ig Series HMI Installation Manual

Part 1   General Note

- The communication interfaces of this series of HMI all support RS232, RS485, RS422 communication, which are composite communication ports. When downloading the project, please use the USB download cable, U disk or Ethernet interface to download.
- The power ground must be connected to make the HMI run correctly.
- The communication ground must be connected to make the HMI communicate correctly.

Part 2   Safety Precautions

Notice following safety precautions at any moment when installing,wiring,operating,vindicate and examine.

Installation
- Please setup the HMI according to this manual otherwise it may cause device damage.
- It's Forbid to uncover the product in the environment that has water vapor,Corrosive gas or combustible gas,otherwise it may cause short circuit or fire.

Wiring
- Please connect the grounding terminal with class-3ground,otherwise it may cause short circuit or fire.
- this series HMI use 24-volt power supply.Any connection of non-standard power supply will lead to machine damage.

Operation
- this series HMI need PIStudio software to design project picture. HMI not designed may lead to run abnormally.
- Do not change wiring while the power is ON,otherwise it may cause short circuit or device damage.
- Please do not touch panel with sharp objects,otherwise it may lead to panel depressed,there by make HMI run abnormality.

Maintenance
- It's forbidden to touch inside HMI,or else it may lead to short circuit or device damage.
- When power,It's forbidden to dismantle HMI panel,otherwise it may lead to short circuit or device damage .
- Do not touch connection terminal in 10 minutes of turning off power,otherwise residual voltage may lead to short circuit or device damage.
- When operating,exhaust vent should not be seaLED,otherwise it may lead to failure easily.

Communication
- Please connect to the communication wire according to this manual.
- The length of communication wire should meet the requirment.
- Use the correct ground loops in order to avoid abnormal communication.

Part 3   Work Environment

The product must be placed in the pack box before installation,if not used for a while,in order to make the product accord with the warranty of our company and future maintenance, be sure to notice the following items when stored.
- Storage environment must be dry and dust-free.
- Storage ambient temperature must refer to "Specifications".
- Storage humidity must refer to "Specifications".
- Avoid corrosive gases and liquids in the storage environment.
- Avoid placing the product directly on the ground.

Part 4   Basic Inspection

Please do following basic checking before using this series HMI.

General

- Check if each screw is loose.
- The vent hole should be protected from oil, water and metal powder, and the chip powder of the drill should be prevented from falling into the HMI.
- If there are harmful gases or dust in the HMI operating environment, please take protective measures.

Checking before installation (Unpowered)

- Please deal with connection division of wiring terminal insulated.
- Communication wiring should be correct, otherwise abnormal operation may occur.
- Check for foreign matter entering the interior of the HMI, especially for flammable substances and conductive materials such as screws, metal sheets, etc.
- Please regulate instrument to reduce electromagnetism interference.
- Check HMI supply voltage.

Checking before running (powered)

- Check the status of the power indicator.
- Check if the communication between the HMI and the device is normal.
- If there is any abnormality in the HMI interface, please contact the manufacturer.

Part 5   Packing List

Sequence number	Component	Quantity
1	this series HMI	1
2	HMI LED	4
3	Power terminal	1

Part 6   Specifications

| Module / Content	PI3070ig / PI8070ig	PI3102ig / PI8102ig	PI8150ig / PI8150ig(N)
Power voltage	DC24V		
Power voltage range	DC12V-DC28V		DC18V~DC28V
Permissible instantaneous power failure time	<5ms		
Power consumption	<8W	<10W	<15W
Operating ambient temperature	-10℃~+55℃		0℃~+50℃
Storage ambient temperature	-20℃~+70℃		-20℃~+60℃
Operating ambient humidity	10%~90%RH (Non-condensing)		
Storage ambient humidity	10%~90%RH (Non-condensing)		
Vibration resistance	Conforms to IEC61131-2 standard: Continuous vibration:10Hz~57Hz 0.0755mm,57Hz~150Hz 9.8m/s² Intermittent vibration:10Hz~57Hz 0.0035mm,57Hz~150Hz 4.9 m/s² in each X, Y, Z direction 10 times (80 miunuties)		
Corrosion resistance	Avoid corrosive gas		
Cooling method	Natural air cooling		

