MKF-JS23 Series Single-Axis Joystick



Handle A (Silver)



Handle A (Black)



Handle B (Black)



Handle D (Silver)

MKF-JS23 Series Single-Axis Joystickis a primary component for video switcher products. Uses German-imported Hall sensor with full-temperature-range linear compensation and multi-point linearity correction. Non-contact between moving parts and sensor for long service life. Features advanced structural design and imported damping materials for excellent tactile feel. Widely used in radio and television products. Xiaolong Electric provides not only single-axis joysticks but also compatible 3-axis joysticks, and offers complete solutions.

Features：

- ✧ Number of Axes： 1 axis
- ✧ Sensor：Hall sensor
- ✧ Handle Material：Aluminum alloy, anodized surface
- ✧ Positioning Method： Friction Positioning (standard); Spring Auto-Return (90mm handle only)
- ✧ Center Detent： Mechanical center detent (optional) - provides tactile and audible feedback when passing through the center position.
- ✧ Operating Angle： 76 deg (±38°）
- ✧ Power Supply: DC5V， 24V (default is 5V)
- ✧ Power Consumption： 12MA (Test conditions: 5V power supply, analog signal output)
- ✧ Signal Output： Analog voltage 0-5V, Current 0-20MA, USB
- ✧ Lifespan： 10 million cycles
- ✧ Operating Temperature： -40℃～+70℃
- ✧ Protection： IP54

