

7吋系列人机界面安装说明书

感谢您购买人机界面，在安装或操作设备前，请仔细阅读本安装说明书以确保正确使用。

1. 安全注意事项 (使用前先阅读这些注意事项)

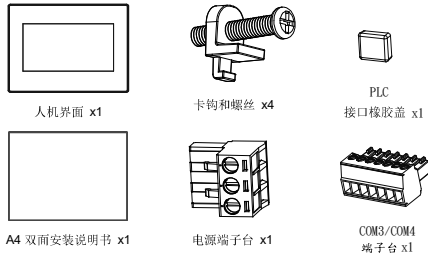
1.1 一般说明

- 打开包装并检查货件是否损坏，如果发现有任何损坏或变形的情况，请联系您的供货商。
- 自行拆解、更改或修改设备，供应商概不负责。
- 不要将液体或任何导电粒子进入到人机界面内。否则可能会损坏装置，引起火灾或故障。
- 只有合格的人员才可以安装、检查和进行维护此设备。
- LCD 面板内的液晶是一种有害的物质，如果面板损坏，请避免接触泄漏的液晶。如果液晶溅到衣服或皮肤上，请用肥皂彻底洗掉。若是眼睛接触泄漏的液晶，请保持眼睛睁开，用大量清水冲洗并尽快就医。
- 电源上电中不要触摸任何端子，否则可能会造成触电引起人身伤害。
- 从事安装、接线作业、进行维修或设备检查之前，请先断开电源。否则，可能会造成损坏或触电。

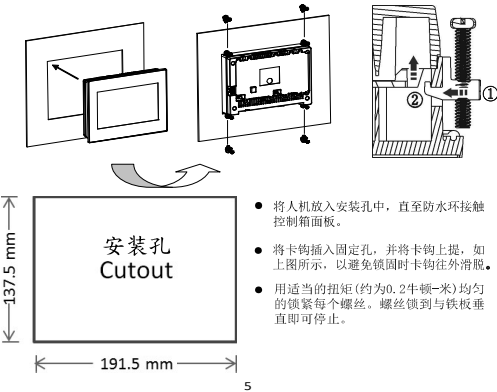
1.2 安装期间

- 只有合格的人员才可以安装人机。
- 请依照安装程序安装人机。
- 连接人机前，请检查电源极性正确并且电压是否在规定范围内。
- 使信号线和电源线远离高压或大电流传输的电缆。

4. 组件说明

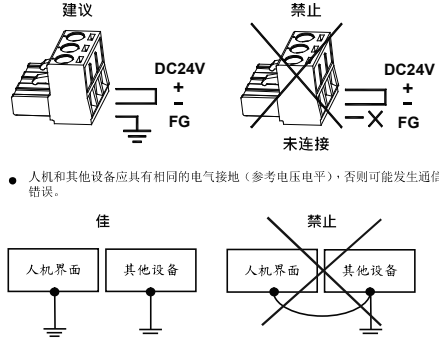


5. 安装程序



5

注意	源线请采用最大电压300V，额定温度105℃，22AWG到14AWG之间的安心导线。
注意	确保人机正确接地，以防止触电、火灾或故障。



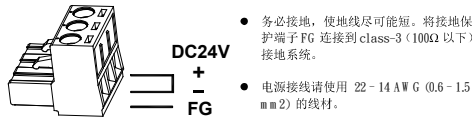
1.3 操作期间

- 不要用尖锐物体或过度用力按压触摸屏，这可能会损坏显示屏。屏幕保护膜可以用于此产品避免受损坏，有关订购信息，请联系我们的销售部门。
- 不要使用该设备的输出信号作为任何安全功能或系统紧急的停止。如果触摸的故障发生可能导致人身伤害或设备损坏。

1.4 服务与维护

- 适用于合约保留。
- 在进行清洁或维护前，请先断开电源设备。
- 只有合格的人员才能进行维护和维修。
- 可使用软布和中性清洁剂来清洁前面板。
- 请使用原厂配件或更换零件。