Part7 Parts And Function
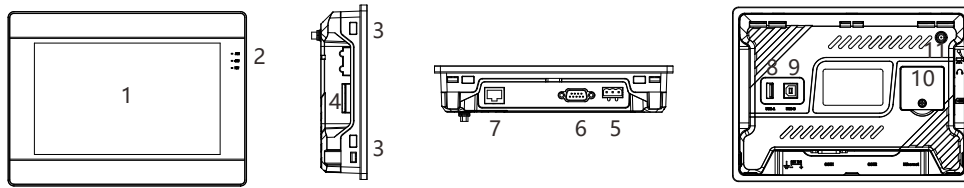
PI3070ig / PI8070ig Components description

1	LCD and touch screen	2	LED	3	Fixed buckle	4	SD card slot
5	Power terminal	6	COM	7	Ethernet	8	USB-A
9	USB-B	10	SIM card slot (optional)	11	4G / WIFI antenna (optional)		
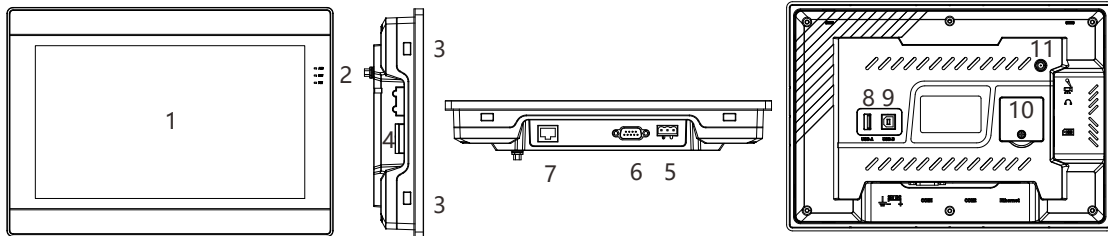
PI3102ig / PI8102ig Components description

1	LCD and touch screen	2	LED	3	Fixed buckle	4	SD card slot
5	Power terminal	6	COM	7	Ethernet	8	USB-A
9	USB-B	10	SIM card slot (optional)	11	4G / WIFI antenna (optional)		
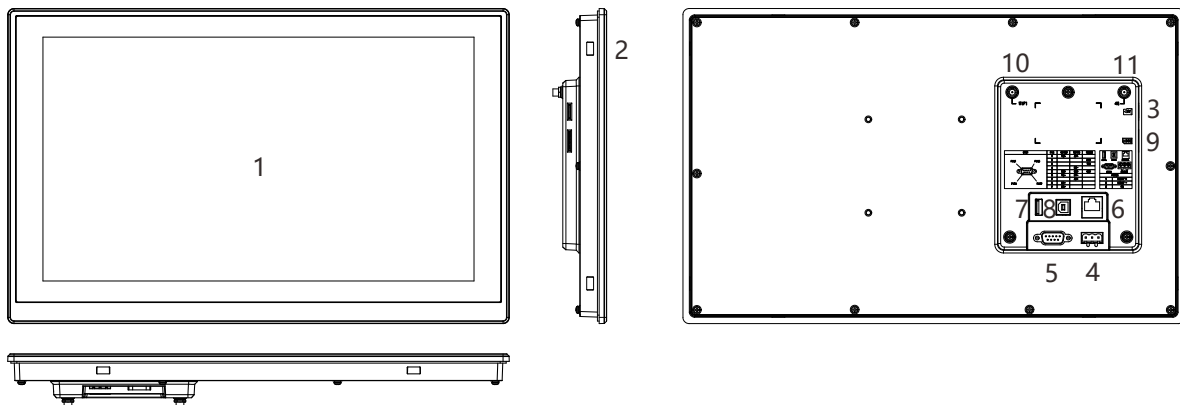
PI8150ig Components description