Product Applications

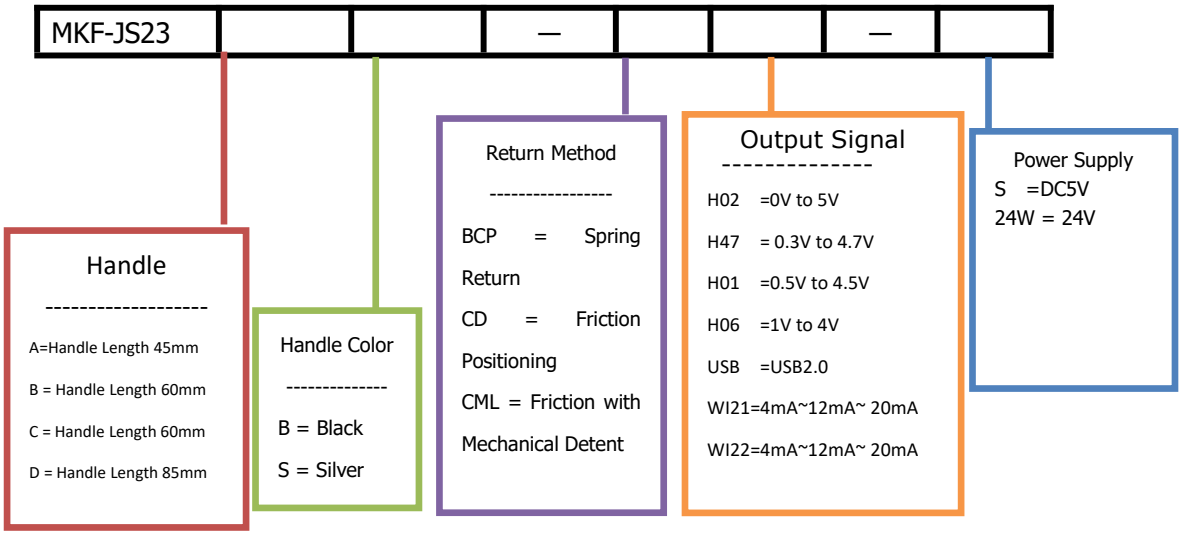




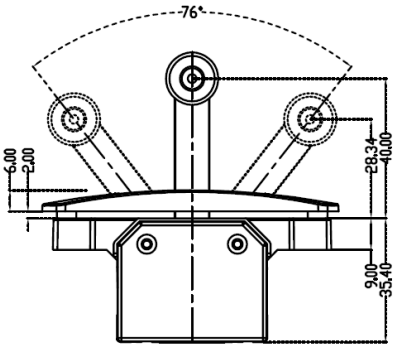


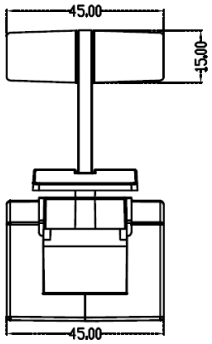


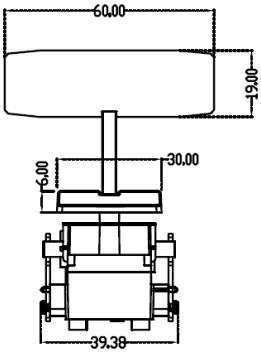
Product Model Parameter Selection

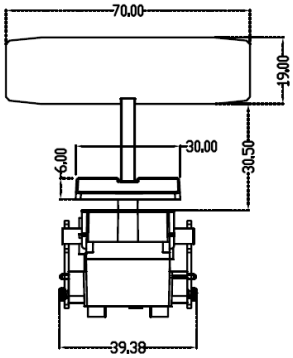


- ✧ 20mA refers to current output. When selecting current signal output mode, power supply is 24V. Signal Output range can be 0-20mA or 4-20mA. Please specify signal range when ordering.
- ✧ USB refers to USB signal output. Powered via USB; select "no power supply" for power option. Uses HID protocol, no driver needed.









Handle A

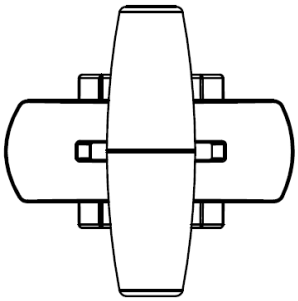


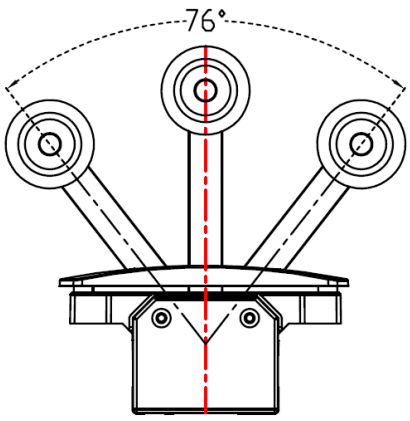
Handle A
Handle Length45mm
Handle Diameter15mm

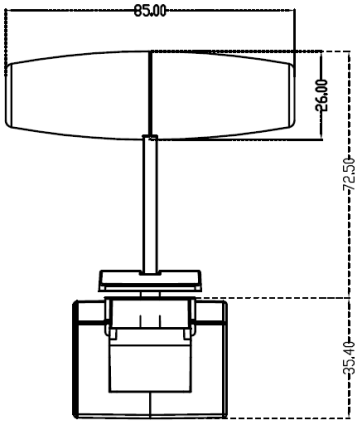
Handle B
Handle Length60mm
Handle Diameter19mm

