

温州联宝贸易有限公司

Wenzhou Linp Trading co., ltd.

乐清市欧姆特尔电子科技有限公司

Yueqing Omtel electronic technology co., ltd.

OM2100系列工业手柄 OM2100 series industry handle



产品特点Product characteristic.

- 摩擦定位或弹簧复位, 中位和起点(终点)可选择机械锁定。
The friction localization or the spring automatic reset, the center position and starting point(the end point)could selecting mechanism locking.
- 单轴前后方向操作或单方向操作。
single axis front and back direction operation or single-direction operation
- 可选择霍尔无接触角度检测或电位器角度检测方式。
Could choose the Hall non-contact angle detect or the potentiometer angle detect method.
- 可选配方向微动开关(开关最大电流4A)。
Could select and match the direction micro switch (switch maximum current 4A)
- 可配置多种型号手柄上端。
Could dispose many kinds of handle top port type.

应用范围Application scope

该系列产品主要应用于旋挖钻机、高空消防车、起重机、盾构机、煤矿提升机、石油提升机。
This series product mainly applies in turns on lathe digs the drilling machine, the upper air fire engine, the hoist crane, the shield machine, the coal mine elevator, the petroleum elevator.

技术参数 Technical parameter

机械参数 Mechanical parameter

摇动角度 Swing angle: $\pm 37.5^\circ$

使用寿命 Service life: 大于500万次 (电位器型), 大于1000万次 (霍尔型)

Is bigger than 5,000,000 times (potentiometer type),

is bigger than 10,000,000 times (Hall type)

操作力 Operate strength: 15N (最大) 15N (biggest)

限位力 Limit position strength: 50N

重量 Weight: 500g (无上端) 500g (without the top port)

电气参数 Electrical parameter

电位器型 Potentiometer type

电源电压: 小于36Vdc

Power supply voltage: Smaller than 36Vdc

总电阻值: 10K Ω

Total resistance value: 10K Ω

精度: 10%

Precision: 10%

中心角度: $\pm 3^\circ$

Central angle: $\pm 3^\circ$

最大功率: 0.2W

Maximum power rate: 0.2W

微动开关 Micro switch:

负载能力: 15A@250Vac, 10A@30Vdc (阻性负载)

Load capacity: 15A@250Vac, 10A@30Vdc (resistive load)

机械寿命: 3000 万次以上

Mechanical life: more than 30,000,000 times

电气寿命: 10 万次以上

Electrical life: more than 100,000 times

绝缘电阻: 100M Ω 以上 (500Vdc 绝缘电阻计)

Insulation resistances: more than 100M Ω

(500Vdc insulation resistance meter)

霍尔型 Hall type

电源电压: 5Vdc

Power supply voltage: 5Vdc

极限允许过电压: 30Vdc (连续使用)

Limit permission overvoltage: 30Vdc (continuous use)

反向极限允许电压: 15Vdc

The reverse limit permits the voltage: 15Vdc

输出电压范围 (可选) Output voltage scope (optional):

H51= 霍尔型, 每轴单霍尔, 输入电压5Vdc, 10% ~50% ~90%Vdc 电压输出

H51= Hall type, Each axis single hall, input voltage 5Vdc ,

10%~50%~90% voltage output

H52= 霍尔型, 每轴单霍尔, 输入电压5Vdc, 0% ~50% ~100%Vdc 电压输出

H52= Hall type, Each axis single hall, input voltage 5Vdc ,

0%~50%~100% voltage output

H53= 霍尔型, 每轴单霍尔, 输入电压5Vdc, 25% ~50% ~75%Vdc 电压输出

H53= Hall type, Each axis single hall, input voltage 5Vdc ,

25%~50%~75% voltage output

最小负载阻抗: 5K Ω

Minimum load impedance : 5K Ω

绝缘电阻: 大于50M Ω (500Vdc 时)

Insulation resistance : Is bigger than 50M Ω (when 500Vdc)

技术参数 Technical parameter

带转换电路 With conversion circuit

电源消耗电流: < 20mA

Power consumption of current : < 20mA

最大输出电流: 10mA

Biggest power source electric current: 10mA

标准电压输出 Standard voltage output

电源电压: 9~18Vdc (U11 ~U15), 18~36Vdc (U21 ~U25)

