HMI installation instructions

1.0 Installation instructions

1.1 Installation guide

1.1.1 Installation position

When installing other equipment, please ensure that AC power line, PLC output module, contactor, starter, relay and other types of electrical interface equipment are kept at an appropriate distance from the product to avoid interference.

Special attention shall be paid to keep a long distance from strong interference sources such as frequency converter, servo driver and switching power supply. The input and output cables of such equipment must be shielded cables, and the shielding network shall be connected to the star grounding point of the system.

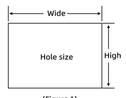
1.1.2 Installation of panels and cabinets

Insert the product into operation panel of the control cabinet. During installation, please use a cross screwdriver and the metal parts attached with this product. Follow the following steps:

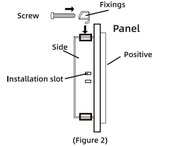
1.Cut a rectangular slot on the surface of the panel according to the hole size. (Figure 1)

2. Insert HMI host from the front of the panel, insert the panel fixings (attached) at the four mounting Jack positions on the side of the HMI host, insert the fixing screws (attached) and tighten them with a cross head screwdriver. (Figure 2)

⚠ Torque not greater than 0.2N/m



(Figure 1)



(Figure 2)

1.1.3 Environmental requirements

- Environmental precautions: do not use the product in places exposed to direct sunlight and wind and rain.
- Do not use in places that are easily polluted by chemical substances, corrosive or flammable gases, etc.
- Do not use in places with explosion hazards, such as places with flammable gas, steam or dust.
- Do not operate in the environment with great temperature change or humidity, which may cause condensation inside the equipment and damage the equipment.

1.1.4 Application environment

This product is designed according to the industrial application environment. The designed application environment temperature is from +10℃ to 50℃, which works stably in most industrial environments. It may not be applicable for some special outdoor environments. Please choose the product with caution!

1.1.5 Electrical environment

This product has passed electrical test and conform to EU CE electrical certification standard. The circuit design of this product can resist interference of electrical noise, but it is not guaranteed to adapt to interference of electrical noise in all cases. Please use correct wiring and grounding to ensure this product work properly.

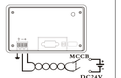
1.2 Power connection

Before installing the product, please confirm that it meets all national and electrical standards. For details, please consult the manufacturer.

1.2.1 Power requirements

Do not operate in the environment with great temperature change or humidity, which may cause condensation inside the equipment and damage the equipment.

Power	Input voltage: rated DC12V~24V Do not use power supply outside specified specification to avoid damaging the product.
Warning! Emergency stop switch	In order to comply with the recommendations of the IC5 safety specification, an emergency stop switch must be installed in any control system using a touch screen (human-machine interface).
Warning! Power tatus	Do not share power supply between the touch screen (human-machine interface) and the inductive load or the input circuit of the controller. Note: DC 24V output power supply provided on some controllers cannot provide current required for the touch screen. The DC power supply must be properly isolated from the AC main power supply.
Warning! Wiring mode	The supply cable of DC power supply shall be as short as possible (maximize length is 200m for shielded cable and 200m for ordinary twisted pair cable). It is recommended to use twisted pair cables. If the power cable is exposed to lightning and thunder-strike, please use appropriate lightning protection, or install appropriate lightning protection equipment. Be sure to keep the AC power cable and high-energy fast-switching DC cable away from the communi-cation cable. Connect a resistor and capacitor between the power ground and PE for the ungrounded DC power supply to provide a channel for the static electricity and high frequency interference. Recommended resistance value is 1m Ω and capacitance capacity is 4700pf.
Connection	Please select power cable that withstand voltage value and current value comply with the safety regulations. The power terminal is in the packaging box as standard accessories. Contact technical support from local supplier or manufacturer if you need additional power terminals. Strictly follow the marking "+" "-" "⏚" when connecting power.



1.2.2 GND requirements

Caution	The electrical box must be grounded. The DC ground is not connected to the actual ground inside the product. To avoid importing external noise into the system due to virtual point grounding, it is better not to connect the DC ground and the shell to the ground. However, if the power supply ground must be connected to the star grounding point, ensure the length of the grounding conductor is as short as possible and the cross-sectional area is as large as possible. When bearing the maximum short-circuit current, the grounded conductor must be directly connected to the star grounding point, which can ensure that the grounding conductor will not bear the current of other branches.

1.2.3 Connection to

Cable requirements	Different communication cables are required to connect with different external devices.
Attention: Do not plug or unplug the communication cable when in operation.	To avoid communication problems, please ensure the length of the communication cable not exceed 150 meters when connecting RS485/422 devices, and not exceed 15 meters when connecting RS232 devices. Message "communication error" will pop up on the display screen if there is a communication problem. The communication indicator light (COM) on the front panel will light and flash quickly until the communication is established in each communication cycle. When the communication cable is long or it needs to pass through environment with electrical noise, the communication cable must be shielded. Do not to lay out communication cable and the AC power cable together, or lay out the communication cable near the electrical noise source. Please make sure that both ends of the communication cable are tightly connected and firmly fixed with the connector of the communication port.