1	LCD and touch screen	2	Fixed buckle	3	TF card slot	4	Power terminal
5	COM	6	Ethernet	7	USB-A	8	USB-B
9	SIM card slot (optional)	10	WIFI antenna (optional)	11	4G antenna (optional)		
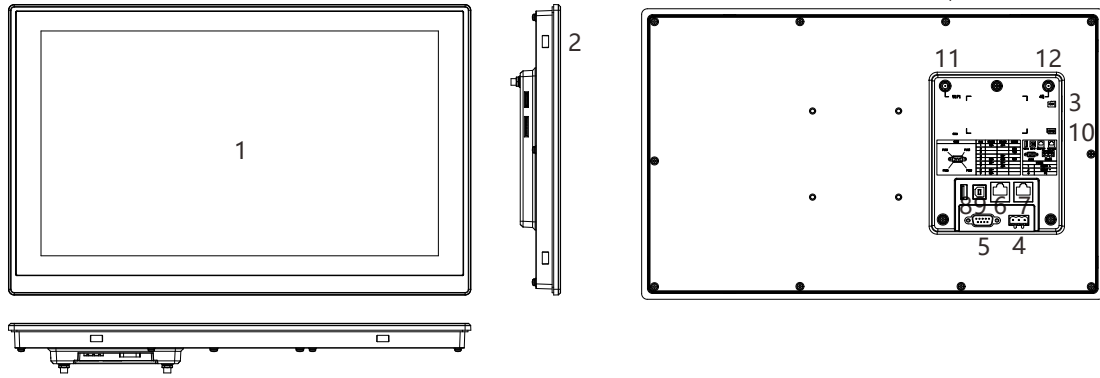
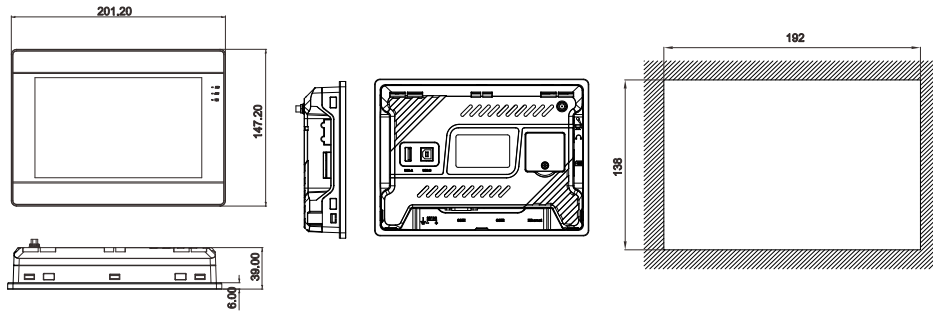PI8150ig(N)/ PI8150ig-C(N) Components description

1	LCD and touch screen	2	Fixed buckle	3	TF card slot	4	Power terminal
5	COM	6	Ethernet 1	7	Ethernet 2	8	USB-A
9	USB-B	10	SIM card slot (optional)	11	WIFI antenna (optional)	12	4G antenna (optional)

The power interface is defined as follows (from left to right):
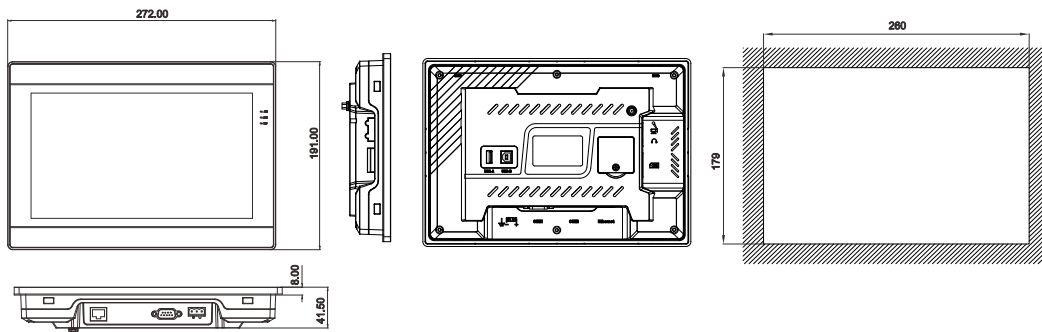