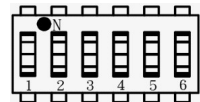
6. 连接电源



7. 终端电阻开关

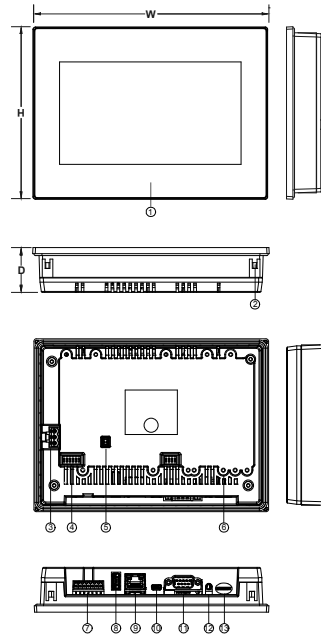
- 7吋系列的人机接口具有一个内置的终端电阻开关，若要启用或停用终端电阻请按下表所示的配置。此终端电阻开关为COM3[RS-422/RS-485]和COM4[RS485]通讯端口专用。
- 终端电阻开关配置：

编号	终端电阻					
	COM3 [RS-422]		COM3 [RS-485]		COM4 [RS-485]	
	启用	停用	启用	停用	启用	停用
1	ON	OFF	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF	OFF	OFF
3	ON	OFF	ON	OFF	OFF	OFF
4	ON	OFF	ON	OFF	OFF	OFF
5	OFF	OFF	OFF	OFF	ON	OFF
6	OFF	OFF	OFF	OFF	ON	OFF



6

2. 部件名称和尺寸



①	电源指示灯
②	固定孔
③	电源端子台
④	COM3/COM4 终端电阻开关
⑤	HBI PLC 接口
⑥	HBI PLC 螺丝孔
⑦	COM3/COM4 端子台
⑧	USB 接口
⑨	以太网网路 RJ45 接口 (网络型/多功能型)
⑩	Mini USB 接口
⑪	COM1: DB-9 公头接口*
⑫	Audio Phone Jack 音频接口(多功能型)
⑬	Micro-SD 卡槽 (多功能型)

*此系列HMI不支持COM2

W	201.0 mm
H	147.0 mm
D	38.3 mm

3

8. 通讯接口

- 此系列HMI不支持COM2。

DB-9 公头接头	
脚位	COM1 [RS-232]
1	NC ¹
2	RX
3	TX
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

*1 NC: 无连接

COM3/COM4 端子台			
脚位	COM3 [RS-422]	COM3 [RS-485]	COM4 [RS-485]
1	NC	NC	DATA+
2	NC	NC	DATA-
3	GND	GND	GND
4	RX+	NC	NC
5	RX-	NC	NC
6	TX+	DATA+	NC
7	TX-	DATA-	NC

