

## JFT01 系列拇指摇杆

## JFT01 Series of Fingertip Joysticks



### ➤ 产品介绍 Product Description

JFT01 拇指摇杆为重型机械和非道路车辆提供了比例控制的理想的解决方案。

JFT01 Fingertip Joystick provides an ideal proportional function solution for heavy duty industrial and off-road machinery.

紧凑的结构, 便于被安装在叉车、拖拉机、轮式装载机等机型的操控台和扶手箱上。

Due to its compact design, the fingertip joystick is ideal for use in dashboards or armrest of forklifts, tractors and wheel loaders etc.

丰富的弹簧复位和摩擦定位功能补充了车辆的操作功能需求。多种位置的触觉反馈提供更好的人机交互性。摇杆颜色和符号的丰富选择使操作员能够直观地识别和记忆功能。

Generous functions of spring return and friction allow a broad range of off-highway vehicle functions to be implemented. Haptics feeling of detent and latching provides good human-machine interaction. And the large selection of actuator colours and symbols enables the operator to visually identify and remember the functions.

### ➤ 产品特点 Features

- 单轴操作  
Single axis Actuation
- 非接触式霍尔传感  
Contactless Hall Effect sensing
- 丰富的功能  
Multiple functions
- 丰富的颜色和图标  
Multiple colours and symbols
- 便捷的“表面”安装（安装在面板表面，面板只需开穿线束的孔）  
Easy 'surface' installation (installed on the surface of the panel, panel only needs to be cutout for cable going-through)
- TPE 软质摇杆帽  
TPE soft touch sections of the actuator cap
- 两种安装孔位允许和大多数的竞品互换  
Two mounting panel fixing options in one body allow interchange with most rivals
- 电路部分灌封  
Potted electronics

## ➤ 主要技术参数 Technical Specifications

### 机械性能 Mechanical specifications

功能	Functions	弹簧复中 Spring return-to-centre 弹簧复端位 Spring return-to-end 摩擦定位 Friction (details refer to "功能 Functions ")
偏转角度	Deflection Angle	Y axis: $\pm 30^\circ$ 仅弹簧复位, 500 万次 5 million cycles for Spring-return only model
使用寿命	Operation Life	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 model
重量	Weight	50g
颜色定制	Color Customization	YES
丝印定制	Graphical Symbols Customization	YES