Handle C
Handle Length70mm
Handle Diameter19mm

Handle D Spring





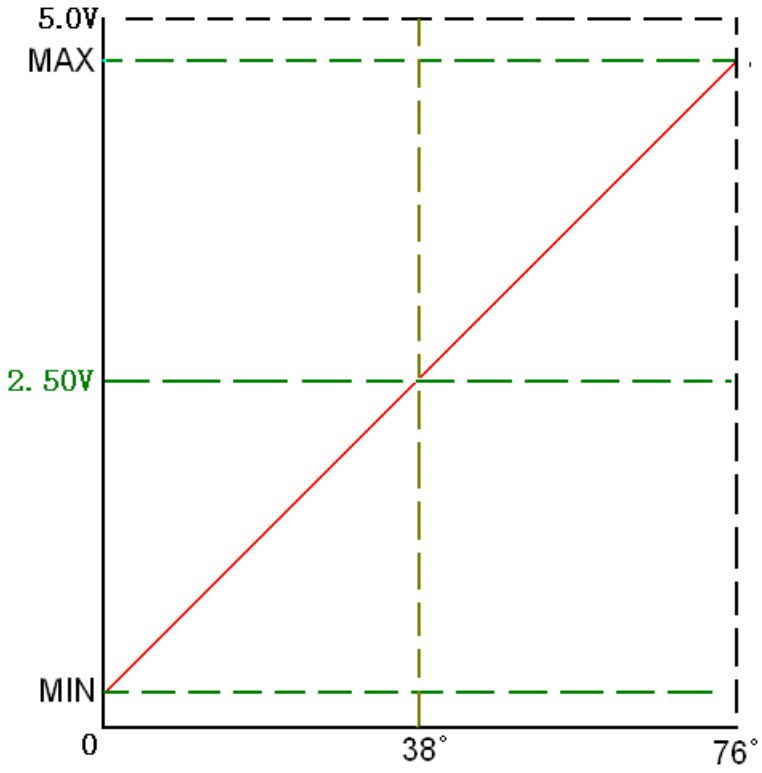


Handle D : Handle Length85mm / Handle Diameter26mm /Material: Aluminum Alloy /Spring Auto-Return

