MKF-JS07 HALL JOYSTICK

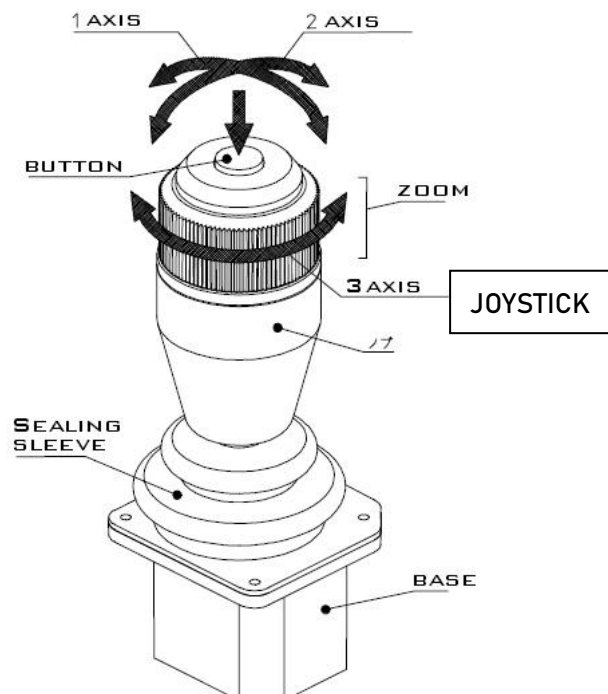## 3 Axis with 1 Button on the top

Hall joystick, 3-axis, with a button, instrument panel installation method, stainless steel and aluminum alloy materials, spring automatic return structure, German high-precision Hall sensor, full temperature range linear correction, protection level above IP54, Smoother operation feel, ergonomic mechanical design.
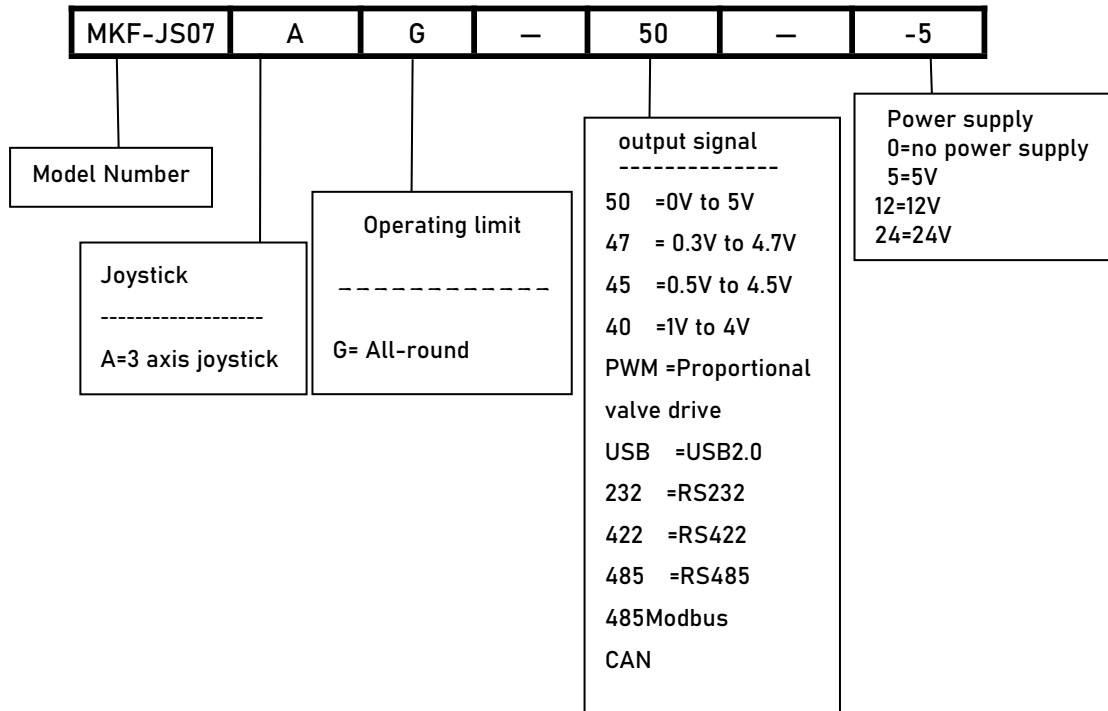
FEATURES