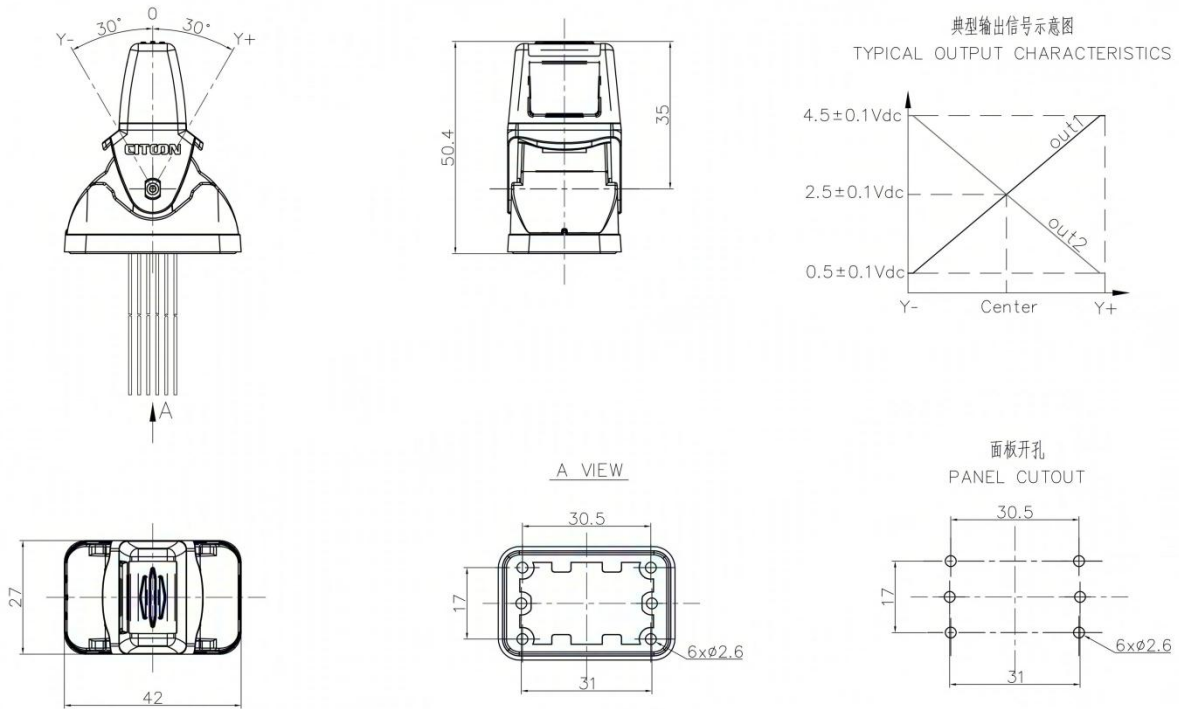
### 电气性能 Electrical specifications

电气原理	Sensor Type	Hall-effect 霍尔
供电电压	Supply Voltage	$5 \pm 10\%V$ DC or 8-32V DC
输出信号	Output	Analog, PWM
解析率	Resolution	12 bit (0.025% of measurement range)
精度	Accuracy	Max 2.0% FS
开关点位	Switching Points	YES

### 环境测试 Environmental specifications

工作温度	Operating temp. range	$-40^\circ\text{C} \sim 85^\circ\text{C}$
储存温度	Storage temp. range	$-40^\circ\text{C} \sim 85^\circ\text{C}$ 安装法兰面以上 IP65 电路部分 IP67
防护等级	Ingress Protection (IP) rating	Sealing above the flange IP65 Electronics IP67
EMC	EMC	100V/m
ESD	ESD	$\pm 8\text{kV}$ (contact discharge) $\pm 15\text{kV}$ (air discharge)

## ➤ 外形&安装尺寸 Dimensions(mm)



## ➤ 功能 Functions

### 弹簧复中位

- 带 Y+/Y-位置反馈(标配)
- 不带两端位置反馈
- 带 Y+端机械锁止
- 带 Y+/Y-机械锁止

### Spring return-to-centre

- with Y+/Y- ends detent(standard)
- With no detent
- with Y+ end latching
- with Y+/Y- ends latching