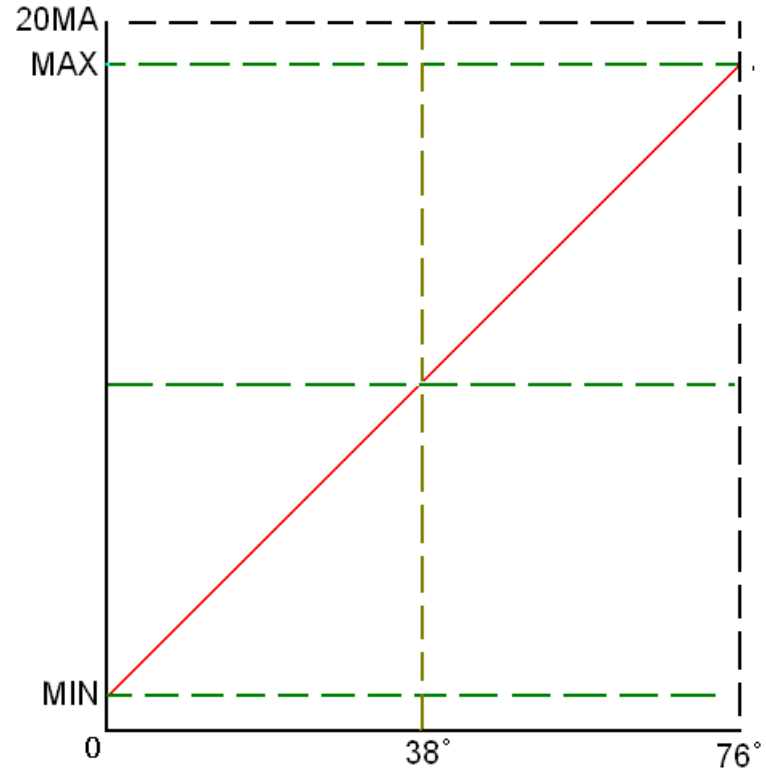
Limit Technical Parameters：

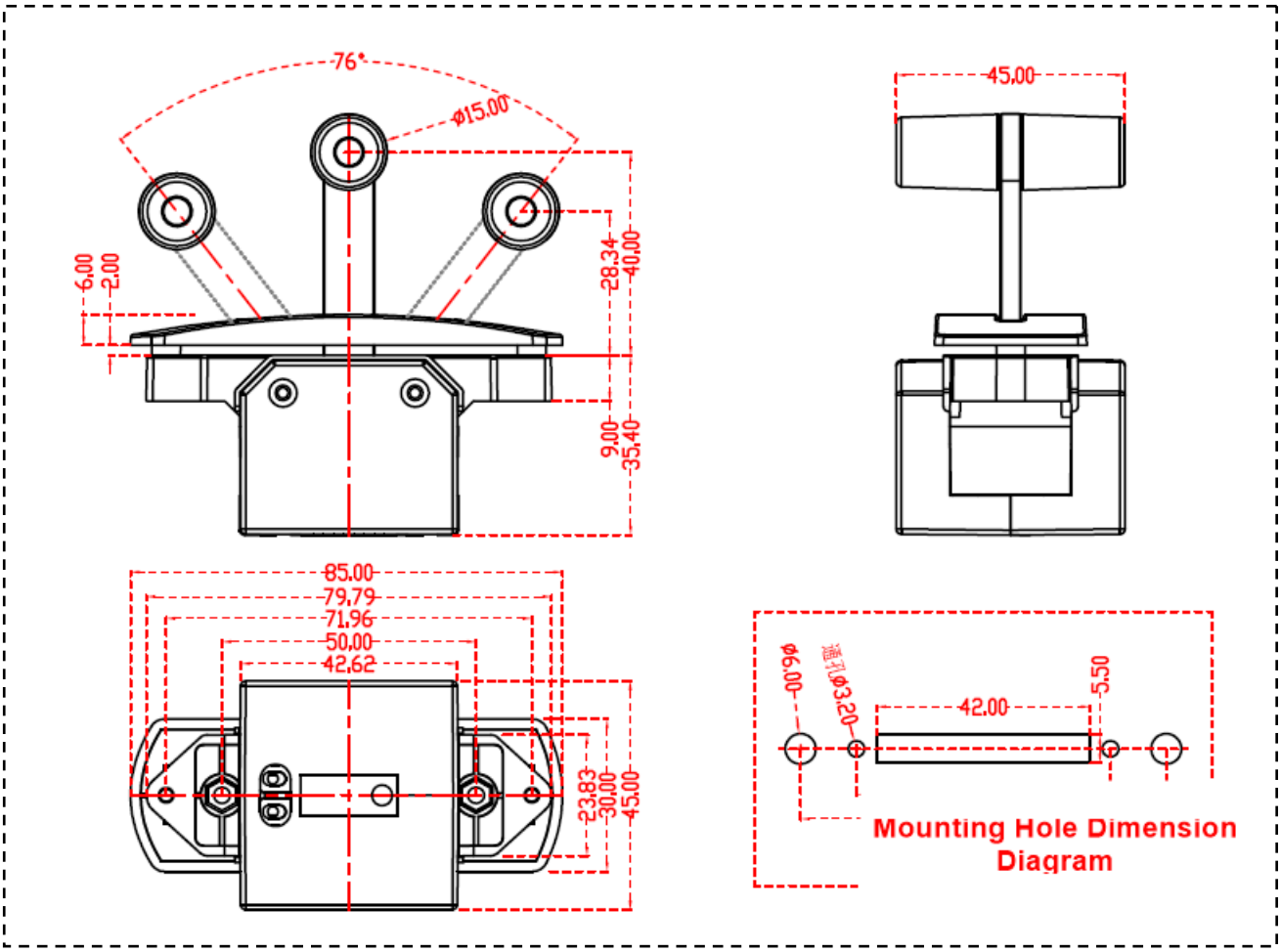
- ✧ Minimum Supply Voltage：4.2V/（max supply voltage at 5V）
- ✧ Maximum Supply Voltage：5.5V/（max supply voltage at 5V）， 28V/(at 24V supply)
- ✧ Maximum Current (at 5V): 15ma

