

Kinco 步科

A handheld calculator with a large LCD screen. The screen is black with a diagonal line. Below the screen is a red 'Kinco' logo. To the left of the screen are four buttons: 'STOP' (red), 'RUN' (green), 'MENU' (white), and 'FIND' (white). To the right of the screen is a numeric keypad with buttons A1 through A9 and a decimal point. Above the screen, there are three small indicators: 'POWER', 'LIFT', and 'LIFT'. On the top left is a black rotary dial, and on the top right is a red circular button.

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步科官方微信

1.1 环境要求

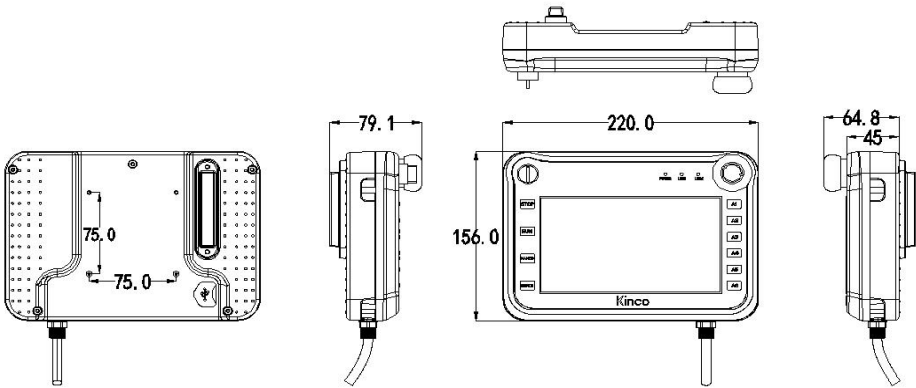
工作环境温度：SZ7 系列人机界面的设计规范可以保证它能够在 32°F~122°F (0~50°C) 的大多数工业环境中稳定工作。NEMA 防护规定：SZ7 系列人机界面的前面板符合 NEMA1 的防护规定。

- 阳光直射处
- 周围温度和相对湿度超出规格的场所
- 温度急剧变化易引起结露的场所
- 有腐蚀性气体和可燃性气体的场所
- 尘埃、灰尘、盐分、铁粉较多的场所
- 会被溅到水、油、药品等泡沫的场所
- 给主机带来直接振动和冲击的场所

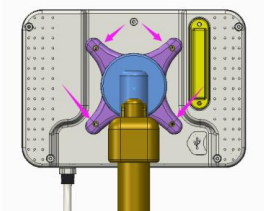
- 有静电或其它形式噪音处
- 有较强电磁场的场所
- 可能暴露于射线的场所
- 靠近于动力电源的场所

- 输入电压：DC16V~DC32V；
- 特别需要注意与变频调速器和开关电源供应器保持较远的距离，这类设备的输入和输出电缆都必须采用屏蔽电缆，并将屏蔽网接到系统的星形接地点；
- 直流电源必须与交流主电源正确的隔离开；
- 不要让 SZ7 系列人机界面和感性负载或控制器的输入电路共用电源。

2.1 尺寸图



2.2.1 支架固定



产品背面预留了 4 个 75*75mm 的 M4 螺纹孔，通过如左图示的支架，将支架的孔位与螺纹孔对齐，拧入 M4 规格的螺丝后固定在支架上。

A detailed diagram of a battery pack. It shows a grey rectangular case with a red cap on the left. Inside, there are two yellow cylindrical cells. A purple component, likely a voltage detector or switch, is mounted on top of the cells. Various wires and connectors are shown, including a USB cable at the bottom and a red cable on the left. The diagram is annotated with letters (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z) and numbers (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100) to identify specific parts and connections.

通过左图示意的挂件结构，用 M4 规格的螺丝固定在后壳处预留的上方二处孔位，即可悬挂在理想位置操控。

注: 本产品出厂仅提供M4 安装螺钉, 见包装纸盒, 如上支架和钣金挂件为示意图, 仅供参考, 用户需自行定制。

Diagram illustrating the back of the device, showing the USB Host port and the 14-core screen cable connection.

