



OMC45 系列霍尔操纵杆 OMC45 Series Hall Joystick



OMC45系列霍尔操纵杆，2轴或3轴，仪表面板安装方式，采用不锈钢及铝合金材料，弹簧自动回位结构，德国高精度霍尔式传感器，全温度范围线性较正，IP54 以上防护等级，较平滑的操作手感，人体工学机械设计。

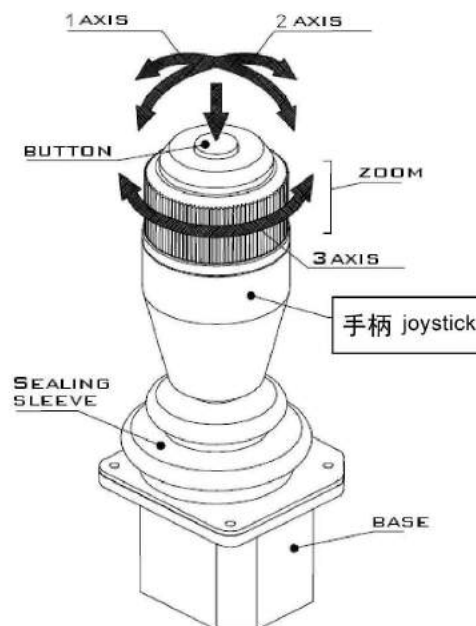
45 Series Hall joystick, 2-axis or 3-axis, instrument panel mounting, apply stainless steel and aluminum alloy, spring return structure, use German high-precision hall-type sensor, full temperature range linear correction, above IP54 protection level, smooth operation feeling , ergonomic mechanical design.

一、产品特点: First、the product features:

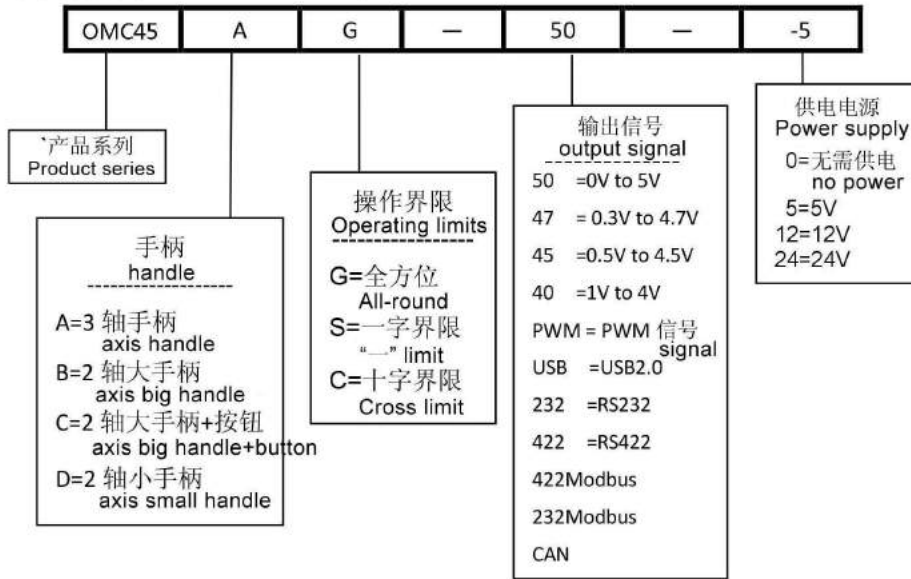
材 料: 不锈钢+铝合金+工程塑料 Material: stainless steel + aluminum + engineering plastics
定 位: 弹簧自动回位 Positioning: spring automatically return
操作角度: XY轴±25度, 方形界限(圆形角); Z轴±36度
Operating angle: XY axis ± 25 degrees, square limit (round angle); Z axis ± 36 degrees
操作范围: 360度全方位; Operating range: 360 degrees in all directions;
按钮开关: 无按钮或1个按钮(防水复位按钮) Push button switch: No button or 1 button (waterproof reset button)
传 感 器: 霍尔传感器, 德国进口霍尔传感器, 全温度范围线性校正, 磁性曲线线性校正;
Sensor: Hall sensor, Germany imported hall sensor, full temperature range linear correction, magnetic curve linear correction
信号输出: 模拟电压 0-5V、模拟电流 0-20mA、RS485、RS422、RS232、USB、CAN
Signal signal output: analog voltage 0-5V, analog current 0-20MA, RS485, RS422, RS232, USB, CAN
操作力度 Operating force (X, Y axis): 0.98N {100gf} (typ)
操作力度 Operating force (Z axis): 0.0067N.m {63gf.cm} (typ)
最大承载力 Maximum bearing capacity (X, Y axis): 120N (12.2kgf)
最大承载力 Maximum bearing capacity (Z axis): 1.19N.m (12.2kgf.cm)
供 电 Power supply: DC5V、DC12-24V;
功 耗: 小于 20MA (5V 供电) 信号输出及轴数的不同而有差别
Power consumption: less than 20MA (5V power supply) be different from signal output and axis number optional
操作寿命: 大于 500 万次; Operating life: more than 5 million times;
温 度: -40度~+70度 Temperature: -40 degrees to +70 degrees
工作温度: -40℃----+70℃ Operating temperature: -40 °C --- +70 °C
保存温度: -50℃----+80℃ Storage temperature: -50 °C --- +80 °C
防护等级: IEC60529/IP40 Protection class: IEC60529 / IP40
重量: 128g (typ) Weight: 128g (typ)
底座尺寸: 55 (L) x55 (W) x38.5 (H) mm; Base size: 55 (L) x55 (W) x38.5 (H) mm;