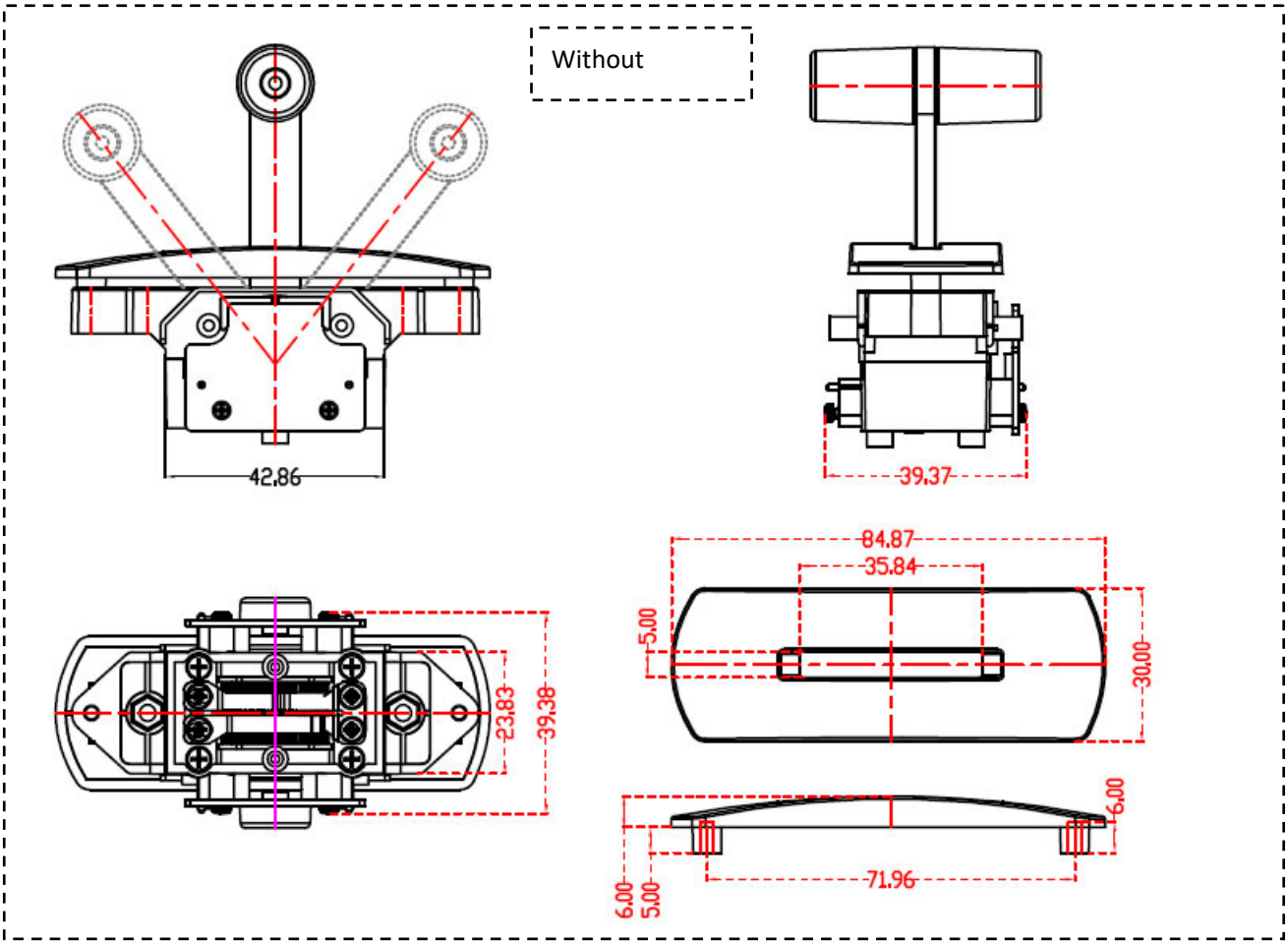
Analog Voltage Signal Output Curve：



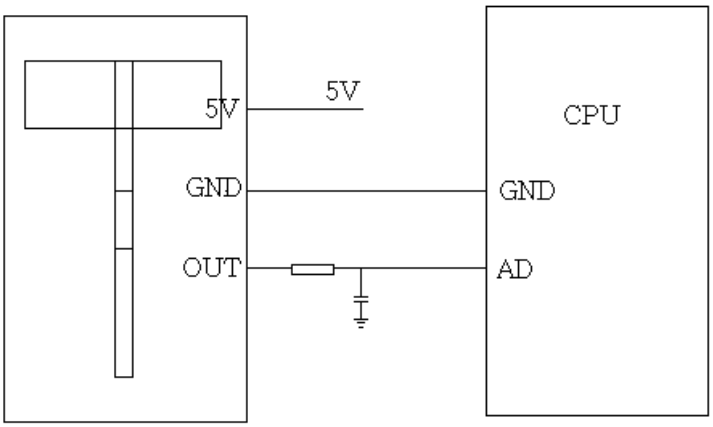
Analog Current Signal Output Curve：




76°
Φ15.00
45.00
6.00
2.00
28.34
40.00
9.00
35.40
85.00
79.79
71.96
50.00
42.62
23.83
30.00
45.00
Φ6.00
通孔Φ3.20
42.00
5.50
Mounting Hole Dimension Diagram

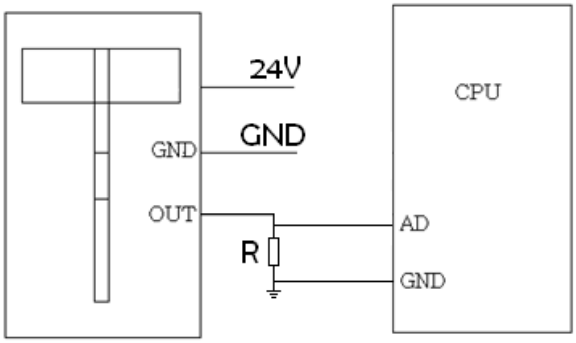

Without
42.86
39.37
84.87
35.84
5.00
30.00
23.83
39.38
6.00
71.96
6.00
5.00

Analog Voltage Signal Output Wiring Diagram



Resistor R = 100ohm-1Kohm
Capacitor C = 1nF

Current Output Wiring Diagram



Resistor R = 100ohm-1000ohm
Example: R=250ohm / 0.25W, AD sampling value is 0-5V

Lead Wire Definitions：

Red: Power +
Black: GND
Yellow: Signal Output