7

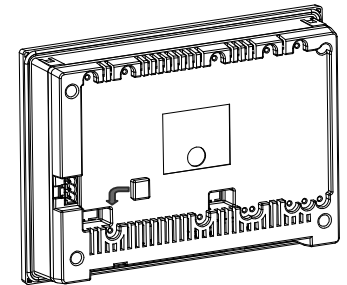
3. 产品规格

型号	7吋串行型	7吋网络型	7吋多功能型
Type of item tested	Control		
Product Description	Operator Panel		
Connections to mains supply	Permanent		
Overvoltage category	II		
Pollution degree	2		
Means of Protection	Class III		
Environmental conditions	Operating Temp. 0~50°C Storage Temp. -20 ~ 60 °C		
For use in wet locations	No		
Equipment mobility	Built in		
Operating conditions	Continuous		
Overall size	201.0 x 147.0 x 38.3 (mm)		
Weight	610 (g)	630 (g)	650 (g)
Marked degree of protection	Front panel: IP65 / Rear Case: IP20 to IEC 60529		
Equipment classification	Industrial, Professional, Commercial		
Equipment class	Class III		
Equipment type	Permanently connected, Fixed		
通讯接头 1	D-Sub 9-Pin COM1: RS-232 (TXD, RXD)		
通讯接头2	可省略端子 COM3: RS-422/485 COM4: RS-485		
网络	---	10M/100M	10M/100M
USB	USB2.0 Type-A (Host)x1 USB2.0 Type-mini-B (Device)x1		
Micro SD	---	---	有
音频输出	---	---	有
PIC扩充	HB1 主机 + B1 扩充板 有 (For RS-422/485)		
终端电阻接线开发	有 (For RS-422/485)		
输入电源	14V-32V(高压电源)		
消耗功率	520mA@24VDC		
绝缘电阻	50MΩ at 50VDC		
操作环境温度	10%~90% @ 40°C (非冷凝)		
耐电压	AC500V/20mA/1 Min. (电源端子与FG端子间)		
耐震度	5~9Hz 振幅: 3.5mm 9~150 Hz 加速度: 19.6m/s ² (2G)		
噪声抑制	X、Y、Z 方向各10次 (符合IEC61131-2规范)		
接地电阻	电压1000Vp-p, 波宽1us, 上升时间1ms		
尺寸	开孔尺寸 191.5 x 137.5 (mm)		

4

9. PLC 扩充说明

- 有利于简洁的结构与节省空间，建议使用HBI系列PLC主机以及BI系列扩充模块。
- PLC接头的橡胶盖可取下，并放置于终端电阻开关前面的凹槽。



8

7 inch HMI Installation Guide

Thank you for purchasing HMI. Before installing or operating the unit, please read this installation guide carefully to ensure correct use.

1. Safety Precautions (Read these precautions before use.)

1.1 General

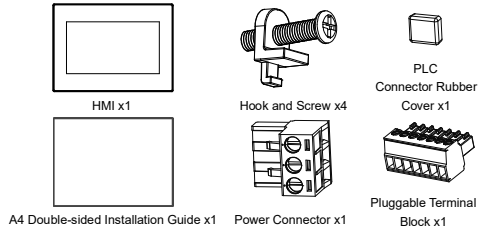
- Unpack and check the delivery for transportation damage. If any damage or deformation is found, please notify the supplier.
- The supplier is not responsible for the disassembled, altered or modified device.
- Never allow fluid or any conductive particles to enter into the HMI. Otherwise, it may damage the HMI, cause fire or malfunction.
- Only qualified personnel may install the HMI, perform maintenance and inspection.
- The liquid crystal inside the LCD panel is a hazardous substance. If the panel is damaged, avoid contact with the leaked liquid crystal. If the liquid crystal spills on clothing or skin, use soap and wash off thoroughly. In case of eye contact the liquid, hold the eye open, flush with plenty water and get medical attention as soon as possible.
- Do not touch any terminals while the power is on. Otherwise, it may cause injury due to electrical shock.
- Disconnect the power supply before installing the HMI, do wiring operation, perform maintenance or inspection. Otherwise, it may cause damage or electrical shock.

1.2 Installation

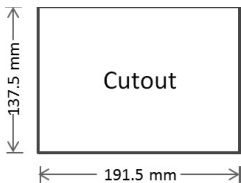
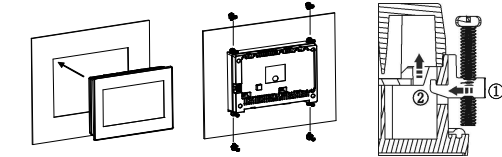
- The installation may be carried out by qualified personnel only.
- Install the HMI according to the installation procedures.
- Check the power source voltage is within the specified range and the polarity is correct before connecting the HMI.
- Keep signal and power supply cables away from high-voltage, large-current carrying cables.

