for mining trucks...

搭配多种上端，使得JS02可高度定制化。

With variant grip options, the JS02 series is highly customizable.

JS02可靠、坚固，可实现重载应用条件下额定500万次循环。

JS02 is a robust and reliable joystick which achieves rated 5 million operation cycles under heavy-duty application conditions.



➤ 产品特点 Product Features

- 双轴控制
Double-axis control
- 非接触式霍尔效应技术
Contactless--Hall effect technology
- 各种机械功能及其在双轴的组合
Combination of various of mechanics
- 一字、十字、万向、长方形、T型、H型限位
slot,cross,T,H and open gate
- 多种上端选项
Choice of multiple grips
- 电子部分密封等级为IP67
Electronics sealed to IP67

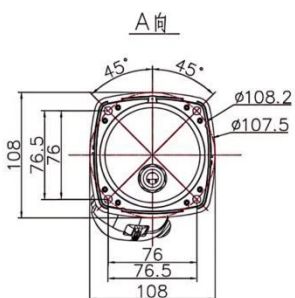
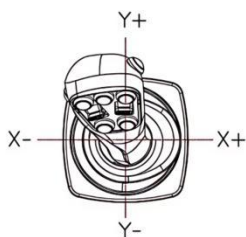
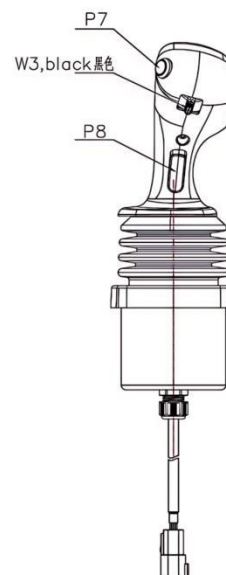
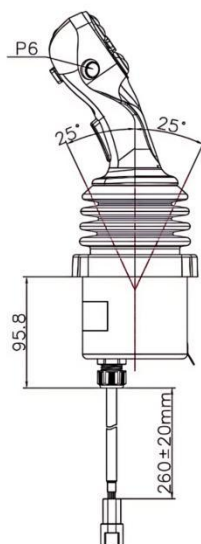
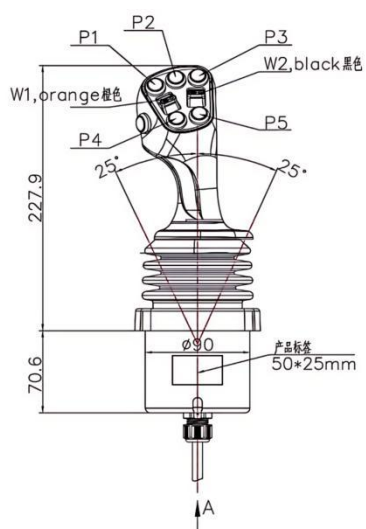
➤ 技术参数 Technical Specifications

机械性能 Mechanical specifications		
机械功能	Mechanical functions	弹簧复中 Spring return-to-centre 摩擦定位 Friction brake 档位 Latching (详见 details refer to "Appendix 附页 1 ")
旋转角度	Mechanical operating angle	弹簧复中 spring return,max. $\pm 30^\circ$ 位置反馈 Detent version,max. $\pm 25^\circ$ 档位/锁定 Latching version, $\pm 20^\circ$ or $\pm 25^\circ$ (max.) 摩擦定位 Friction version,max. $\pm 25^\circ$ 仅弹簧复位, 500 万次 5 million cycles for Spring-return model
使用寿命	Life expectancy	弹簧复位带位置反馈、端位锁定, 摩擦定位款, 100 万次 1 million cycles for detent,latching and friction brake models
重量	Weight	1.1kg
底座深度	Mounting depth	72mm,85mm,105mm
电气性能 Electrical specifications		
传感类型	Sensor type	Hall-effect 霍尔
供电电压	Applied voltage	$5\pm 10\%$ Vdc or 9-32 VDC
输出信号	Effective output	开关量,电压,电流,CAN bus,PWM 等 switching,voltage,Current,CAN bus,PWM etc.
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	$-40^\circ\text{C}\sim 85^\circ\text{C}$
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)

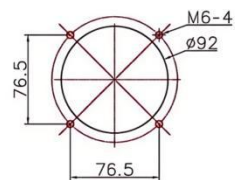
➤ 匹配上端 Compatible Grips

G005	G010	G021	G022
			

➤ 外形&安装尺寸 Mechanical Dimensions(mm)