Material	stainless steel + aluminum alloy + PC+ABS(plastic)
Positioning	Spring returns automatically
Operating angle	XY axis ±25 degrees, square limit (circular angle); Z axis ±36 degrees
Operating range	360 degrees in all directions
Button switch	no button or 1 button (waterproof reset button)
Sensor	Hall sensor, Hall sensor imported from Germany, linear correction in the whole temperature range, linear correction of magnetic curve
Signal output	analog voltage 0-5V Analog current 0-20MA RS485, RS422, RS232, USB, CAN
Operating force (X,Y axis)	0.98N(100gf)(typ)
Operating Force (Z axis)	0.0067N.m{63gf.m}(typ)
Maximum load capacity (X, Y axis)	120N(12.2kgf)
Maximum bearing capacity (Z axis)	1.19N.m(12.2kgf.cm)
Power supply	DC5V, DC12-24V;
Power consumption	less than 20MA (5V power supply) Signal output and the number of axes vary
Operating life	more than 5 million times;
Temperature	-40° ~ +70°
Working temperature	-40℃~ +70℃
Storage temperature	-50℃~ +80℃
Protection level	IEC60529/IP40
Weight	128g(typ)
Base size	55(L)x55(W)x38.5(H)mm;

OTHERS

Button: switch value, press to short-circuit with GND, and disconnect with GND when released;
add resistance (10K) when used;XYZ output load should not be less than 1.0KΩ.

PRODUCT MODEL PARAMETER SELECTION

| MKF-JS07 | A | G | — | 50 | — | -5 |

Model Number

Joystick

A=3 axis joystick

Operating limit
- - - - - - - - - - -
G= All-round

output signal
- - - - - - - - - - - -
50 =0V to 5V
47 = 0.3V to 4.7V
45 =0.5V to 4.5V
40 =1V to 4V
PWM =Proportional valve drive
USB =USB2.0
232 =RS232
422 =RS422
485 =RS485
485Modbus
CAN

Power supply
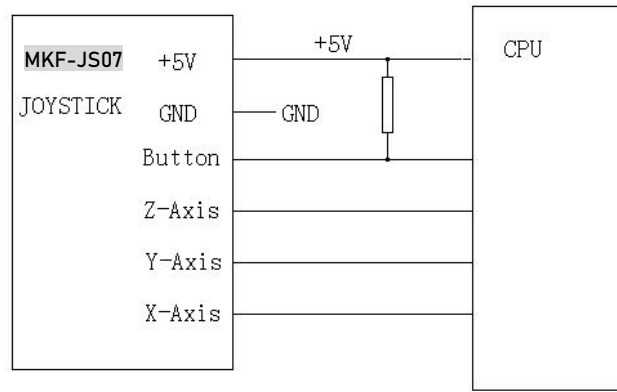0=no power supply
5=5V
12=12V
24=24V