1

4. Unpacking the Unit



5. Installation Procedures

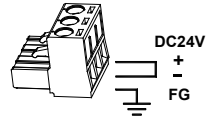


5

Caution	Please use solid wires between 22AWG and 14AWG. Maximum 300V and rated temperature to 105°C for input power pins.
----------------	---

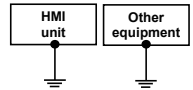
Caution	Make sure the HMI is properly grounded to prevent electrical shock, fire or malfunction.
----------------	--

Recommended

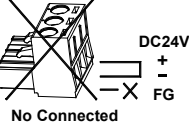


- HMI unit and other equipment should have the same electrical grounding (reference voltage level), otherwise communication errors may occur.

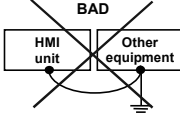
GOOD



Prohibited



NO CONNECTED



1.3 Operation

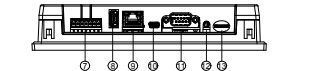
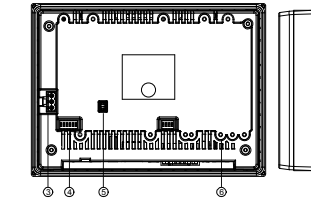
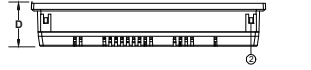
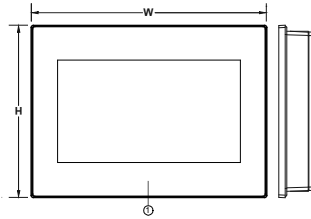
- Do not use sharp objects or excessive force to press the touch screen. This may damage the touch screen. Screen protector can be applied to the HMI screen to protect it from damage, for ordering information, please contact our sales department.

1.4 Maintenance and Service

- The agreed guarantee applies.
- Only qualified personnel should make repairs and perform maintenance.
- Disconnect the device from the power supply before carrying out cleaning or maintenance.
- Clean the front panel with a soft cloth and mild detergent.
- Please use original replacement spare parts or accessories.

2

2. Part Names and Dimensions



①	Power Indicator Light
②	Mounting Hole
③	Power Connector
④	COM3/COM4 Termination Switch
⑤	HB1 PLC Connector
⑥	HB1 PLC Screw Hole
⑦	COM3/COM4 Pluggable Terminal Block
⑧	USB Connector
⑨	Ethernet RJ45 Connector (for Ethernet/Multifunction model)
⑩	Mini USB Connector
⑪	COM1:DB-9 Male Connector*
⑫	Audio Phone Jack (for Multifunction model)
⑬	Micro-SD Card Slot (for Multifunction model)

W	201.0 mm
H	147.0 mm
D	38.3 mm

*This series HMI do not support COM2.

