

SZ7G/SZ7GE/SZ7GS/SZ7GES 机器人手持终端 Kinco 步科

安装说明



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1. 安装注意事项

1.1 环境要求

工作环境温度: SZ7G/SZ7GE 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: SZ7G/SZ7GE 系列人机界面的前面板符合 NEMA1 的防护规定。

请勿在以下场所使用:

- 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、药品等飞沫的场所
- 给主机带来直接振动和冲击的场所

在以下场所使用时请采取屏蔽措施:

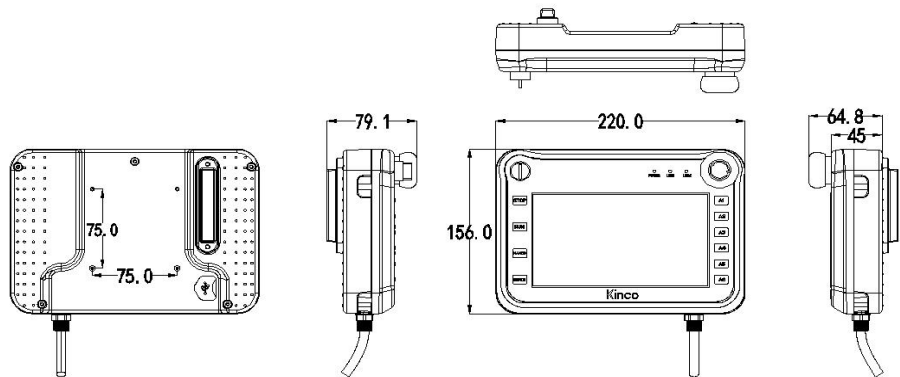
- 有静电或其它形式噪音处
- 有较强电磁场的场所
- 可能暴露于射线的场所
- 靠近于动力电源的场所

1.2 电源要求

- 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 SZ7G/SZ7GE 系列人机界面和感性负载或控制器的输入电路共用电源。

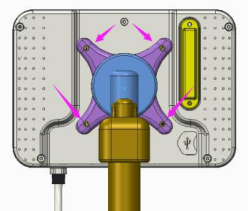
2. 产品安装

2.1 尺寸图



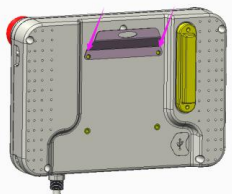
2.2 安装方式说明

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。

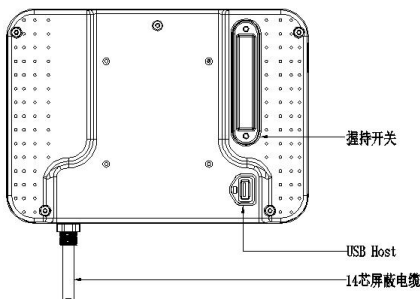
2.2.2 悬挂式安装



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。

3. 通讯连接



功能	RS485 (COM0)	RS232 (COM2)	以太网口	USB HOST	急停开关	三选择开关	握持开关
SZ7G	✓	✓		✓	✓	✓	
SZ7GE			✓	✓	✓	✓	
SZ7GS	✓	✓		✓	✓	✓	✓
SZ7GES			✓	✓	✓	✓	✓

注: 1.RS485、RS232、以太网口都集成在14芯屏蔽电缆内, 详见下文线缆信号说明。

3.1 RS232 (COM2) 串口

RS232 串口可用于 SZ7G/SZ7GS 系列人机界面的编程和调试。

连接	14 芯屏蔽电缆的黑色、黄色、粉色线 (见下文线缆具体说明)
端口作用	上/下载用户组态程序、HMI 系统固件更新、通讯

3.2 USB HOST 接口

连接	连接 USB 接口设备或 U 盘
端口作用	连接 USB 接口键盘、鼠标、打印机等, 插入 U 盘上传/下载程序以及存储数据

3.3 RS485 (COM0) 串口 (SZ7G/SZ7GS 支持)

连接	14 芯屏蔽电缆的灰色、红色线 (见下文线缆具体说明)
端口作用	用于连接 HMI 和具有 RS485 通讯端口的控制器

3.4 以太网接口 (SZ7GE/SZ7GES 支持)

以太网接口为 10M/100M 自适应以太网端口。

连接	14 芯屏蔽电缆的灰、红、黑、黄色线 (见下文线缆具体说明)
端口作用	用于 HMI 组态的上/下载, 系统参数的设置和在线模拟; 构成多 HMI 联机; 与 PLC 等通过以太网通讯; 通过以太网口与 PC 机通讯

4. 工作模式

4.1 进入模式选择界面操作说明

触摸屏上电前用手指按住液晶屏不放, 给触摸屏上电, 待触摸屏自动进入模式选择界面之后方可松手, 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。

4.2 模式选择界面功能菜单说明

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. 14 芯屏蔽电缆具体说明

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。

线缆颜色	输入电源	COM0:RS485	Ethernet	COM2:RS232	握持开关	急停开关	三选择开关
蓝	24V						
橙	0V						
绿					握持地		
棕						急停地	
灰		RS485 B	RX_N				
红		RS485 A	RX_P				
黑			TX_N	RS232 接收			
黄			TX_P	RS232 发送			
粉				信号地			
紫							三选择开关地
白					握持信号		
蓝红						急停信号	
橙白							自动信号
绿白							远程信号

注: 1. 急停开关: 按下时开关处于断开状态, 弹起时开关处于闭合状态。

2. 握持开关根据按压开关的力度大小分为两个状态, 分别是轻按 (力度较小)、重案 (力度较大), 原始状态常开, 轻按时握持信号与握持地闭合, 再重按时握持信号与握持地断开。

5.2 超五类网线插座模块使用说明

SZ7GE 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。

6. 售后服务

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

SZ7G/SZ7GE/SZ7GS/SZ7GES series Teach Panel Installation Instruction



Kinco Electric (Shenzhen) Ltd.