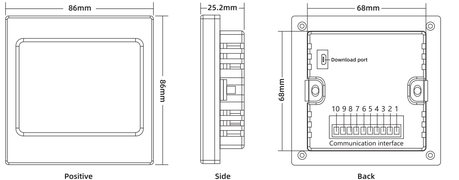
2.0 Programming software

2.1 Please go to our official website to download the programming software, and be sure to use correct software version. (HMI_setup_v3.1 configuration software)

3.0 HMI series

3.1 035W01R HMI

Display size	Overall dimension	Effective display area size	Opening size	Recommended opening size
3.5 "	86* 86*25.2mm	70.08*52.56mm	68*68mm	70*70mm

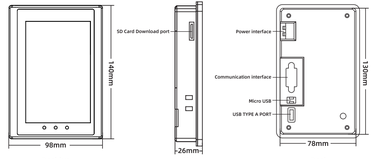


Communication interface pin definition:

Pin	Definition	Serial port 1:RS485	Serial port 1:RS232	Serial port 2:RS485	Power Supply
1	DC24V				Power supply positive input
2	0V				Power supply negative input
3	GND	RS485 Ground	RS232 Ground		
4	485 A1	RS485 A1 (+)			
5	485 B1	RS485 B1 (-)			
6	GND			RS485 Ground	
7	485 A2			RS485 A2 (+)	
8	485 B2			RS485 B2 (-)	
9	TXD1		RS232 Transmit		
10	RXD1		RS232 Receive		

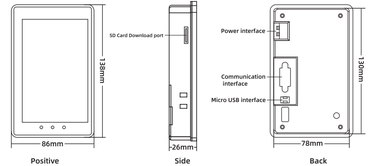
3.2 043W01 RAG HMI

Display size	Overall dimension	Effective display area size	Opening size	Recommended opening size
4.3 "	140*98*26mm	95.04*53.86mm	130*78mm	132*80mm



3.3 043W01/W02 RDG HMI

Display size	Overall dimension	Effective display area size	Opening size	Recommended opening size
4.3 "	138*86*26mm	95.04*53.86mm	130*78mm	132*80mm



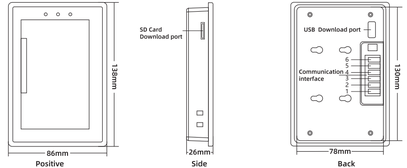
AMZ043W01RAG AMZ043W01/W02RDG Communication interface pin definition:

Serial port terminal:

Pin	Definition	Serial port 1 RS422	Serial port 1 RS485	Serial port 1 RS232	Serial port 2 RS232	Serial port 2 RS485
					(either-or)	
1					RS232 Receive	RS485 B (-)
2	RXD			RS232 Receive		
3	TXD			RS232 Transmit		
4					RS232 Transmit	RS485 A (+)
5	SG	Communication Signal Ground				
6	RX-	RS422 Receive-				
7	RX+	RS422 Receive+				
8	TX-	RS422 Transmit-	RS485 B (-)			
9	TX+	RS422 Transmit+	RS485 A (+)			

3.4 043W01 RPGA/AMZ 043W02 RPG SERIES HMI

Display size	Overall dimension	Effective display area size	Opening size	Recommended opening size
4.3 "	138*86*26mm	95.04*53.86mm	130*78mm	132*80mm



Communication interface pin definition:

043W01 RPGA

Pin	Definition	Power	Serial port 1:RS485	Serial port 1:RS232
1	0V	Power supply negative input		RS232 Ground
2	RS232 RXD			RS232 Receive
3	RS232 TXD			RS232 Transmit
4	RS485 B (-)		RS485 B (-)	
5	RS485 A (+)		RS485 A (+)	
6	DC+24V	Power supply positive input		

043W02 RPGE/RPGEG

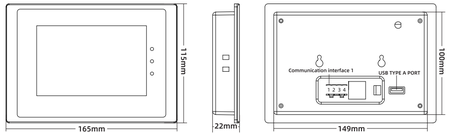
Pin	Definition	Power	Serial port 1:RS232
1	0V	Power supply negative input	
2	RS232 RXD		RS232 Receive
3	RS232 TXD		RS232 Transmit
4	RS232 GND		RS232 Ground
5	N.C.	Empty	
6	DC+24V	Power supply positive input	