### 弹簧复端位

- 弹簧复 Y-端, 不带位置反馈和机械锁止

### Spring return-to-end

- return to Y- end, with no detent and latching

### 摩擦定位

- 带中位反馈(标配)
- 无中位反馈

### Friction

- with centre detent(standard)
- With no centre detent

### \* 释义 paraphrase

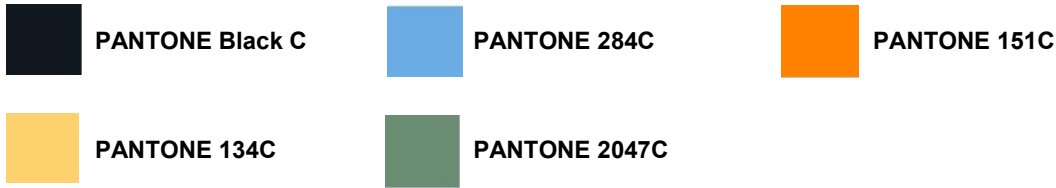
Detent- feeling points 位置反馈

Latching- fixation points/locking 锁止

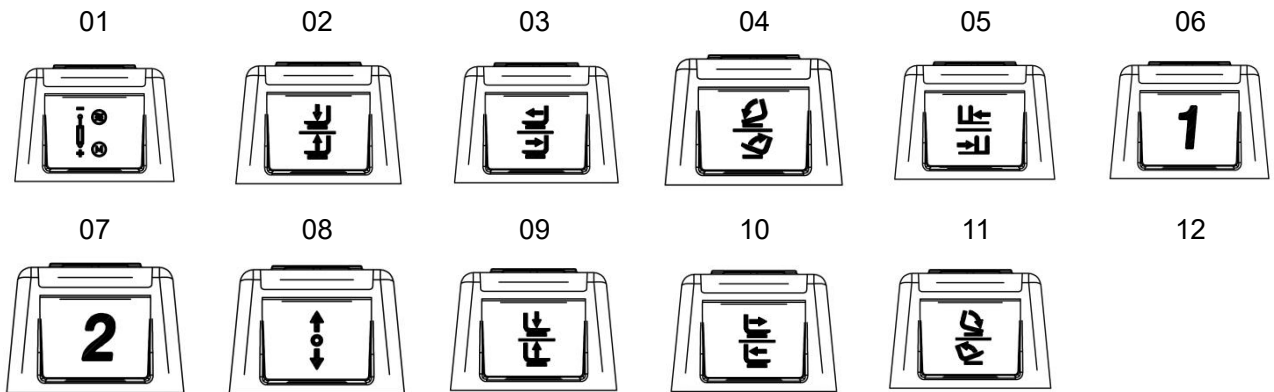
Y-, the operator side 操作者侧

Y+, the opposite side of the operator 操作者反方向侧

➤ **颜色 Color:**



➤ **印刷 Graphical Symbols**



➤ **编号规则 Product Code Reference**

JFT01	1	1	00	LV
产品类别 Product Family Name	功能 Functions	颜色 Colors	图形符号 Graphical symbols	供电电压 Supply Voltage
JFT01	<p><b>0-</b> Spring return-to-centre with NO detent 弹簧复中, 无两端位置反馈</p> <p><b>1-</b> Spring return-to-centre with Y+/Y- ends detents(standard) 弹簧复中, 带 Y+/Y-位置反馈(标配)</p> <p><b>2-</b> Spring return-to-centre with Y+ end latching 弹簧复中, 带 Y+端机械锁止</p> <p><b>3-</b> Spring return-to-centre with Y+/Y- ends latching 弹簧复中, 带 Y+/Y-机械锁止</p> <p><b>4-</b> Spring return-to-Y- end 弹簧复 Y-端</p> <p><b>5-</b> Spring return-to-Y+ end 弹簧复 Y+端</p>	<p><b>0-</b> Black 黑色</p> <p><b>1-</b> Blue 蓝色</p> <p><b>2-</b> Orange 橙色</p> <p><b>3-</b> Yellow 黄色</p> <p><b>4-</b> Green 绿色</p>	<p><b>00-</b> No symbol</p> <p><b>XX-</b> Symbol</p>	<p>LV- 5±10% V dc</p> <p>HV- 12/24 V dc</p>

6- Friction with centre detent(standard)

摩擦定位, 带中位反馈(标配)

7- Friction w/o centre detent

摩擦定位, 无中位反馈

8- Five detent positions 五档

<b>03</b>	<b>00</b>	<b>00</b>
<i>输出信号</i>	<i>开关点位</i>	<i>出线/连接器</i>
<i>Signal Output</i>	<i>Swicthing points</i>	<i>Connection</i>
01- 0.25~4.75V dc	<b>00-</b> No Switches	<b>00</b> - 250mm Loose Cable (AWG 24)
02- 4.75~0.25V dc	<b>05-</b> ±5 Degrees	<b>01</b> - Molex Micro-Fit Connector 250mm Cable
03- 0.5~4.5V dc	<b>15-</b> ±15 Degrees	
04- 4.5~0.5V dc	<b>30-</b> ±30 Degrees	
16- 1-5V		
17- 3-5V		
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		