Supply Voltage: 9~18Vdc (U11 ~U15), 18~36Vdc (U21 ~U25)

输出电压范围 (可选) Output voltage scope (optional):

U11= 带转换电路, 输入电压9~18Vdc, -10V~0V~+10V 电压输出

U11= With conversion circuit, input voltage 9~18Vdc,
-10V~0V~+10V voltage output

U12= 带转换电路, 输入电压9~18Vdc, +10V~0V~+10V 电压输出

U12= With conversion circuit, input voltage 9~18Vdc,
+10V~0V~+10V voltage output

U13= 带转换电路, 输入电压9~18Vdc, -5V~0V~+5V 电压输出

U13= With conversion circuit, input voltage 9~18Vdc,
-5V~0V~+5V voltage output

U14= 带转换电路, 输入电压9~18Vdc, +5V~0V~+5V 电压输出

U14= With conversion circuit, input voltage 9~18Vdc,
+5V~0V~+5V voltage output

U15= 带转换电路, 输入电压9~18Vdc, 0~+10V 电压输出

U15= With conversion circuit, input voltage 9~18Vdc,
0~+10V voltage output

U21= 带转换电路, 输入电压18~36Vdc, -10V~0V~+10V 电压输出

U21= With conversion circuit, input voltage 18~36Vdc,
-10V~0V~+10V voltage output

U22= 带转换电路, 输入电压18~36Vdc, +10V~0V~+10V 电压输出

U22= With conversion circuit, input voltage 18~36Vdc,
+10V~0V~+10V voltage output

U23= 带转换电路, 输入电压18~36Vdc, -5V~0V~+5V 电压输出

U23= With conversion circuit, input voltage 18~36Vdc,
-5V~0V~+5V voltage output

U24= 带转换电路, 输入电压18~36Vdc, +5V~0V~+5V 电压输出

U24= With conversion circuit, input voltage 18~36Vdc,
+5V~0V~+5V voltage output

U25= 带转换电路, 输入电压18~36Vdc, 0~+10V 电压输出

U25= With conversion circuit, input voltage 18~36Vdc,
0~+10V electric output

标准电流输出 The standard electric current output

电源电压: 9~36Vdc

Supply Voltage: 9~36Vdc

输出电流范围 (可选) Output current scope (optional):

I21=带转换电路, 输入电压9~36Vdc, 二线制4mA~12mA~20mA 电流输出

I21= With conversion circuit, input voltage 9~36Vdc,
the two-wire system 4mA~12mA~20mA electric current output

I22=带转换电路, 输入电压9~36Vdc, 二线制20mA~4mA~20mA 电流输出

I22= With conversion circuit, input voltage 9~36Vdc,
the two-wire system 20mA~4mA~20mA electric current output

环境参数 Environment parameter

工作温度 Operating temperature : - 20°C~+70°C

存储温度 Storage temperature : - 40°C~+85°C

防护等级 Protection rank: IP65 (安装面板以上) IP65 (installs above mounting panel)

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① ② ③ ④ ⑤

分项选型说明Sub-item selection instructions

① 产品系列号Product series number

OM2100 系列工业手柄，单轴摩擦定位或弹簧复位，安装孔距尺寸为58mm

主要应用于旋挖钻机、高空消防车、起重机、盾构机、煤矿提升机、石油提升机

The OM2100 series industry handle, the single axis friction localization or the spring return, the installment pitch of holes size is 58mm. Mainly applies in rotary drilling rig, the aerial fire truck, crane, the shield, coal hoist, oil-hoist

② 操作方式The operating mode

FCF= 摩擦定位，中位带手感

FCF= friction localization, the center position with feel

FEF= 摩擦定位，起点（或终点）带手感

FEF= friction localization, the beginning (or end point) with feel

FCL= 摩擦定位，中位机械锁

FCL= friction localization, the center position machinery locking

FEL= 摩擦定位，起点（或终点）机械锁

FEL= friction localization, the beginning (or end point) the machinery locking

SC0= 弹簧复位，回中位

SC0= spring return, returns to the center position

SCL= 弹簧复位，回中位，中位机械锁

SCL= spring return, returns to the center position, the center position machinery locking

SE0= 弹簧复位，回起点

SE0= spring return, return to the beginning

SEL= 弹簧复位，回起点，起点（或终点）机械锁

SEL= spring return, return to the beginning, the beginning (or end point) the mechanical locking