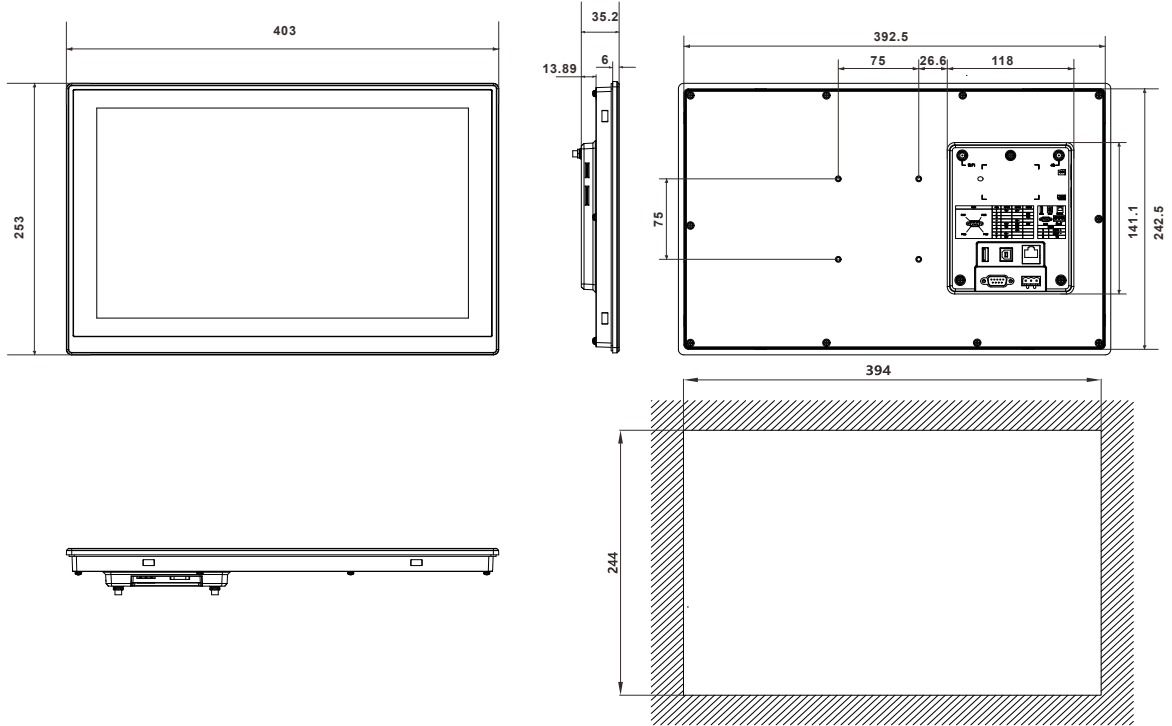| DC 24V+	DC24V-	GND
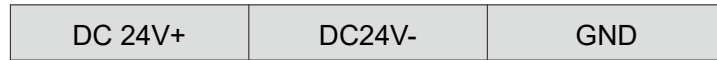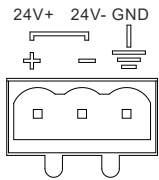
Part8   The Size Of Product
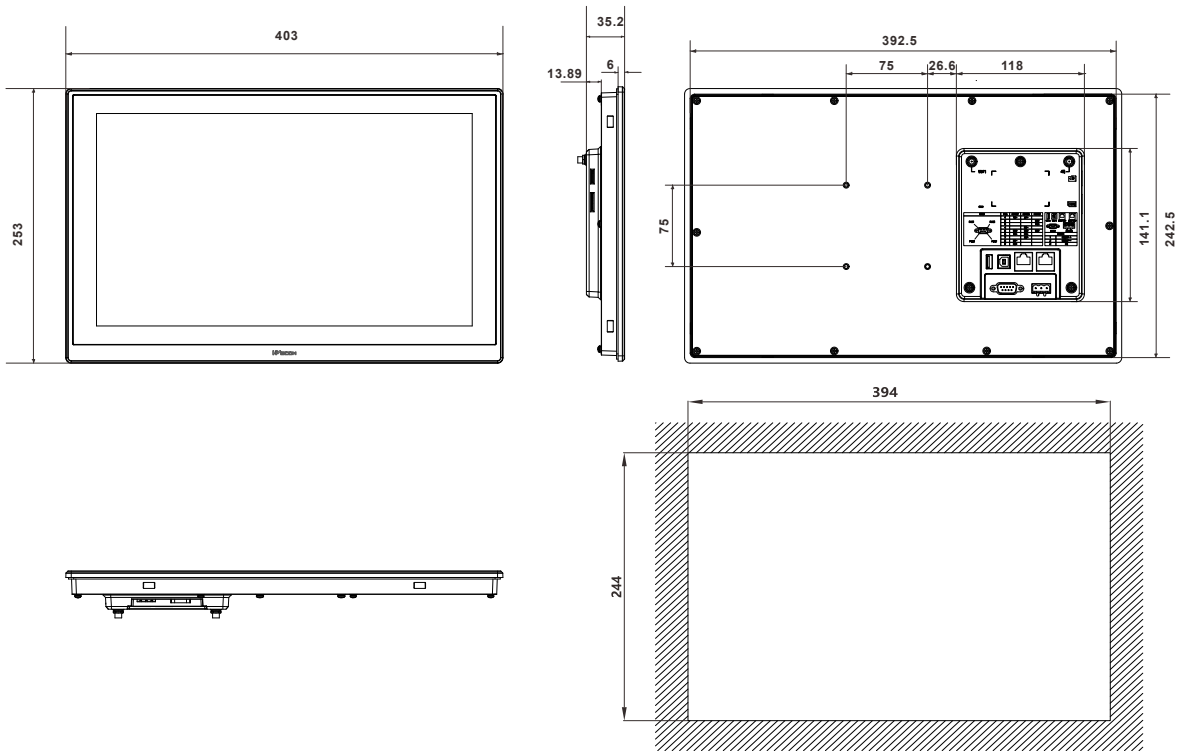
Unit ： mm ， error range : ±0.5mm