其它: other:

按钮: 开关量, 按下与GND短接, 放开时与GND断路; 使用时要加上接电阻(10K);
Button: switch, press and GND short circuit, open and GND disconnect; add resistance (10K) when using;
XYZ 输出负载不应小于 1.0KΩ
XYZ output load should not be less than 1.0KΩ



产品型号参数选择 Product model parameter selection

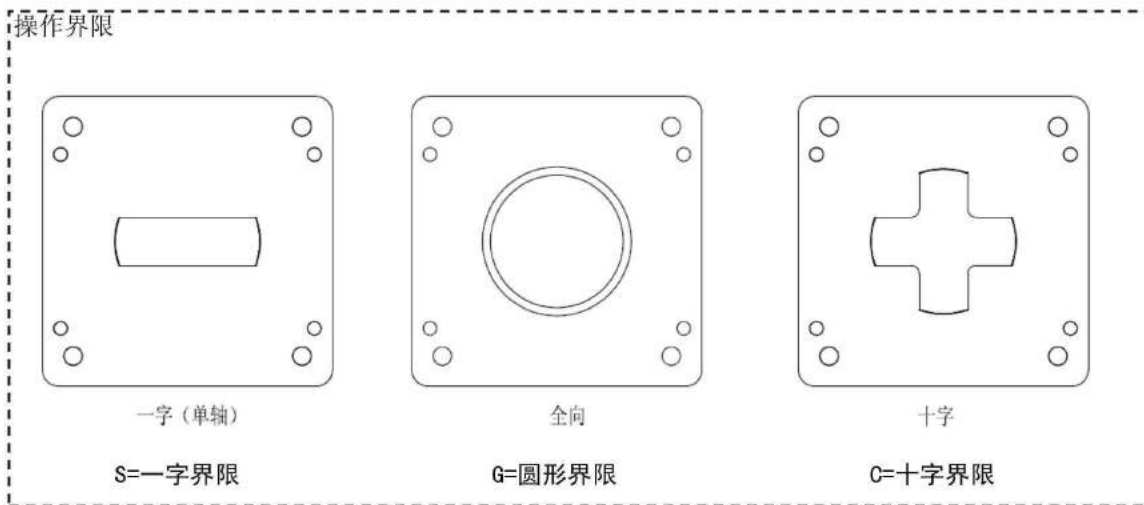


- PWM 订货时，请与工厂联系 PWM order, please contact the factory
- RS232,RS422,及其它的通信协议请与工厂索取
R232.RS422 Communication Protocol pls contact with company
- CAN 通信通信，波特率、扩展码及协议可定制
CAN communication ,baud rate,extend code and protocol can be customized
- 弹簧力度：多种，请与工厂联系
Spring strength : various , pls contact with company