043W02 RPGD/RPGDG

Pin	Definition	Power	Serial port 1:RS485
1	0V	Power supply negative input	
2	N.C.	Empty	
3	RS485 GND		RS485 Ground
4	RS485 B (-)		RS485 B (-)
5	RS485 A (+)		RS485 A (+)
6	DC+24V	Power supply positive input	

3.5 043W01 RLG HMI

Display size	Overall dimension	Effective display area size	Opening size	Recommended opening size
4.3 "	165*115*22mm	95.04*53.86mm	149*100mm	151*102mm



Communication interface pin definition:

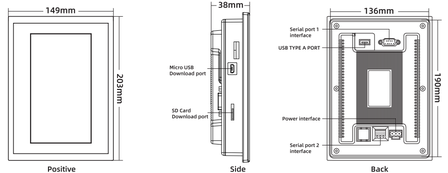
Power input + communication interface 1 (only serial port 1 is supported)

Pin	Definition	Explaination
1	DC+24	Power supply positive input
2	0V	Power supply negative input
3	485A	RS485 A (+)
4	485B	RS485 B (-)

Serial port terminal:

3.6 070 W01 RAG HMI

Display size	Overall dimension	Effective display area size	Opening size	Recommended opening size
7"	203*149*38mm	153.84*85.63mm	190*136mm	192*138mm



Communication interface pin definition:

Serial port 1 Communication interface

Pin	Definition	RS232	RS485	RS422
1	N.C.	Empty		
2	RXD	RS232 Receive		
3	TXD	RS232 Transmit		
4	N.C.	Empty		
5	GND	Communication Signal Ground		
6	RX-			RS422 Receive-
7	RX+			RS422 Receive+
8	TX-		RS485 B (-)	RS422 Transmit-
9	TX+		RS485 A (+)	RS422 Transmit+

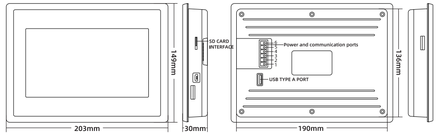
Serial port2 Communication interface (either-or)

Pin	Definition	RS232	RS485
1	RX/B	RS232 Receive	RS485 B (-)
2	TX/A	RS232 Transmit	RS485 A (+)
3	GND	Communication Signal Ground	

Serial port terminal:

3.7 070W01 RPDG（RPDGG/RPDGD/RPDGE）HMI

Display size	Overall dimension	Effective display area size	Opening size	Recommended opening size
7"	203*149*30mm	153.84*85.63mm	190*136mm	192*138mm



Communication interface pin definition:

AMZ070W01RPDG/RPDGG

Pin	Definition	Power	Serial port 1： RS485
1	DC+24V	Power supply positive input	
2	RS485 A1		RS485 A (+)
3	RS485 B1		RS485 B (-)
4	N.C.	Empty	
5	N.C.	Empty	
6	0V	Power supply negative input	RS485-GND

AMZ070W01RPDGD

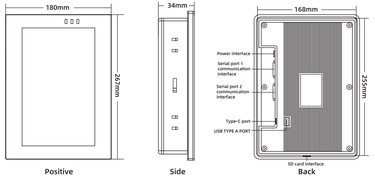
Pin	Definition	Power	Serial port 1： RS485	Serial port 1： RS485
1	DC+24V	Power supply positive input		
2	RS485 A1		RS485 A1(+)	
3	RS485 B1		RS485 B1(-)	
4	RS485 A2			RS485 A2(+)
5	RS485 B2			RS485 B2(-)
6	0V	Power supply negative input	Communication Signal Ground	

AMZ070W01RPDGE

Pin	Definition	Power	Serial port 1： RS485	Serial port 1： RS232
1	DC+24V	Power supply positive input		
2	RS485 A1		RS485 A1(+)	
3	RS485 B1		RS485 B1(-)	
4	RS232 TX			RS232 TX
5	RS232 RX			RS232 RX
6	0V	Power supply negative input	Communication Signal Ground	

3.8 101W01 RAG HMI

Display size	Overall dimension	Effective display area size	Opening size	Recommended opening size
10.1"	267*180*34mm	222.72*125.28mm	255*168mm	257*170mm



Communication interface pin definition:

Serial port terminal:

Serial port 1 Communication interface

Pin	Definition	Serial port 1: RS232	Serial port 1: RS485	Serial port 1: RS422
1	N.C.	Empty		
2	RXD	RS232 Receive		
3	TXD	RS232 Transmit		
4	N.C.	Empty		
5	GND	Communication Signal Ground		
6	RX-			RS422 Receive-
7	RX+			RS422 Receive+
8	TX-		RS485 B (-)	RS422 Transmit-
9	TX+		RS485 A (+)	RS422 Transmit+

Serial port 2 Communication interface (either-or)