推荐面板开孔尺寸 (上装式)
Panel cutout for drop-in mount



➤ 编号规则 Product Code Reference

JS02	S	101	S	101	N
底座系列 Base Family Name	X 轴基本功能 X-axis primary functions	反馈&锁定代码 Feedback & latching codes	Y 轴基本功能 Y-axis primary functions	反馈&锁定代码 Feedback & latching codes	中位 neutral position
JS02	S- Spring return 弹簧 复位 F- Friction brake 摩擦 定位 L- Latching 锁止 N- only Y axis	000- 0-0-0(spring return OR friction brake) 001- 0-0-D(spring return) 100- D-0-0(spring return) 101- D-0-D(spring return) 002- 0-0-L(spring return) 200- L-0-0(spring return) 202- L-0-L(spring return) 020- 0-L-0(friction brake) 222- L-L-L(latching) 333- L-L-L-L(latching) Blank-(N, only Y axis)	S- Spring return 弹簧 复位 F- Friction brake 摩擦 定位 L- Latching 锁止 N- only X axis	000- 0-0-0(spring return OR friction brake) 001- 0-0-D(spring return) 100- D-0-0(spring return) 101- D-0-D(spring return) 002- 0-0-L(spring return) 200- L-0-0(spring return) 202- L-0-L(spring return) 020- 0-L-0(friction brake) 222- L-L-L(latching) 333- L-L-L-L(latching) Blank-(N, only X axis)	N- w/o mechanical lock P- mechanical lock
0	C	J	- G010	R	- 07
轴向限位类型	信号输出类型	信号输出	上端系列	左右手或单手	其它订制信息: 线缆直径, 长度, 连接器等

Gate Type	Outputs Type	Output	Grip Type	Left or Right hand or Unidirectional	Other Customized Details eg. cable length,connectors etc
0- Open gate 方形限位	A- analogue 模拟量	01- 0.25~4.75V dc	G005	L- Left hand grip	
1- Cross-shaped 十字限位	C- CAN Bus	02- 4.75~0.25V dc	G010	R- Right hand grip	
2- Slot 一字限 位	S- Switching 开关量	03- 0.5~4.5V dc	G021A/B	Blank- Unidirectional	
3- Z-shaped Z 字限位		04- 4.5~0.5V dc			
4- T-shaped T 形限位		16- 1-5V			
5- H-shaped H 形限位		17- 3-5V			
		18- 1-9V			
		19- 0.1-10V			
		20- 0-5V dc			
		31- 0.25~4.75V dc,0.25~4.75V dc			
		32- 4.75~0.25V 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,4.75~0.25V dc			
		47- 4.75~0.25V 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
70- 4-20 mA
71- 4-20 mA,4-20 mA
72- 4-20 mA,20-4mA
J- CAN J1939
O- CAN open
91- switching,1-0-1
92- switching,2-0-2
93- switching,3-0-3
94- switching,4-0-4

➤ **应用Applications**

JS02可应用于推土机、平地机、装载机等土方机械，以及农机、塔式起重机、矿卡等。

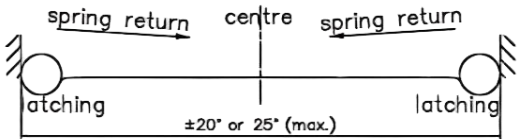
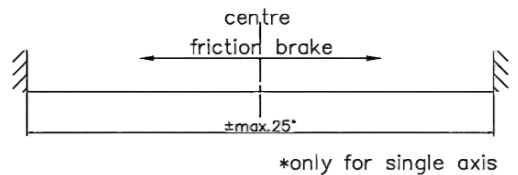
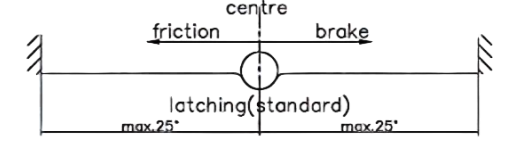
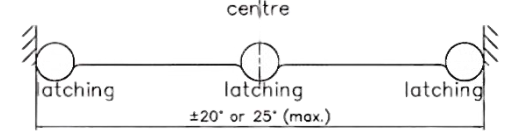
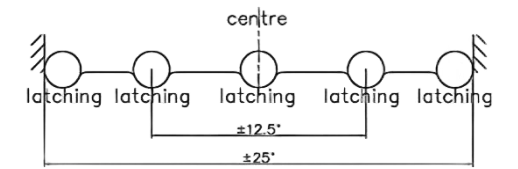
JS02 can be applied to earthmoving machinery such as bulldozers, graders, frontloaders, as well as agricultural machines, tower cranes, mining trucks etc.

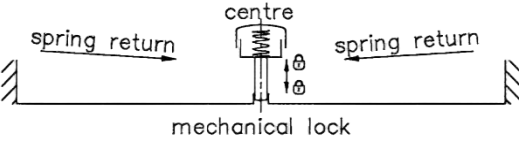


JS02 机械功能原理图
JS02 MECHANICAL FUNCTIONS DIAGRAM

Version 01_Aug. 2026

基本功能 Primary Functions	基本功能代码 Primary Functions Code	反馈&锁定功能 Detent & latching functions	反馈&锁定代码 Detent & latching codes	反馈&锁定字母符号 Detent & latching letter symbols	功能原理符号 Functions schemic symbols	附加机械中位锁止 additional centre mechanical lock
弹簧复中 Spring return to centre	S	-	000	0-0-0		P/N
		D(反馈 detent)	001	0-0-D		P/N
			100	D-0-0		P/N
			101	D-0-D		P/N
		L(锁定 Latching)	002	0-0-L		P/N
			200	L-0-0		P/N

			202	L-0-L		P/N
摩擦定位 Friction brake	F	-	000	0-0-0		P/N
		L(锁定 Latching)	020	0-L-0		N
(档位)锁定 Latching	L	-	222	L-L-L		N
			333	L-L-L-L-L		N

机械中位锁止字母符号 centre mechanical lock letter symbols	机械中位锁止功能原理符号 centre mechanical lock schemic symbols
P (for spring return version)	

P
(for friction hold version)