PI3070ig / PI8070ig installation size

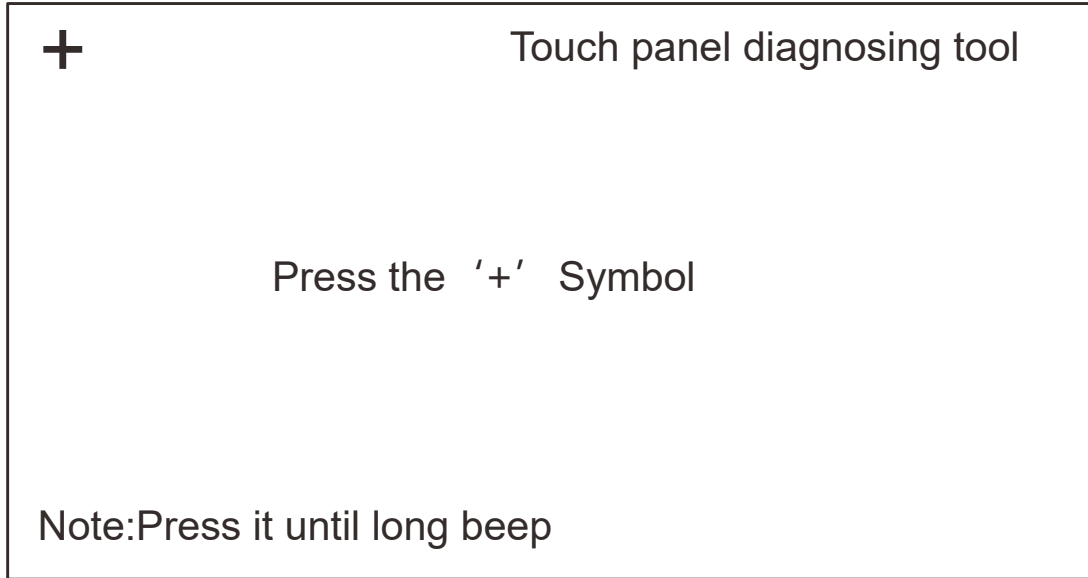PI3102ig / PI8102ig installation size

PI8150ig installation size

PI8150ig(N)/ PI8150ig-C(N) installation size

Part 9   Touch Screen Calibration

After starting HMI,keep on pressing top left corner of screen about 3 to 5 seconds, an interface will appear as following :

Click top left corner, top right corner, bottom right corner, bottom left corner and the center of '+' in turn and restart.