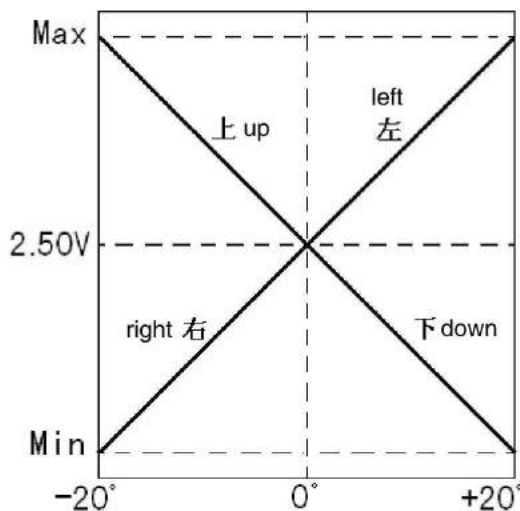
手柄选择 Handle selection

			
<p>A 手柄 A Handle</p>	<p>B 手柄 B Handle</p>	<p>C 手柄 C Handle</p>	<p>D=小手柄 D= Small handle</p>
<p>手柄材料：工程塑料 按钮：1按钮 轴数：3轴 Handle Material: engineering plastic Button: 1 Button Number of axis: 3 axis</p>	<p>手柄材料：铝合金 按钮：无按钮 轴数：2轴 Handle Material: Aluminum Alloy Button: None Button Number of axis: 2 axis</p>	<p>手柄材料：铝合金 按钮：1按钮 轴数：2轴 Handle Material: Aluminum Alloy Button: 1 Button Number of axis: 2 axis</p>	<p>手柄材料：铝合金 按钮：无按钮 轴数：2轴 Handle Material: Aluminum Alloy Button: None Button Number of axis: 2 axis</p>

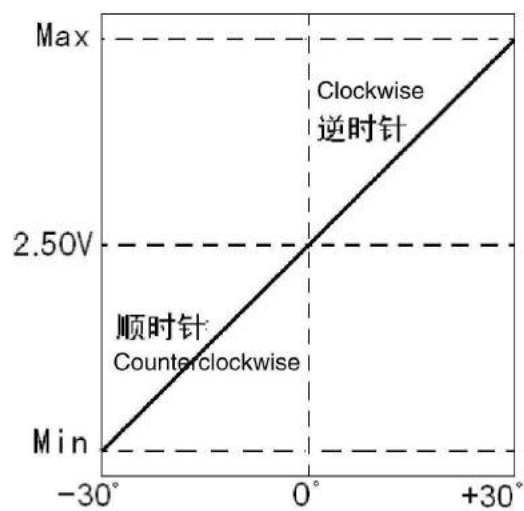
操作范围：Operating range:



模拟电压信号输出：Analog voltage signal output:



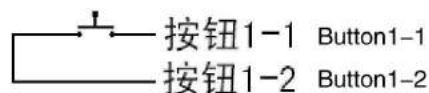
XY 轴模拟电压信号输出图形
XY axis analog voltage signal output graph



Z 轴模拟电压信号输出图形
Z axis analog voltage signal output graph

按钮开关原理图：

Button switch schematic:



按钮开关技术参数：（欧姆龙）

- ◆ 开关方式：常开
- ◆ 触点电流：50mA/5V
- ◆ 防护等级：IP40
- ◆ 操作寿命：大于 100 万次

Button switch Technical parameters:

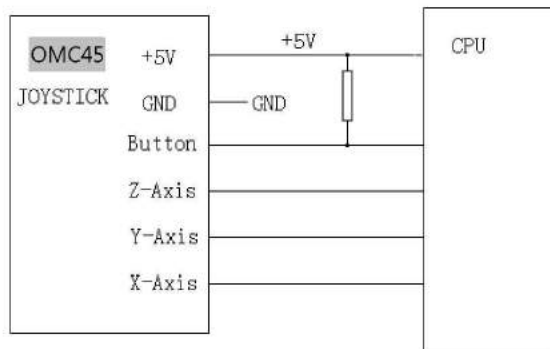
- ◆ switch mode: normally open
- ◆ contact current: 50mA / 5V
- ◆ protection class: IP40
- ◆ operating life: more than 1 million times



