

WS-A Touch Panel Instruction

--V1.4

Models: WS-035AP

WS-043AP

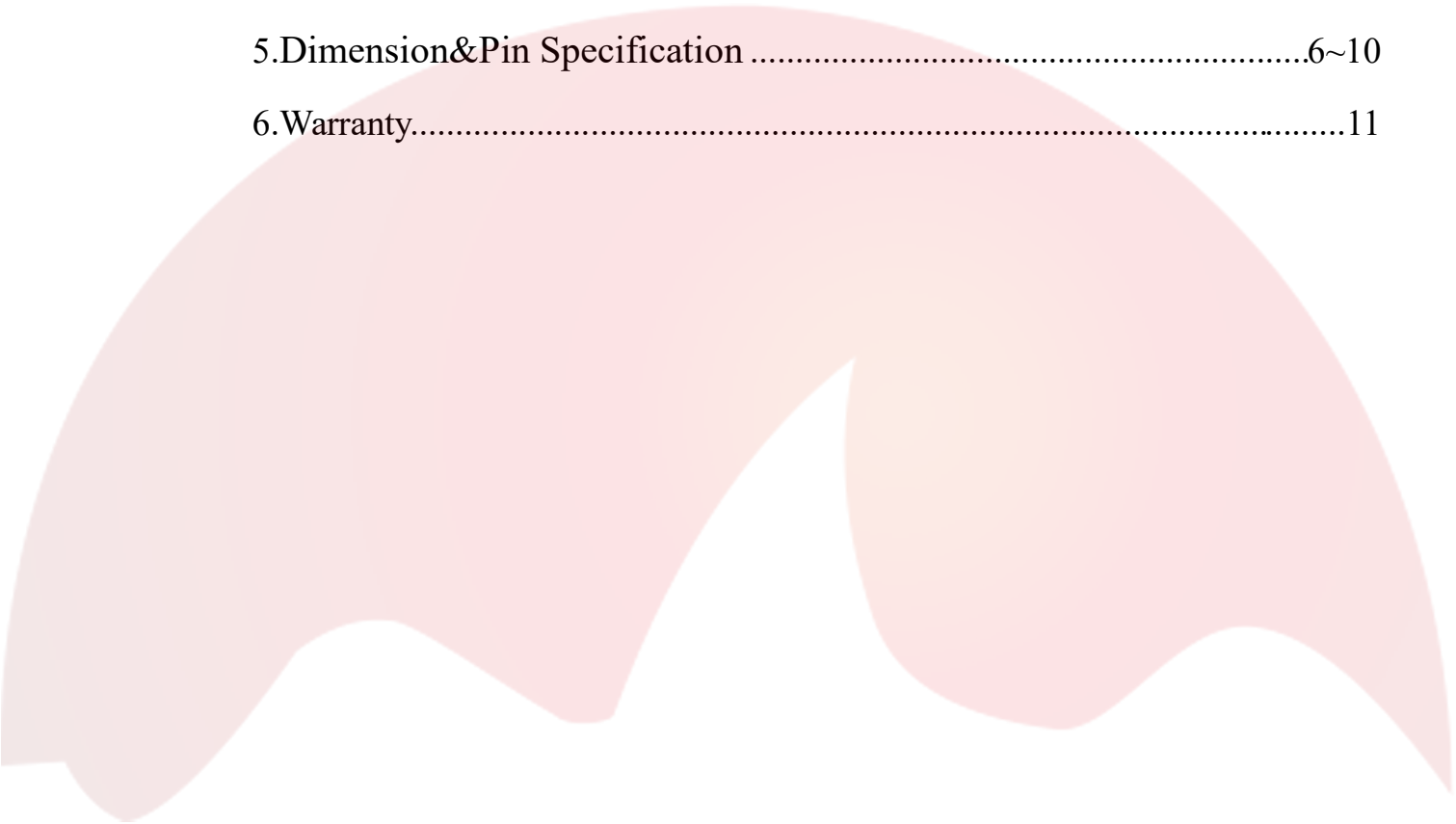
WS-043B

WS-070AP

WS-101AP

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1. Summary

- WS-A series touch panel was built in with ARM9 RISC 32-bit CPU, gets high-speed, big capacity and anti-interference function.
- Operation SW gets structure simplified, control parts modulized and integrated. It also has the property of stability, user-friendly operation system.
- Communication interface smoothly switching.
- Support most communication protocol,PLC, Frequency converter, Servo controller, Single-Chip controller like Mitsubishi/Panasonic/Omron/Delta/Xinje/Siemens/LG and others. Users only need to choose it from SW interface.
- SupportRS232, RS485, RS422 and other ports.
- It gets full functions display like ON/OFF, Digit data, Picture, Historical tendency, Historical data, Message, Icon, Tendency, GIF, Alarm, Text, Excel and various graphics.
- It supports multi-language configuration, multi-functional button, setup, data transmission, Data collection, Curving lines.
- Support custom gallery adding; users can add the favorite pictures to the custom gallery for future work.
- Support CN and EN keyboard input, and switched freely.
- Vector Gallery supports png/Jpg/Gif/Bmp and other formats. Any zooming is OK without jag.
- Baud Rate range: 1200-230400bps。
- You can use our platform for new project and get advantage of more convenience, lower cost and shorter research period.
- Support data download and update from U-disk.
- Normally working in -20°C environment.