③ 输出信号Output signal

P101= 电位器型，输入电压小于36Vdc，带10K Ω 中心抽头电位器，0% ~100%Vdc 电压输出

P101= potentiometer type, input voltage smaller than 36Vdc,

with 10K Ω center-tapped potentiometer 0~100%Vdc voltage output

H51= 霍尔型，输入电压5Vdc，10% ~50% ~90%Vdc 电压输出

H51= Hall type, input voltage 5Vdc, 10%~50%~90%Vdc voltage output

H52= 霍尔型，输入电压5Vdc，0% ~50% ~100%Vdc 电压输出

H52= Hall type, input voltage 5Vdc, 0%~50%~100%Vdc voltage output

H53= 霍尔型，输入电压5Vdc，25% ~50% ~75%Vdc 电压输出

H53= Hall type, input voltage 5Vdc, 25%~50%~75%Vdc voltage output

U11= 带转换电路，输入电压9~18Vdc，-10V~0V~+10V 电压输出

U11=With conversion circuit, input voltage 9~18Vdc, -10V~0V~+10V voltage output

U12= 带转换电路，输入电压9~18Vdc，+10V~0V~+10V 电压输出

U12=With conversion circuit, input voltage 9~18Vdc, +10V~0V~+10V voltage output

U13= 带转换电路，输入电压9~18Vdc，-5V~0V~+5V 电压输出

U13=With conversion circuit, input voltage 9~18Vdc, -5V~0V~+5V voltage output

U14= 带转换电路，输入电压9~18Vdc，+5V~0V~+5V 电压输出

U14=With conversion circuit, input voltage 9~18Vdc, +5V~0V~+5V voltage output

U15= 带转换电路，输入电压9~18Vdc，0~+10V 电压输出

U15=With conversion circuit, input voltage 9~18Vdc, 0~+10V voltage output

U21= 带转换电路，输入电压18~36Vdc，-10V~0V~+10V 电压输出

U21=With conversion circuit, input voltage 18~36Vdc, -10V~0V~+10V voltage output

U22= 带转换电路，输入电压18~36Vdc，+10V~0V~+10V 电压输出

U22=With conversion circuit, input voltage 18~36Vdc, +10V~0V~+10V voltage output

U23= 带转换电路，输入电压18~36Vdc，-5V~0V~+5V 电压输出

U23=With conversion circuit, input voltage 18~36Vdc, -5V~0V~+5V voltage output

U24= 带转换电路，输入电压18~36Vdc，+5V~0V~+5V 电压输出

U24=With conversion circuit, input voltage 18~36Vdc, +5V~0V~+5V voltage output

产品选型Product Selection

U25=带转换电路, 输入电压18~36Vdc, 0~+10V 电压输出

U25=With conversion circuit, input voltage 18~36Vdc, 0~+10V voltage output

I21=带转换电路, 输入电压9~36Vdc, 二线制4mA ~12mA ~20mA 电流输出