Tel: 0755-26585555

Web: www.kinco.cn Email: sales@kinco.cn

Add: Building 1, No. 6 Langshan 1st Rd, Hi-tech Park

North, Nanshan, Shenzhen, China.

1. Installation Note

1.1 Environmental Requirement

Operating temperature: SZ7G /SZ7GE 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:

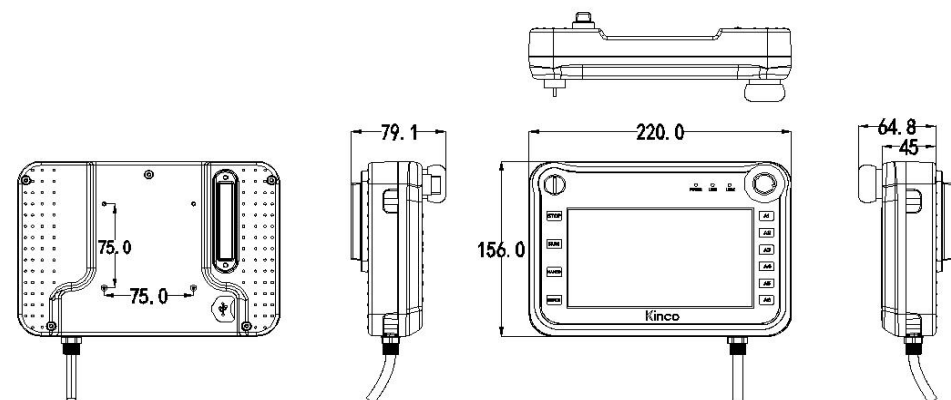
- Places that exist electrostatic or other kinds of noise
- Places of strong electromagnetic
- Places that may be exposed to rays
- Places near the power

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.

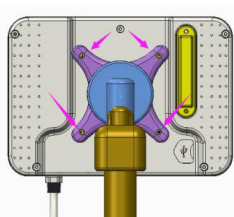
2. Installation Description

2.1 Dimensional Drawing



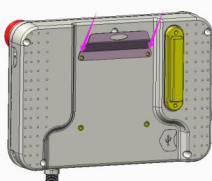
2.2 Installation Instructions

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.

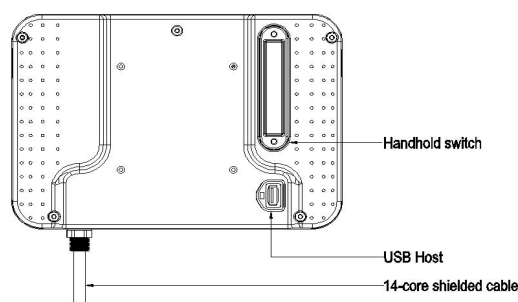
2.2.2 Hanging Mounting



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	RS485	RS232	Ethernet	USB HOST	Stop all the way	Three choice Switch	Grip switch
SZ7G	✓	✓		✓	✓	✓	
SZ7GE			✓	✓	✓	✓	
SZ7GS	✓	✓		✓	✓	✓	✓
SZ7GES			✓	✓	✓	✓	✓

Note: 1.Note: 1. RS485, RS232 and Ethernet ports are integrated in 14 core shielded cable. See cable signal description below for details.

3.1 RS232 (COM2) serial port

RS232 port for SZ7G / SZ7GS series programming and debugging

Connection	Black/yellow/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.

3.3 RS485 (COM0) serial port (SZ7G & SZ7GS 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 (SZ7GE & SZ7GES 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.

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 the 14-core shielded cable

5.1 Detailed description of the 14-core shielded cable

In order to facilitate the use of customers and improve the stability of the products, this series of products adopt 14 core shielded cable, which is twisted in two pairs .

The standard length of cable is 5 meters.

Cable colour	Supply power	COM0: RS485	Ethernet	COM2:RS232	Handhold switch	Emergency switch	3-position selection switch
blue	24V						
orange	0V						
green					Gripping ground		
brown						Emergency stop	
grey		RS485 B	RX_N				
red		RS485 A	RX_P				
blank			TX_N	RS232 Rx			
yellow			TX_P	RS232 Tx			
pink				Signal ground			
purple							Three choice Switch ground
white					Handhold signal		
Blue-red						Emergency signal	
Orange-white							AUTO-signal
Green-white							Remote signal

Note: 1.Emergency stop switch: the switch is in the off state when it is pressed down, and the switch is in the closed state when it is bounced up.

2.The holding switch is divided into two states according to the strength of pressing the switch, namely, light pressing (less strength), heavy case (greater strength), the original state is normally open, light holding signal and holding ground are closed on time, and then heavy holding signal and holding ground are disconnected on time.

5.2 UTP Cable Socket Module Instruction

SZ7GE 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>