USB Communication Protocol

- ✧ Interface Type：USB2.0
- ✧ Driver：USB HIDprotocol,no driver needed,Compatible with Windows XP, Windows 7, Windows 10
- ✧ Recognized as a game controller in the computer
- ✧ Supports Microsoft DirectX. When writing programs, search online for "Usb joystick Direct input "

Protocol: **USB2.0 HID**

IdentificationName: **3D Joystick Keyboard**

USB Keyboard Data Format (3 bytes HEX):

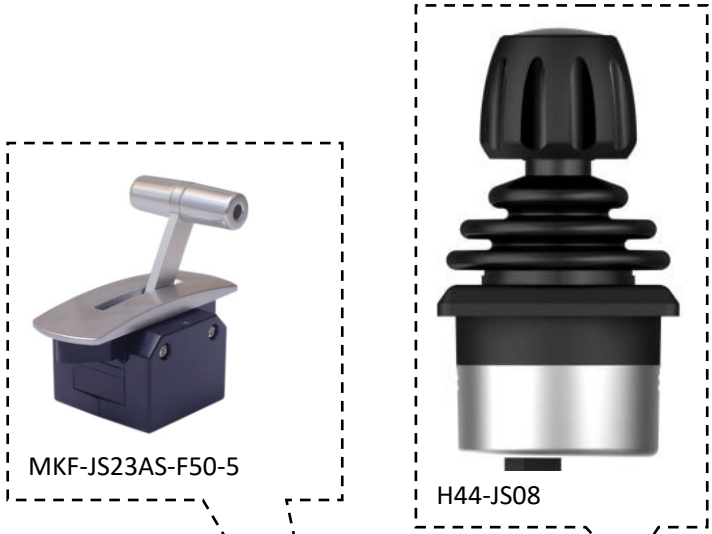
The USB sends 3-axis joystick angle parameters and button status values

byte1	byte2	byte3
DataL Data Low Byte	DataH Data High Byte	0X00 Not Used

XXXX: X-axis data, 0000-03FF (BYTE1 = data high, BYTE2 = data low)







BMD Keyboard Controller