电气参数: Electrical parameters:

最低工作电压: 3.05V (2轴 5V 供电时)、7V (12-24V 供电时)
Minimum operating voltage: 3.05V (2-axis 5V power supply), 7V (12-24V power supply)
4.0V (3轴 5V 供电时)、7V (12-24V 供电时)
4.0V (3-axis 5V power supply), 7V (12-24V power supply)
最高输入电压: 5.5V (5V 供电时)、28V (12-24V 供电时)
Maximum input voltage: 5.5V (5V power supply), 28V (12-24V power supply)
工作电流: 15mA (5V 供电, 模拟电压信号输出时)
Working current: 15mA (5V power supply, analog voltage signal output)
模拟电压信号输出负载: 大于 1KΩ
Analog voltage signal output load: more than 1KΩ
模拟电压信号中心电压: 2.50V 或 50%Vdd
Analog voltage signal center voltage: 2.50V or 50% Vdd

接线图 wiring diagram

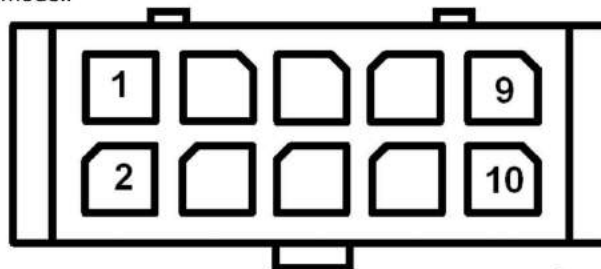


操纵杆端子图: Joystick terminal diagram:



引线长度: 30CM
Lead length: 30CM

连接器型号: Molex 43045-10000
Connector model:



1. 模拟电压信号 Analog voltage signal

引脚号 Pin No.	颜色 Color	功能 Function	引脚号 Pin No.	颜色 Color	功能 Function
1	白色 white	按钮 1-1 button 1-1	2		空 empty
3	白色 white	按钮 1-2 button 1-2	4		空 empty
5	黄色 yellow	X 信号 X signal	6	黑色 black	电源-(GND) Power - (GND)
7	绿色 green	Y 信号 Y signal	8	黑色 black	电源-(GND) Power - (GND)
9	蓝色 blue	Z 信号 Z signal	10	红色 red	电源+(VCC) Power + (VCC)



RS422 信号输出接口 RS422 signal output interface

引脚号 Pin No.	颜色 Color	功能 Function	引脚号 Pin No.	颜色 Color	功能 Function
1	白色 white	TX-	2		空 empty
3	蓝色 blue	TX+	4		空 empty
5	黑色 black	地 ground GND	6		GND
7	黄色 yellow	RX+	8	黑色 black	电源-(GND) Power - (GND)
9	绿色 green	RX-	10	红色 red	电源+(VCC) Power + (VCC)

RS232 信号 signal

引脚号 Pin No.	颜色 Color	功能 Function	引脚号 Pin No.	颜色 Color	功能 Function
1			2		空 empty
3	绿色 green	发送 Send TXD	4		空 empty
5	黑色 black	地 ground GND	6		GND
7	黄色 yellow	接收 Receive RXD	8	黑色 black	电源-(GND) Power - (GND)
9			10	红色 red	电源+(VCC) Power + (VCC)

CAN 信号 signal

引脚号 Pin No.	颜色 Color	功能 Function	引脚号 Pin No.	颜色 Color	功能 Function
1	蓝色 blue	CAN-H	2		RX232-TX (CAN 参数设置 parameter setting)
3	白色 white	CAN-L	4		RX232-RX (CAN 参数设置 parameter setting)
5	黑色 black	地 ground GND	6		GND
7	黑色 black	地 ground GND	8	黑色 black	电源-(GND) Power - (GND)
9	红色 red	5V	10	红色 red	电源+(24V) Power + (24V)

5V 与 24V 供电, 订货时选其一

5V and 24V power supply, choose one when ordering

RX232 实际没有引出线 (订制产品用)

RX232 actually dont out lead (custom products)