- When the USB interface, no additional power supply is required.
- A-type handle has only 3 axes in all directions, and cannot choose cross or one word.
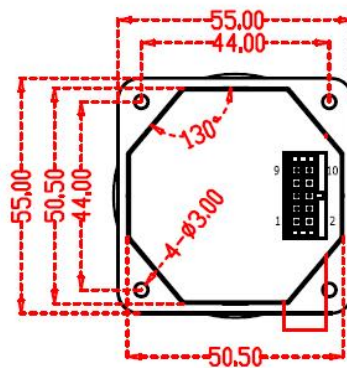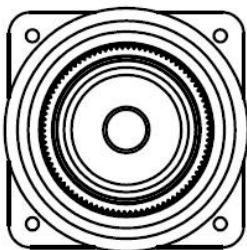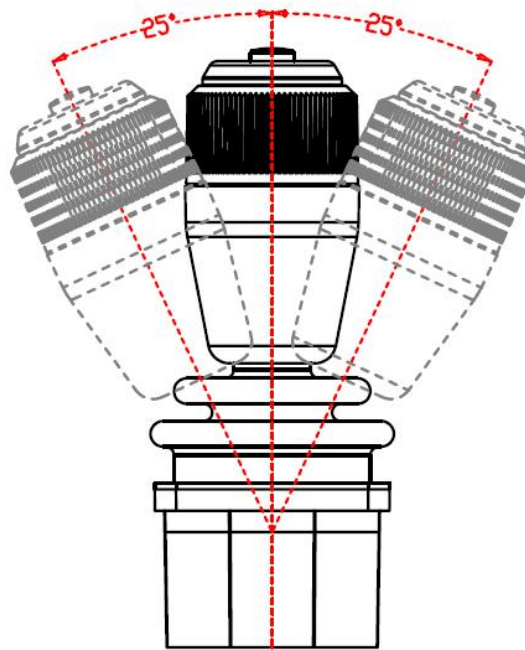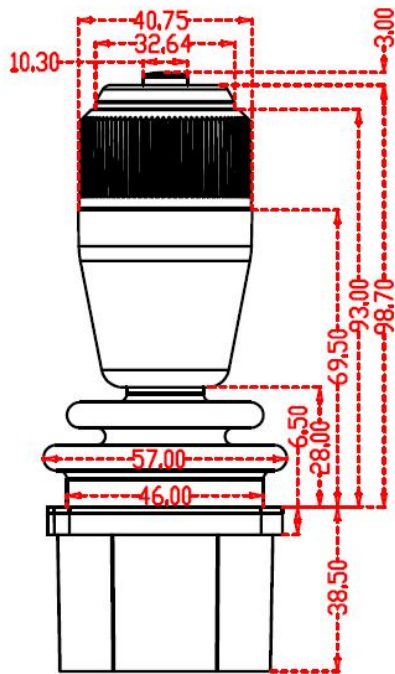
SPECIFICATION

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Minimum working voltage	3.05V (when 2 axis 5V power supply)
	7V (when 12-24V power supply)
	4.0V (when 3 axis 5V power supply)
	7V (when 12-24V power supply)
Maximum input voltage	5.5V (when 5V power supply)
	28V (when 12-24V power supply)
Working current	15mA (5V power supply, analog voltage signal output)
Analog voltage signal output load	Greater than 1KΩ
Analog voltage signal center voltage	2.50V or 50%Vdd