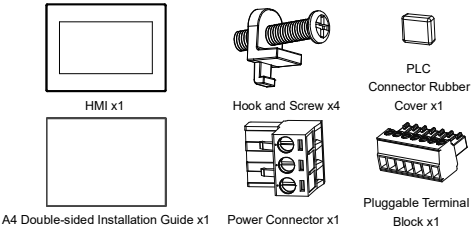
3

3. Specifications

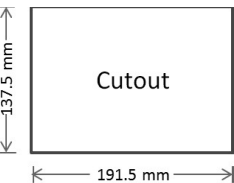
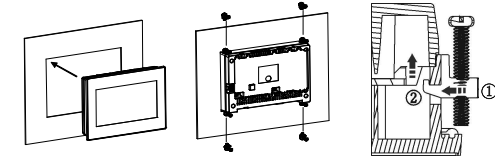
Model	7" Serial model	7" Ethernet model	7" Multifunction model
Type of item tested	Control		
Product Description	Operator Panel		
Connections to mains supply	Permanent		
Overvoltage category	II		
Pollution degree	2		
Means of Protection	Class III		
Environmental conditions	Operating Temp. 0~50°C Storage Temp. -20~60°C		
For use in wet locations	No		
Equipment mobility	Built in		
Operating conditions	Continuous		
Overall size	201.0 x 147.0 x 38.3 (mm)		
Weight	610 (g)	630 (g)	650 (g)
Marked degree of protection	Front panel: IP65 / Rear Case: IP20 to IEC 60529 Type 1 to UL50E		
Equipment classification	Industrial, Professionally, Commercial		
Equipment class	Class III		
Equipment type	Permanently connected, Fixed		
Serial 1	Connector: D-Sub 9-Pin COM1: RS-232 (TXD, RXD)		
Serial 2	Connector: Pluggable Terminal Block COM3: RS-422/485 COM4: RS-485		
LAN	---	10M/100M	10M/100M
USB	USB2.0 Type-A (Host)x1 USB2.0 Type mini-B (Device)x1		
Micro SD	---	---	Yes
Audio	---	---	Yes
PLC Extension Termination Switch	HB1 main units + B1 extension modules Yes (For RS-422/485)		
Power input	14V~32V (Isolated Power)		
Consumption	520mA@24VDC		
Insulation	50MΩ at 500VDC		
Relative Humidity	10%~90%@ 40°C (non-condensing)		
Withstand Voltage	AC500V/20mA/1 Min. (between charger & FG terminals)		
Vibration	5 to 9Hz Half-amplitude: 3.5mm 9 to 150 Hz Constant acceleration: 19.6m/s ² (2G) 3 directions of X, Y, Z: 10Hzmin (IEC61131-2 complaints)		
Noise Suppression	1000Vp-p, width 1ms, rising time 1ms		
Grounding Resistance	Below 100Ω		
Dimension Cut-out	191.5 x 137.5 (mm)		

4

4. Unpacking the Unit

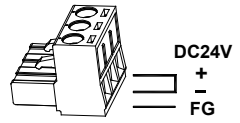


5. Installation Procedures



5

6. Power Connection



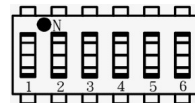
- Be sure to connect the ground FG terminal to a class-3 ground (Ground resistance should not exceed 100Ω). Try to make the ground wire as short as possible.
- Use 22 - 14 AWG (0.6 - 1.5 mm²) wire for the power connections.

7. Termination Switch

- 7 inch HMI has a built-in termination resistor switch. To enable or disable the termination resistor please follow the configuration shown in the table below. The termination switch is for COM3 [RS-422 / RS-485] and COM4 [RS-485].

- Configuration of Termination Resistor Switch.

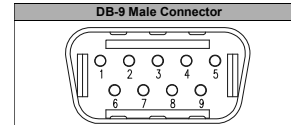
No.	Termination Resistor					
	COM3 [RS-422]		COM3 [RS-485]		COM4 [RS-485]	
	Enable	Disable	Enable	Disable	Enable	Disable
1	ON	OFF	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF	OFF	OFF
3	ON	OFF	ON	OFF	OFF	OFF
4	ON	OFF	ON	OFF	OFF	OFF
5	OFF	OFF	OFF	OFF	ON	OFF
6	OFF	OFF	OFF	OFF	ON	OFF



6

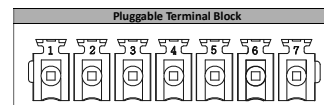
8. Pin-out of COM Ports

- This series HMI do not support COM2.



PIN#	COM1 [RS-232]
1	NC ¹
2	RX
3	TX
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

¹ NC: No Connection

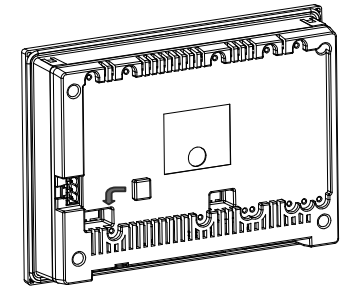


PIN#	COM3 [RS-422]	COM3 [RS-485]	COM4 [RS-485]
1	NC	NC	DATA+
2	NC	NC	DATA-
3	GND	GND	GND
4	RX+	NC	NC
5	RX-	NC	NC
6	TX+	DATA+	NC
7	TX-	DATA-	NC

7

9. PLC Extension Tips

- For compact size and saving space, using HB1 main units + B1 extension modules is recommended.
- The rubber cover of the PLC connector can be taken off and placed into the termination switch slot.



8