注: 1.RS485、RS232、以太网口都集成在 14 芯屏蔽电缆内。

2.型号后缀为S表示产品带握持开关,为E表示支持以太网通讯。

RS232 串口可用于 SZ7 系列人机界面的编程和调试。

3.2 USB HOST 接口

3.3 RS485 串口 (SZ7 和 SZ7S 支持)

注: 在 Kinco HMlware 中创建工程时, SZ7 和 SZ7S 共用一个元件图标。

以太网接口为 10M/100M 自适应以太网端口。

注: 在 Kinco HMIware 中创建工程时, SZ7E 和 SZ7ES 共用一个元件图标。

4.1 进入模式选择界面操作说明

根据模式选择界面提示进入相关操作。如果在进入模式选择界面 20S 内没有有效操作或无操作，系统将自动进入触控校正界面。

进入模式选择界面会弹出一个启动菜单对话框，详细功能模式说明如下：

系统设置：单击此按钮，系统进入设置界面，在此画面中可以设置开机启动画面，屏保时间，蜂鸣器声音，以及亮度调节，设置完成后，可单击 Restart 按钮重启触摸屏。

固件更新: 单击此按钮，系统进入固件更新画面，在此画面中可以进行固件更新工作，一般用户请不要使用此模式。

触控校正：单击此按钮，系统进入触摸屏校正画面，校正成功后会自动重启。

停止倒计时：单击此按钮，控制 20S 倒计时启停。

备注: 在模式选择界面的右上角有一个多语言切换按钮, 单击此按钮可进行中英文切换。

5.1 线缆信号说明

此系列产品为方便客户使用，提高产品稳定性，采用了 14 芯屏蔽电缆，两两对绞。标配电缆长 5 米。

注: 1. 握持信号(常开)、自动(AUTO)、远程(REMOTE)等选择后, 都将与公共地导通。

2. 急停开关（常闭）按下后，急停信号与公共地断开，恢复后重新导通。

3. 急停开关、握持开关、三选择开关的额定电压为DC24V, 额定电流为0.35A。

SZ7E 和 SZ7ES 型号产品具有以太网口功能，出厂时按照 T568B 标准接线，如下：

1--黄色线
2--黑色线
3--红色线
6--灰色线

其中 1、2、3、6 指超五类网线插座模块上的编号，对应的线缆是指 14 芯屏蔽电缆内的线序。

《人机界面售后服务条款》请登录如下网址查看: <http://www.kinco.cn>

SZ7 series Teach Panel



Installation Instruction



Kinco Electric (Shenzhen) Ltd.



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Add: Building 1, No. 6 Langshan 1st Rd, Hi-tech Park
North, Nanshan, Shenzhen, China.

1. Installation Note

1.1 Environmental Requirement

Operating temperature: SZ7 Series HMI can work stably in most industrial environments that the temperature between 32°F to 122°F (0~50°C).
NEMA rating: This Series HMI is NEMA 1 rated in front panel.

Please do not use in the following places:

- Places direct in sunlight
- Surrounding temperature and humidity beyond the specifications
- Places of temperature changes sharply and easily cause condensation
- Places that exist corrosive gas and combustible gas
- Places of much dust, dirt, salt and iron powder
- Places that will be splashed water, oil and drugs
- Places that bring direct vibration and shock to host

Please take shielding measures in the following places:

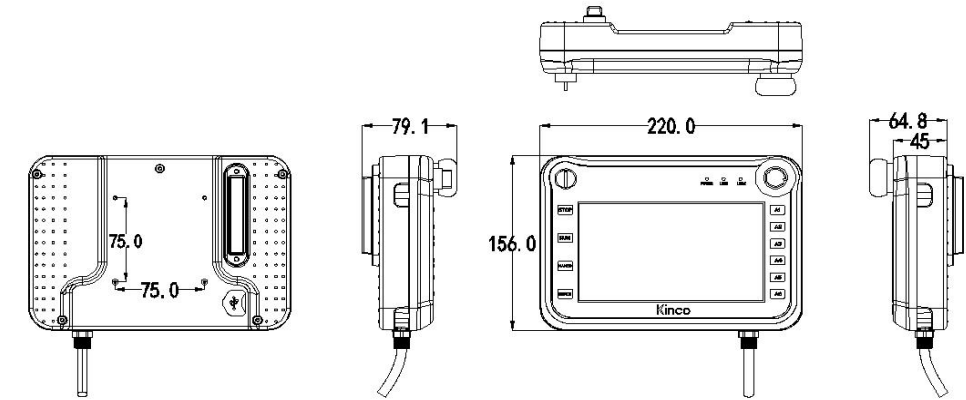
- Places that exist electrostatic or other kinds of noise
- Places of strong electromagnetic
- Places that may be exposed to rays
- Places near the power

1.2 Power Requirement

- Input voltage:DC16V~DC32V.
- Particularly note that there must be enough distance between this product and converters or switch power supply. Make sure that the input and output cables of that kind equipment are shield cable and the shielding network is connected with the ground.
- Make sure that the DC power and AC power is isolated.
- Do not use same power supply with the input circuit of inductance load or the controller.

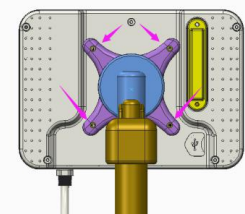
2. Installation Description

2.1 Dimensional Drawing



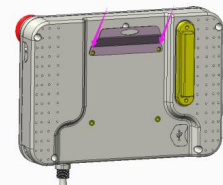
2.2 Installation Instructions

2.2.1 Rack Mounting



On the back of the product, 4 M4 75*75mm thread holes are reserved, and the hole position of the bracket (refer to the left) is aligned with the thread hole, and the screw is screwed into the M4 specification.