Part 10   Parameters Setting

Keep on pressing top right corner of screen about 3 to 5 seconds,an interface will appear as following:
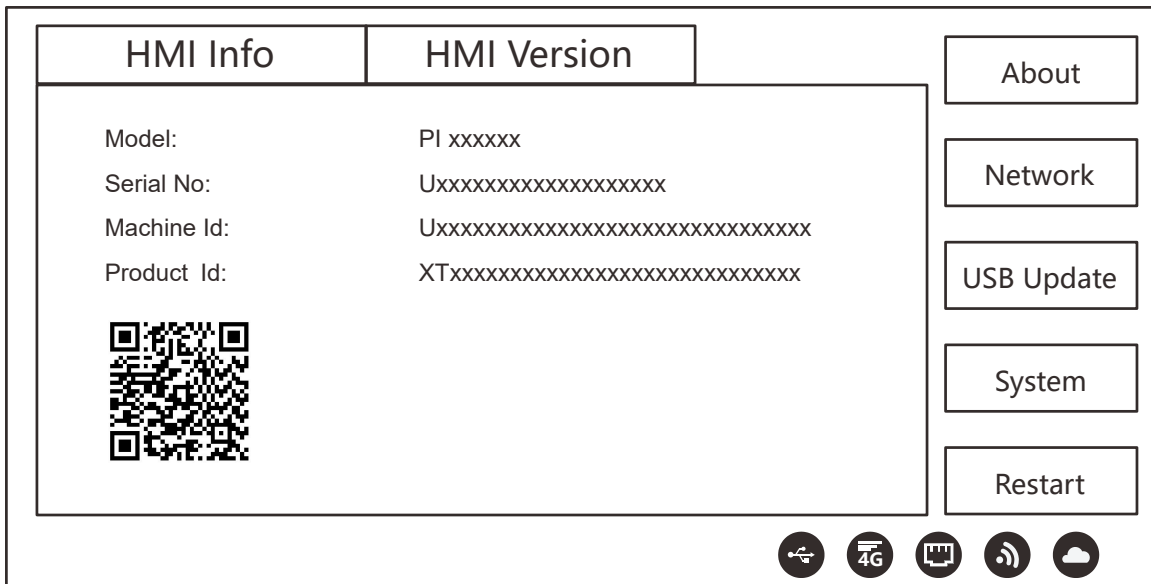
Part 11　Product Installation

Notes:
- The installation direction must be in accordance,Otherwise it may lead to fault.
- In order to make circle effect greatly,adjacent objects and baffle should be kept on enough space when installation,otherwise it will cause bad cooling.
- Used in crust plane of Type 4X indoor grade.

Installation steps:
- Make sure the waterproof gasket is cased,and then install HMI to the adaptive crust.
- Make sure the fixed piece screw is cased,and then hitch front cover screw to withstand inside control box .
- Please tight screws aptly and remember not too strength,otherwise it will lead to crustaceous damage.　Torque:6.17lb-inch(0.7N-M)

Part 12　Interface Definition

PI3070ig / PI8070ig / PI3102ig / PI8102ig / PI8150ig / PI8150ig(N)　series interfaces

COM1 definition:

Pin	Definition	Pin	Definition
1	RS422 TX +/RS485 A1 +	2	RS232 RXD
3	RS232 TXD	4	RS485 B2-
5	GND	6	RS422 TX-/RS485 B1-
7	RS485 A2+	8	RS422 RX-
9	RS422 RX+		

▲ Note:RS422 and RS485-1 can not be used in COM1 port of PI3070ig / PI8070ig / PI3102ig / PI8102ig / PI8150ig / PI8150ig(N) series HMI at the same time.

Notice

The contents of this manual are subject to change without notice.

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