I21= With conversion circuit, input voltage 9~36Vdc,

two-wire system 4mA ~12mA the ~20mA electric current output

I22=带转换电路, 输入电压9~36Vdc, 二线制20mA ~4mA ~20mA 电流输出

I22= With conversion circuit, input voltage 9~36Vdc,

two-wire system 20mA ~4mA the ~20mA electric current to output

NA= 无模拟信号输出

NA= non-simulated signal output

④ 微动开关Micro switch

MS00= 无微动开关

MS00= without micro switch

MS11= 带4A 起点位置微动开关

MS11= with 4A beginning position micro switch

MS12= 带4A 前后位置微动开关

MS12=with 4A front and back position micro switch

MS13= 带4A 中位及前后位置微动开关

MS13=with 4A center position and front back position micro switch

⑤ 手柄上端The handle top port

BG=42mm*39mm

HB=32mm*90mm

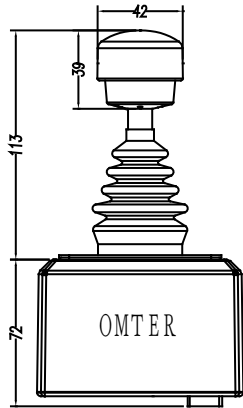
HBS=32mm*97mm , 带按钮with a button

HBR=32mm*96mm , 带跷板with rocker

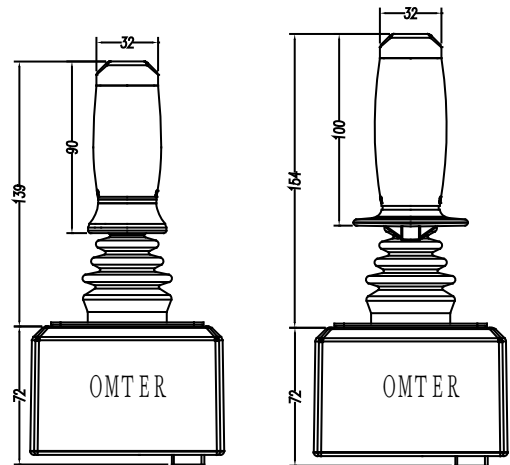
HD=32mm*100mm , 带托手with holder

HTTP://WWW.OMTER-TYXN.CN

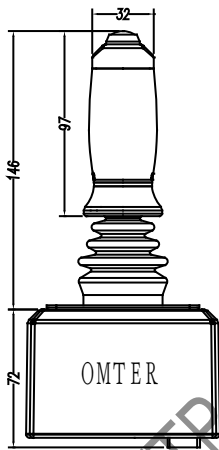
外形尺寸 External dimensions



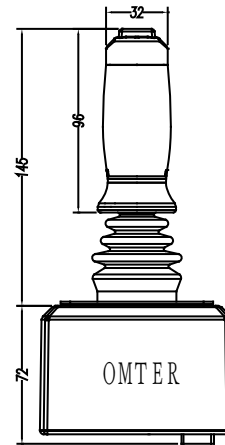
BG上端 BG top port



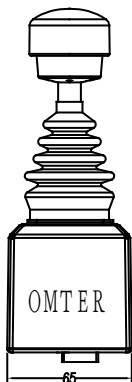
HB和HD上端 HB and HD top port



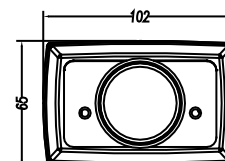
HBS上端 HBS top port



HBR上端 HBR top port

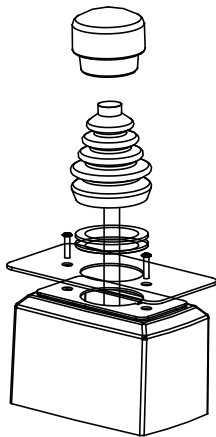


侧视图 Lateral view



俯视图 Vertical view

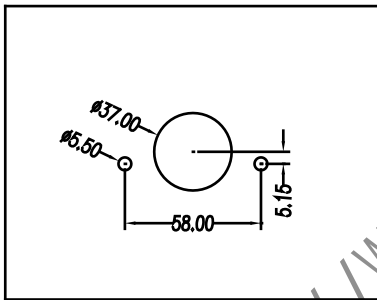
机械安装The machinery installment



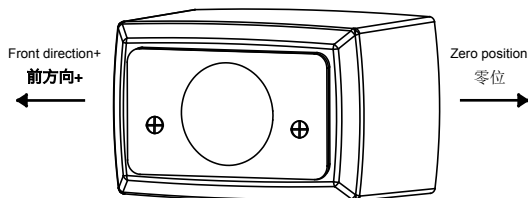
2个M5*8螺丝
2pcs M5*8 screw
面板厚度3mm
Mounting panel thickness 3mm

↑ 产品从面板下向上安装
product from the Mounting panel to the upward installment

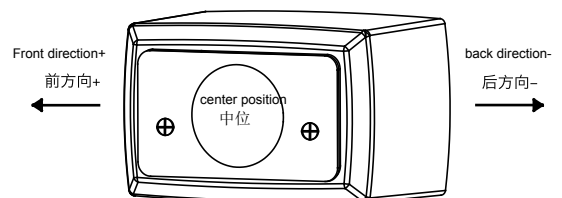
安装示意图Installs the schematic drawing



安装面板开孔示意图Mounting panel to the open hole schematic drawing



单方向操作方向定义Single-direction operation direction definition



前后方向操作方向定义Front and back direction operation direction definition

电气安装Electrical installment

线缆出线方式接线图

Wire out-way wiring diagram:

单方向操作Single direction operation:

线序	功能
1	电位器前方向端
2	电位器后方向端
3	电位器滑动端
4	起点位置常开开关
5	起点位置常开开关

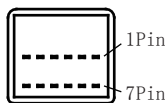
Line No.	Function
1	Potentiometer front direction port
2	potentiometer back direction port
3	Potentiometer wiper port
4	Starting position normally open switch
5	Starting position normally open switch

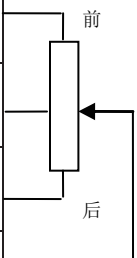
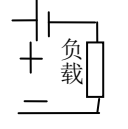

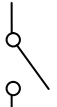
前后方向操作Front and Rear direction operation:

线序	功能
1	电位器前方向端
2	电位器中位端
3	电位器后方向端
4	电位器滑动端
5	前方向开关
6	前方向开关
7	后方向开关
8	后方向开关

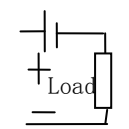
Line No.	Function
1	Potentiometer front direction port
2	potentiometer intermediate position port
3	potentiometer back direction port
4	Potentiometer wiper port
5	Front direction switch
6	Front direction switch
7	Back direction switch
8	Back direction switch

安普 (AMP) 接插件connector:



引脚	电位器	霍尔	24V 电压输入+-10V 输出	二线制电流输出	
1		电位器前方向端	+5V	24V	
2		电位器中位 单方向 空	空	24V GND	
3		电位器后方向端	0V	输出+	空
4		电位器滑动端	输出	输出-	空
5		前方向开关常开 单方向起点开关常开	前方向开关常开 单方向起点开关常开	前方向开关常开 单方向起点开关常开	前方向开关常开 单方向起点开关常开
6		前方向开关公共端 起点开关公共端	前方向开关公共端 起点开关公共端	前方向开关公共端 起点开关公共端	前方向开关公共端 起点开关公共端
7		后方向开关常开 单方向 空	后方向开关常开 单方向 空	后方向开关常开 单方向 空	后方向开关常开 单方向 空
8		后方向开关公共端 单方向 空	后方向开关公共端 单方向 空	后方向开关公共端 单方向 空	后方向开关公共端 单方向 空
9		跷板开关左方向常开	跷板开关左方向常开	跷板开关左方向常开	跷板开关左方向常开
10		手柄上端开关公共端	手柄上端开关公共端	手柄上端开关公共端	手柄上端开关公共端
11		跷板开关右方向常开	跷板开关右方向常开	跷板开关右方向常开	跷板开关右方向常开
12		安全开关	安全开关	安全开关	安全开关

电气安装Electrical installment

Pin	Potentiometer	Hall	The 24V voltage input +10V output	Two-wire system electric current output
1	Potentiometer front direction port	+5V	24V	
2	potentiometer intermediate port Single direction Hollow	Hollow	24V GND	
3	potentiometer back direction port	0V	Output+	
4	Potentiometer wiper port	Output	Output-	
5	Front direction switch normally open Single direction Starting position switch normally open	Front direction switch normally open Single direction Starting position switch normally open	Front direction switch normally open Single direction Starting position switch normally open	Front direction switch normally open Single direction Starting position switch normally open
6	Front switch public port Starting point switch public port	Front switch public port Starting point switch public port	Front switch public port Starting point switch public port	Front switch public port Starting point switch public port
7	Back direction switch normally open Single direction Hollow	Back direction switch normally open Single direction Hollow	Back direction switch normally open Single direction Hollow	Back direction switch normally open Single direction Hollow
8	Back direction switch public extremity Single direction Hollow	Back direction switch public extremity Single direction Hollow	Back direction switch public extremity Single direction Hollow	Back direction switch public extremity Single direction Hollow
9	Rocker switch left direction normally open	Rocker switch left direction normally open	Rocker switch left direction normally open	Rocker switch left direction normally open
10	Handle top port switch public port	Handle top port switch public port	Handle top port switch public port	Handle top port switch public port
11	Rocker switch right direction normally open	Rocker switch right direction normally open	Rocker switch right direction normally open	Rocker switch right direction normally open
12	Safety switch	Safety switch	Safety switch	Safety switch