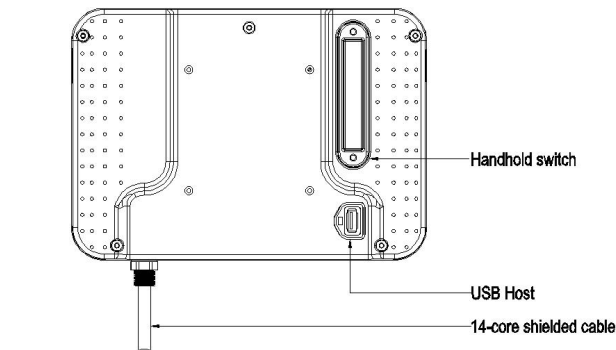
2.2.2 Hanging Mounting



Through sketch left hanging structure, specifications of the screws fixed in the shell reserved above two holes, can suspended in a desired position control.

NOTE: There are only M4 installation screws in the packaging carton. The rack and the sheet metal pendant are just schematic diagrams, needed to customize by customers.

3. Communication connections



Function	SZ7	SZ7S	SZ7E	SZ7ES
RS485	√	√		
RS232	√	√	√	√
Ethernet			√	√
USB HOST	√	√	√	√

Note: 1.RS485、RS232、Ethernet are integrated in the 14-core shielded cable.
2. The Suffix of S indicates that products with hand holding switch, E is for Ethernet port.

3.1RS232 port

RS232 port is used to program and debug.

Connection	Green/brown/pink in the 14-core shielded cable(see below)
Port Function	The port is used to upload/ download user configuration program to the HMI to set HMI system parameters and to communication.

3.2 USB HOST

Connection	Connect with USB interface devices or U disks
Port Function	This interface can be connected with USB keyboard, mouse and printers, and the U disk can be used for user's configuration uploading/ downloading as well as data storage.

3.3RS485 port (SZ7 and SZ7S Support)

Connection	Grey/red in the 14-core shielded cable(see below)
Port Function	This port is used to connect the controller with RS-485port.

Note: When you create a project in Kinco HMIware SZ7 and SZ7S share a component icon.

3.4 Ethernet (SZ7E and SZ7ES Support)

Ethernet interface can adaptive 10 M/ 100 M.

Connection	Grey/red/black/yellow in the 14-core shielded cable (see below)
Port Function	The port can be used for uploading/downloading HMI program, setting system parameters and online simulation. It can connect multiple HMIs via the Ethernet; it can communicate HMI and PLC via the Ethernet, as well as communicate with a PC via the Ethernet port.

Note: When you create a project in Kinco HMIware.SZ7E and SZ7ES share a same icon

4. Operation Mode

4.1 Instructions for entering Operation Mode selection window

Hold pressing on the touch panel when you power on HMI, then HMI will enter operation mode selection window, select the operation mode according to your application. If there is not any operation in 20 seconds after entering operation mode selection window, HMI will enter application (normal working) mode automatically.

4.2 Descriptions of functions in Operation Mode selection window

After entering operation mode selection window, it will pop up a menu. Follows are the descriptions of the functions in the menu:

System Setup: Press this button to enter system setup window. This window is used to set initial window, screen saver time, buzzer and brightness adjustment. After setting, press Restart button to restart HMI.

Firmware Update: Press this button to enter firmware update mode. This window is used to update firmware. Normally this mode is not advised to use without guiding by manufacturer.

Touch Calibration : Press this button to enter touch calibration window. It will restart HMI automatically after calibration successful. There is a timer in this button, it will enter application window if there is no operation within 20s.

Stop timer: Press this button to stop the 20s timer.

Note: There is a multi-languages button; it is used to switch English and Chinese.

5. Detailed description of the14-core shielded cable

5.1 Detailed description of the14-core shielded cable

SZ7 series HMI adopt 14-core shielded twisted cable to improve product stability.
The standard length of cable is 5 meters.

Cable colour	supply power	PLC(COM0) RS485	Ethernet	PC/PLC(C OM2) RS232	Handhold Switch	Emergency switch	3-position selection switch
blue	24V						
orange	0V						
green				RS232 Rx			
brown				RS232 Tx			
grey		RS485B	RX_N				
red		RS485A	RX_P				
black			TX_N				
yellow			TX_P				
pink				Signal Ground			
purple					Common Ground		
white					Handhold signal		
blue-red						Emergency signal	
orange-white							AUTO-signal
green-white							Remote signal

Note: 1.Handhold signal (NO) 、AUTO-Signal、Remote-Signal are connected with common ground when they are selected.

2.When emergency switch (NC) is pressed down, it is disconnect with Common Ground.

3. Rated voltage is DC24V, rated current is 0.35A, included emergency switch, handhold switch and 3-position selection switch.

5.2 UTP Cable Socket Module Instruction

SZ7E and SZ7ES have Ethernet interface, the wire connection is in accordance with the T568B standard, as follows:

- 1--yellow
- 2--black
- 3--red
- 6--grey

Pin 1, 2, 3, 6 are the pin number on the UTP Cable Socket Module, the color above is the wire color in 14-core shielded cable.

6. After-sales Service

For < Service Terms and Conditions for HMI >, please check :<http://www.kinco.cn>