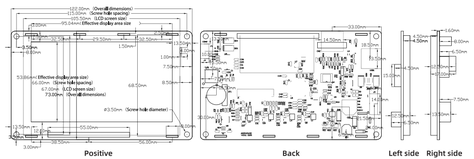
Pin	Definition	Serial port 2: RS232	Serial port 2: RS485
1	N.C.	Empty	
2	RXD	RS232 Receive	
3	TXD	RS232 Transmit	
4	N.C.	Empty	
5	GND	Communication Signal Ground	
6	N.C.	Empty	
7	N.C.	Empty	
8	485B		RS485 B (-)
9	485A		RS485 A (+)

4.0 Serial port screen series

4.1 043W01/W02 RDE Serial port screen

Product dimension drawing of 043 serial port screen

Display size	Overall dimension	LCD screen size	Effective display area size	Screw hole spacing
4.3"	122*73*17mm	105.5* 67*4.5mm	95.04*53.86mm	115*66mm



Communication interface pin definition:

Serial port 1 Communication interface

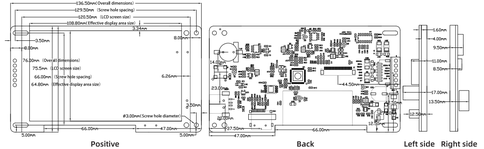
Pin	Definition	Explaination
1	0V	Power supply negative input
2	RS485 B	Serial port 1： RS485 B (-)
3	RS485 A	Serial port 1： RS485 A (+)
4	N.C.	Empty
5	DC+24V	Power supply positive input

Serial port 2 Communication interface

Pin	Definition	Explaination
1	RS232 TXD	Serial port 2： RS232 Transmit, Connected to controller RS232 Receive
2	RS232 RXD	Serial port 2： RS232 Receive,Connected to controller RS232 Transmit
3	GND	Communication Signal Ground

4.2 050 W01 RED Serial port screen

Display size	Overall dimension	LCD screen size	Effective display area size	Screw hole spacing
5"	136.5*76*17mm	120.5*75.5*4mm	108.8*64.8mm	129.5*66mm

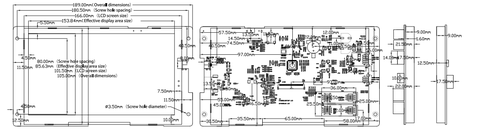


Communication interface pin definition:

Pin	Definition	Explain	
1	DC+24V	Power supply positive input	
2	0V	Power negative input	
3	GND	RS485+RS232 Ground	
4	RS485 A2	RS485 A2 (+)	Serial port 2:RS485 communication
5	RS485 B2	RS485 B2 (-)	
6	RS232 TX1	RS232 Transmit,Connected to controller Receive	Serial port 1:RS232 communication
7	RS232 RX1	RS232 Receive Connected to controller Transmit	

4.3 070 P24 Serial port screen

Display size	Overall dimension	LCD screen size	Effective display area size	Screw hole spacing
7"	189*105*22mm	166*101.5*9mm	153.84*85.63mm	180.5*80mm



Communication interface pin definition:

Serial port 1 Communication interface

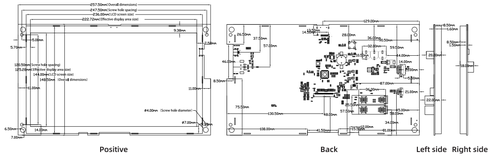
Pin	Definition	Explain	
1	0V	Power supply negative input	
2	RXD	Serial port ：RS232 Receive or RS485 B (-)	Two communication modes are optional
3	TXD	Serial port ：RS232 Transmit or RS485 A (+)	
4	N.C.	Empty	
5	DC+24V	Power supply positive input	

Serial port 2 Communication interface

Pin	Definition	Explain	
1	RXD	Serial port:RS232 Receive or RS485 B (-)	Two communication modes are optional
2	TXD	Serial port:RS232 Transmit or RS485 A (+)	
3	GND	Communication Signal Ground	

4.4 101 P24 Serial port screen

Display size	Overall dimension	LCD screen size	Effective display area size	Screw hole spacing
10.1"	257.5*148.5*22mm	236*144*8.5mm	222.72*125.28mm	247.5* 120.5mm



Communication interface pin definition:

Serial port 1 Communication interface

Pin	Definition	Explain	
1	0V	Power supply negative input	
2	RXD	Serial port ：RS232 Receive or RS485 B (-)	Two communication modes are optional
3	TXD	Serial port ：RS232 Transmit or RS485 A (+)	
4	N.C.	Empty	
5	DC+24V	Power supply positive input	

Serial port 2 Communication interface

Pin	Definition	Explain	
1	RXD	Serial port 2：RS232 Receive or RS485 B (-)	Two communication modes are optional
2	TXD	Serial port ：RS232 Transmit or RS485 A (+)	
3	GND	Communication Signal Ground	