连接器引脚定义-USB 信号输出:

Connector Pin Definition - USB Signal Output:

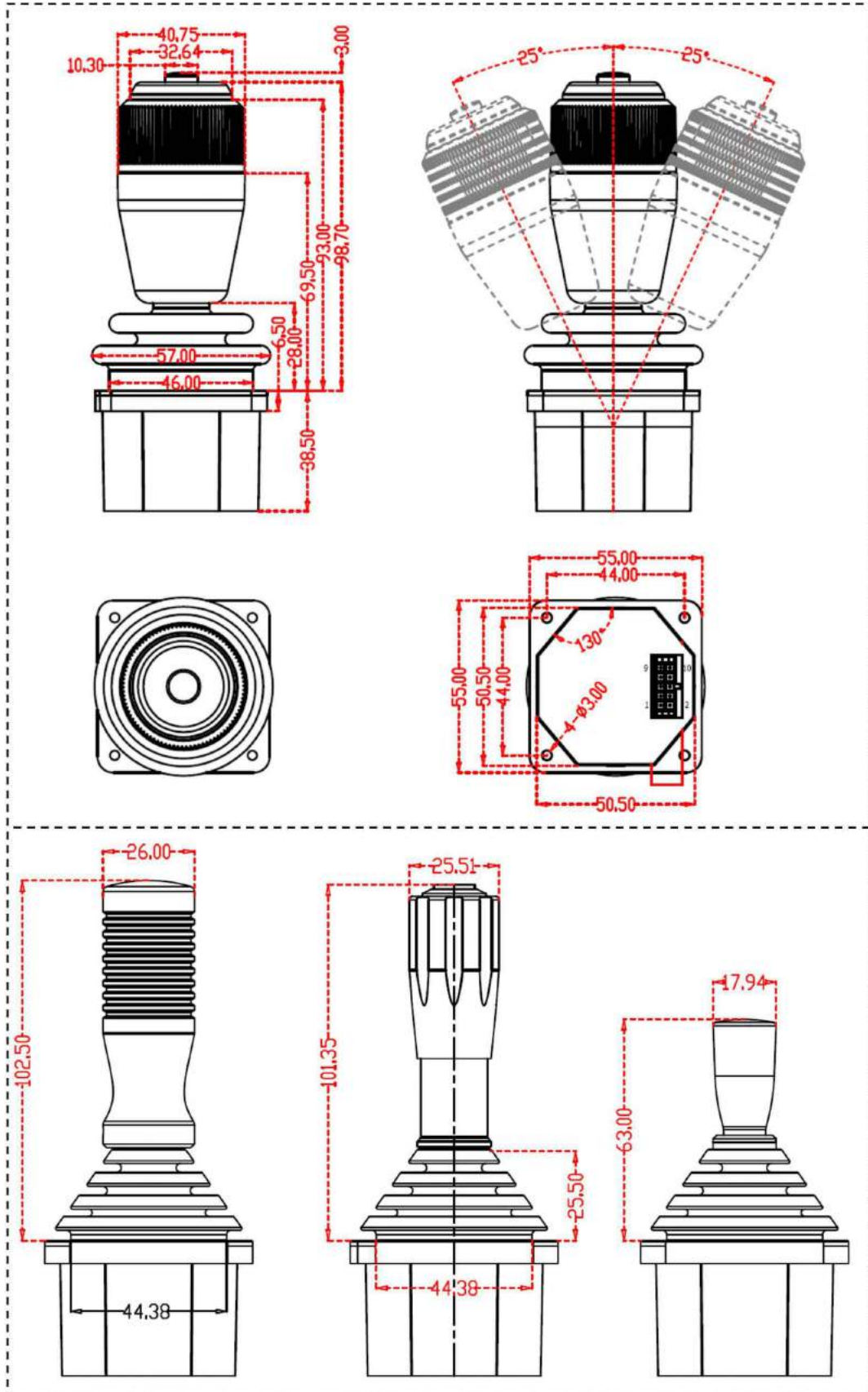
引线长度 1.6M Lead length 1.6M

USB 插头: TAPY-A USB plug: TAPY-A



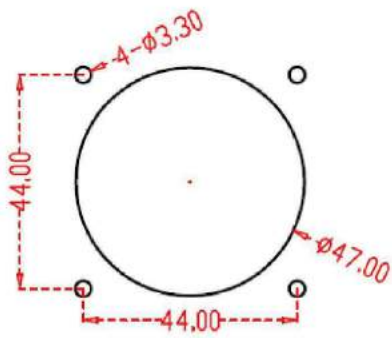
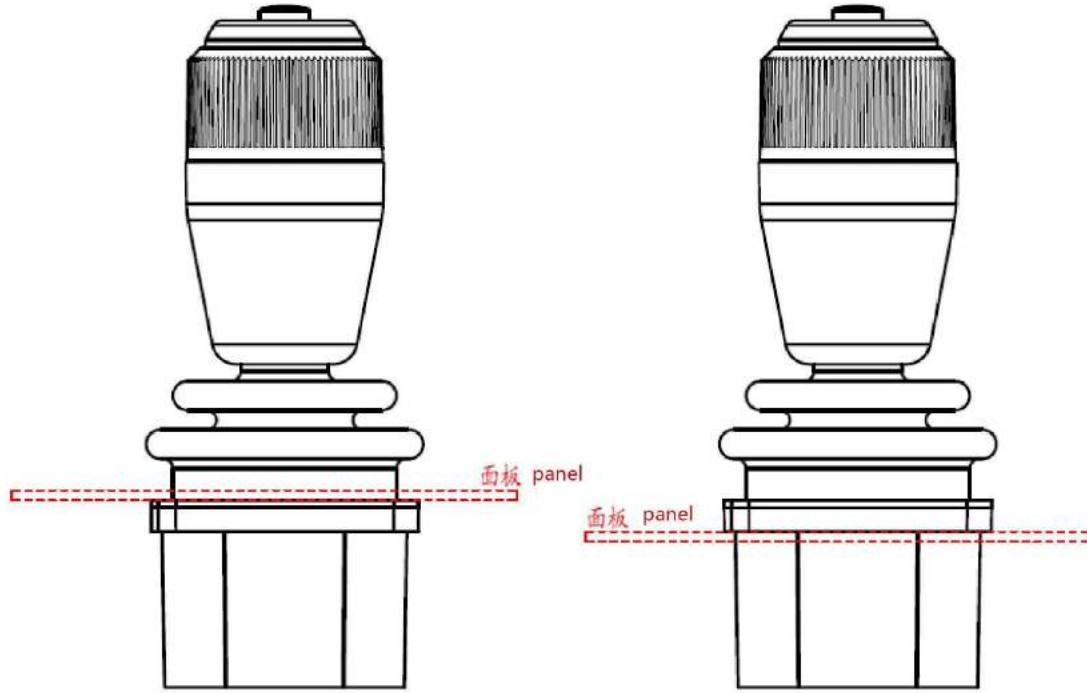
引脚 Pin	符号 Symbol	颜色 Color	功能说明 Function Description
1	+5V	红 red	USB 电源+ USB power +
2	D-	白 white	数据负 data negative
3	D+	蓝 blue	数据正 data positive
4	GND	黑 black	USB 电源-GND USB Power-GND

外形尺寸图: Dimensions:

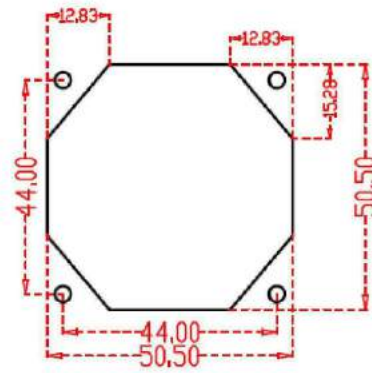




安装方式: Installation:



从底部安装开孔图
from bottom install open hole diagram



从上面安装开孔图
from top install open hole diagram

操纵杆装饰圈 Joystick decorative ring



- 材料: ABS
- 颜色: 银色
- 表面处理: 喷油+UV
- Material: ABS
- color: silver
- Surface treatment: injection + UV



此零件是选配件，不在产品标配中，另外订购
This part is an option, not in the product standard set, pls ordered separately