Diagram

DRAWING

INSTALLATION DRAWING

Cabinet

Cabinet

4-Ø3,30

44,00

44,00

Ø47,00
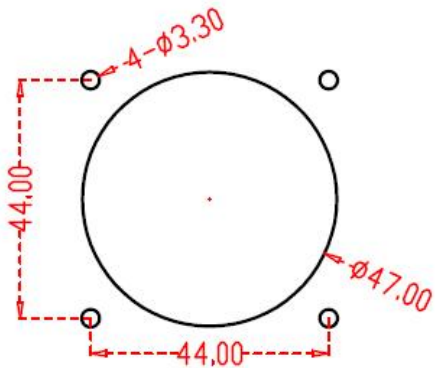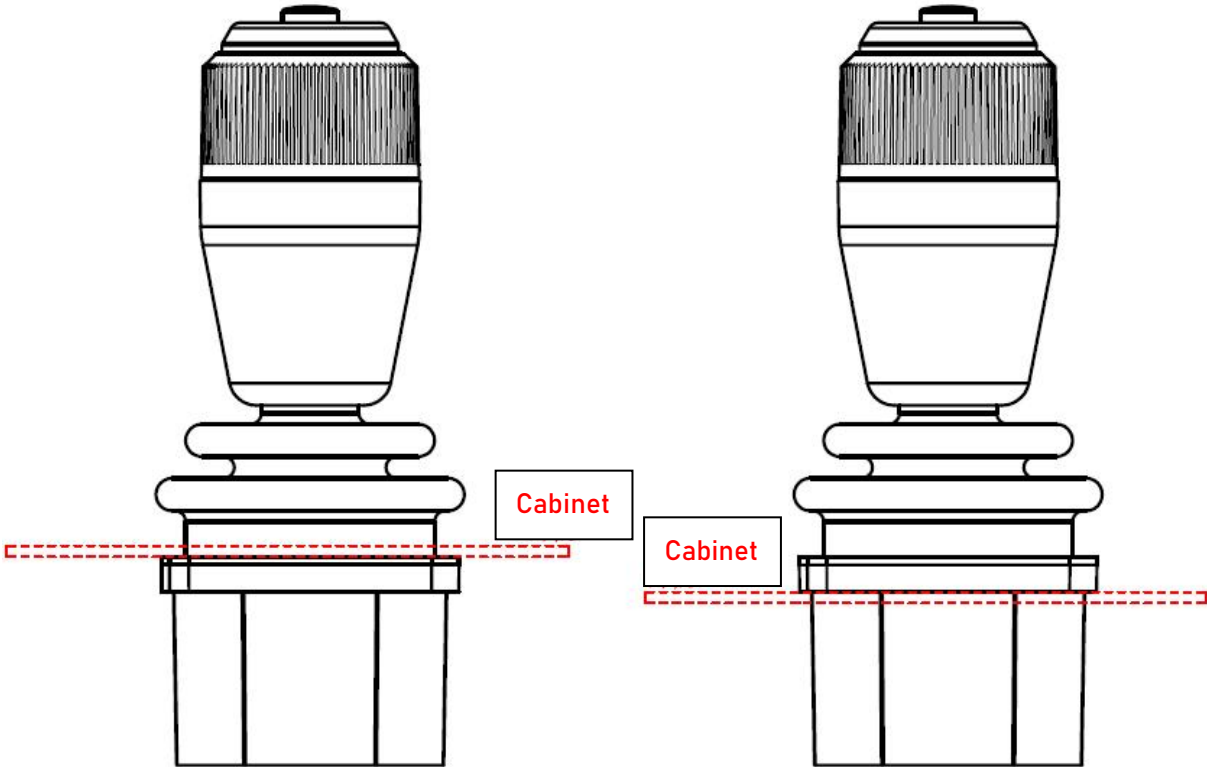
Installation at the rear side

12,83

12,83

15,28

44,00

50,50

44,00

50,50
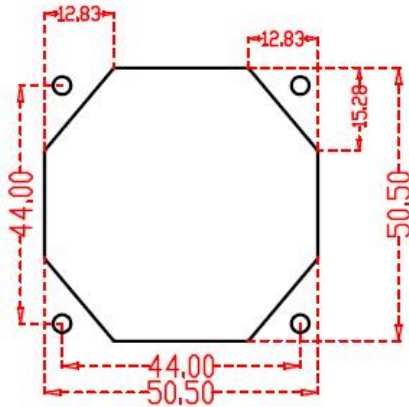
Installation from the top

USB communication protocol:
USB 2.0 HID man-machine interface protocol standard
Support Microsoft operating system, no driver needed; support directX library
Related routines online check "joystick directX input"

1. Data format sent by USB keyboard (7 bytes HEX):

The USB keyboard sends the angle parameters of the keyboard's 3-axis joystick and the state value of the keyboard

byte1	byte2	byte3	byte4	byte5	byte6	byte7
XXL	XXH	YYL	YYH	ZZL	ZZH	BB1

XXXX: X axis data, 0000-03FF, (BYTE2 data high bit, BYTE1 data low bit)
0X0020-0X01FF left
0X0200 stop
0X0201-0X03DF right

YYYY: Y axis data, 0000-03FF, (BYTE4 data high bit, BYTE3 data low bit)
0X0020-0X01FF down
0X0200 stop
0X0201-0X03DF up

ZZZZ: Z axis data, 0000-03FF, (BYTE6 data high bit, BYTE5 data low bit)
0X0020-0X01FF counterclockwise (wide)
0X0200 stop
0X0201-0X03DF clockwise (tele)

BB1: Button Group 1

Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Button 8	Button 7	Button 6	Button 5	Button 4	Button 3	Button 2	Button 1

The development related technical support materials are as follows:

- USB test software
- USB writing routines
- USB keyboard communication protocol

This keyboard driver is driver-free and supports DirectX of Windows. Please search for "direct input joystick" on Baidu. There are related designs in various languages on the Internet.