

## 4.3 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.

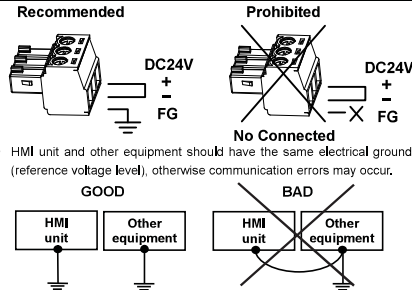
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**Caution**

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.



#### 1.3 Operation

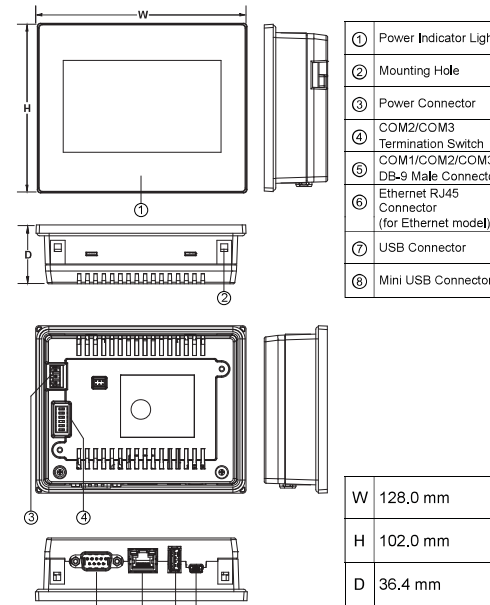
- Do not use sharp objects or excessive force to press the touch screen. This may damage the touch screen. Screen protector can be applied to the HMI screen to protect it from damage, for ordering information, please contact our sales department.
- Do not use the output signal of the device as any safety function or system emergency stop. It may result in personal injury or equipment damage if a malfunction of the touch occurs.

#### 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.

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## 2. Part Names and Dimensions



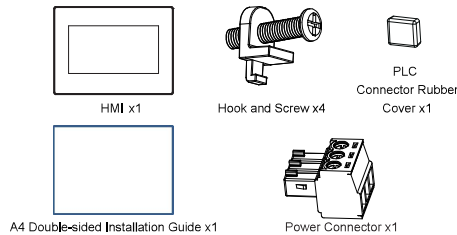
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## 3. Specifications

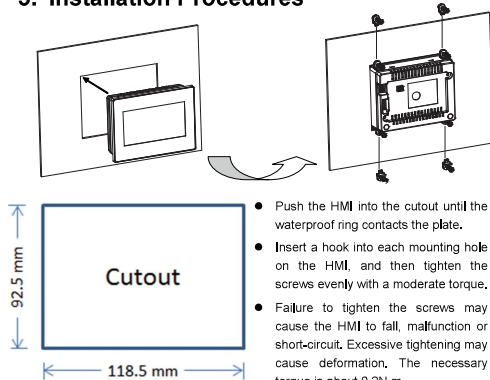
Model	4.3 inch Serial Model	4.3 inch Ethernet Model
UL 61010-1 Technical Consideration	Type of item tested	Control
	Product Description	Operator Panel
	Connections to mains supply	Permanent
	Overvoltage category	II
	Pollution degree	2
	Means of Protection	Class III
	Environmental conditions	Operating Temp. 0~50°C Storage Temp. -20 ~ 60°C
	For use in wet locations	No
	Equipment mobility	Built in
	Operating conditions	Continuous
I/O Port	Overall size	128.0 x 102.0 x 36.4 (mm)
	Weight	215 (g) 235 (g)
	Marked degree of protection	Front panel: IP65 / Rear Case: IP20 to IEC 60529 Type 1 to UL 50E
	Equipment classification	Industrial, Professional, Commercial
	Equipment class	Class III
	Equipment type	Permanently connected, Fixed
	Serial 1	Connector: D-Sub 9-Pin COM1: RS-232 (TXD, RXD) COM2: RS-422/485 COM3: RS-485
Power	Serial 2	---
	LAN	---
	USB	USB2.0 Type-A (Host)x1 USB2.0 Type mini-B (Device)x1
	Micro SD	---
	Audio	---
	PLC Extension	HB1 main unit
	Termination Switch	Yes (For RS-422/485)
Environment	Power Input	14V-32V(isolated power)
	Consumption	420mA@24VDC
	Insulation	50MΩ at 500VDC
	Relative Humidity	10%~90% @ 40°C (non-condensing)
Dimension	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 <sup>2</sup> (2G) 3 directions of X, Y, Z: 10times (IEC61131-2 complaints)
	Noise Suppression	1000Vp-p, width 1us, rising time 1ms
	Grounding Resistance	Below 100Ω
	Cut-out	118.5 x 92.5 (mm)

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## 4. Unpacking the Unit

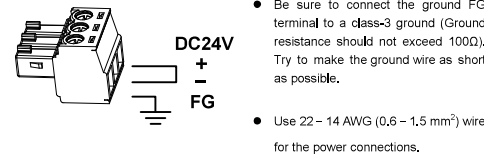


## 5. Installation Procedures



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## 6. Power Connection

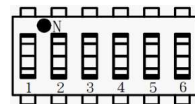


## 7. Termination Switch

- 4.3 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 COM2 [RS-422 / RS-485] and COM3 [RS-485].

- Configuration of Termination Resistor Switch.

No.	Termination Resistor					
	COM2 [RS-422]		COM2 [RS-485]		COM3 [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



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## 8. Pin-out of COM Ports

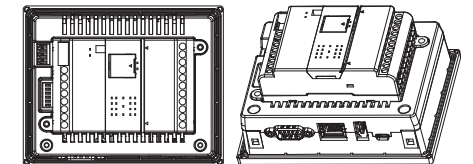
DB-9 Male Connector				
PIN#	COM1 [RS-232]	COM2 [RS-422]	COM2 [RS-485]	COM3 [RS-485]
1	NC <sup>*1</sup>	TX+	DATA+	NC
2	RX	NC	NC	NC
3	TX	NC	NC	NC
4	NC	RX+	NC	NC
5	GND	GND	GND	GND
6	NC	TX-	DATA-	NC
7	NC	NC	NC	DATA+
8	NC	NC	NC	DATA-
9	NC	RX-	NC	NC

\*1 NC: No Connection

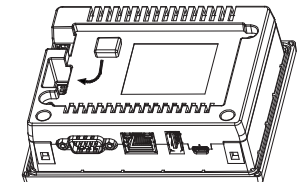
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## 9. PLC Extension Tips

- 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.



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