2. Parameter

Model	WS-035AP	WS-043AP	WS-043B	WS-070AP	WS-101AP
Screen	3.5" TFT LCD	4.3" TFT LCD	4.3" TFT LCD	7" TFT LCD	10.1" TFT LCD
Resolution	320×240 px	480×272 Px	480×272 Px	800X480	1024x600
Color	260K	260K	260K	260K	260K
Brightness	300 cd/m ²	300 cd/m ²	300 cd/m ²	450 cd/m ²	250 cd/m ²
Backlight	LED	LED	/	LED	LED
Life	20000hrs	20000hrs	20000hrs	20000hrs	20000hrs
Touch screen	4 line Touch panel of resistance	4 line Touch panel of resistance	4 line Touch panel of resistance	4 line Touch panel of resistance Capacitive Panel optional	4 line Touch panel of resistance Capacitive Panel optional
CPU	32-bit 200MHz ARM9	32-bit 240MHz ARM9	32-bit 240MHz ARM9	32-bit 600MHz ARM9, built-in 32MB DDR	32-bit 600MHz ARM9, built-in 32MB DDR
Capacity	128M FLASH	128M NAND FLASH	16Mbyte SPINOR FLASH	128Mbyte SPI NAND FLASH	128Mbyte SPI NAND FLASH
RTC	Yes	Yes	Yes	Yes	Yes
Ethernet	/	/	/	/	/
USB	USB2.0 port*1	USB2.0 port*1 USB2.0 Host port*1	USB2.0 port*1	USB2.0 port*1 USB2.0 Host port*1	USB2.0 port*1 USB2.0 Host port*1
Download	USB cable	USB cable&SD card	USB cable&SD card	USB cable, SD card&U-Disk	USB cable, SD card&U-Disk
U Disk	/	Yes	/	Yes	Yes
Serial port communication	COM1:RS232/RS485 COM2:RS485	COM1:RS232/RS485 /RS422	COM1:RS232/RS485	COM1:RS232/RS485 /RS422 COM2:RS232/RS485 (Only dual serial screen supports COM2)	COM1:RS232/RS485/RS422 COM2:RS232/RS485(Only dual serial screen supports COM2)
Rated power	< 2W	< 2W	< 2.5W	< 3.5W	< 3.5W
Rated Volt	DC 10V-30V	DC 10V-30V	AC/DC 10V-30V	DC 10.8V-30V	DC 10V-30V
Power protection	+/-2KV lightning surge protection; +/-4KV Group pulse; +/-4KV Static touch;	+/-2KV lightning surge protection; +/-4KV Group pulse; +/-4KV Static touch; +/-10KV Static Air	+/-2KV lightning surge protection; +/-4KV Group pulse; +/-4KV Static touch; +/-10KV Static Air	+/-2KV lightning surge protection; +/-4KV Group pulse; +/-4KV Static touch; +/-10KV Static Air	+/-2KV lightning surge protection; +/-4KV Group pulse; +/-4KV Static touch; +/-10KV Static Air

	+/-10KV Static Air				
Drop-outs	< 5 mS	< 5 mS	< 5 mS	< 5 mS	< 5 mS
CE&RoHS	EN61000-6-2:2005 & EN61000-6-4:2007	EN61000-6-2:2005 & EN61000-6-4:2007	EN61000-6-2:2005 & EN61000-6-4:2007	EN61000-6-2:2005 & EN61000-6-4:2007	EN61000-6-2:2005 & EN61000-6-4:2007
Working temperature	-20~60°C	-20~60°C	-20~60°C	-20~50°C	-20~60°C
Storage temperature	-30~70°C	-30~70°C	-30~70°C	-40~70°C	-30~70°C
Environment temperature	10~90%RH	10~90%RH	10~90%RH	10~90%RH	10~90%RH
Seismic performance	10~25 Hz (X/Y/Z 2G/30mins)	10~25 Hz (X/Y/Z 2G/30mins)	10~25 Hz (X/Y/Z 2G/30mins)	10~25 Hz (X/Y/Z 2G/30mins)	10~25 Hz (X/Y/Z 2G/30mins)
Cooling	Natural Air	Natural Air	Natural Air	Natural Air	Natural Air
Protection Grade	IP20	IP20	IP20	IP20	IP20
Install size	68mm×68mm	130mmX78mm	130mmX78mm	192mmX138mm	255mmX168mm
Products size	86mm×86mm×26m m	140mmX98mmX26m m	138mmX86mm	203mmX149mmX38 mm	267mmX180mmX34mm
Net Weight	101g	149g	149g	400g	745g
Software	WINSUNZK HMI_Setup_V3. 1	WINSUNZK HMI_Setup_V3.1	WINSUNZK HMI_Setup_V3.1	WINSUNZK HMI_Setup_V3.1	WINSUNZK HMI_Setup_V3.1
SW Model	WS035AP	WS043AP	WS043	WS070AP	WS101AP

3. Pictures



Picture 1-1: WS-035AP Front



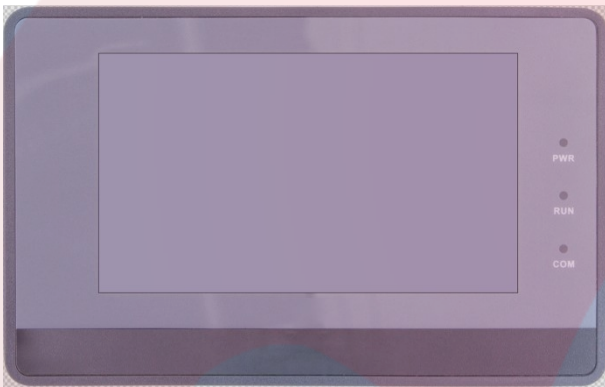
Picture 1-2: WS-035AP Back



Picture 1-3: WS-043AP Front



Picture 1-4: WS-043AP Back



Picture 1-5 WS-043B Front



Picture 1-6: WS-043B Back



Picture 1-7: WS-070AP Front



Picture1-8: WS-070AP Back



Picture 1-9: WS-101AP Front



Picture 1-10: WS-101AP Back

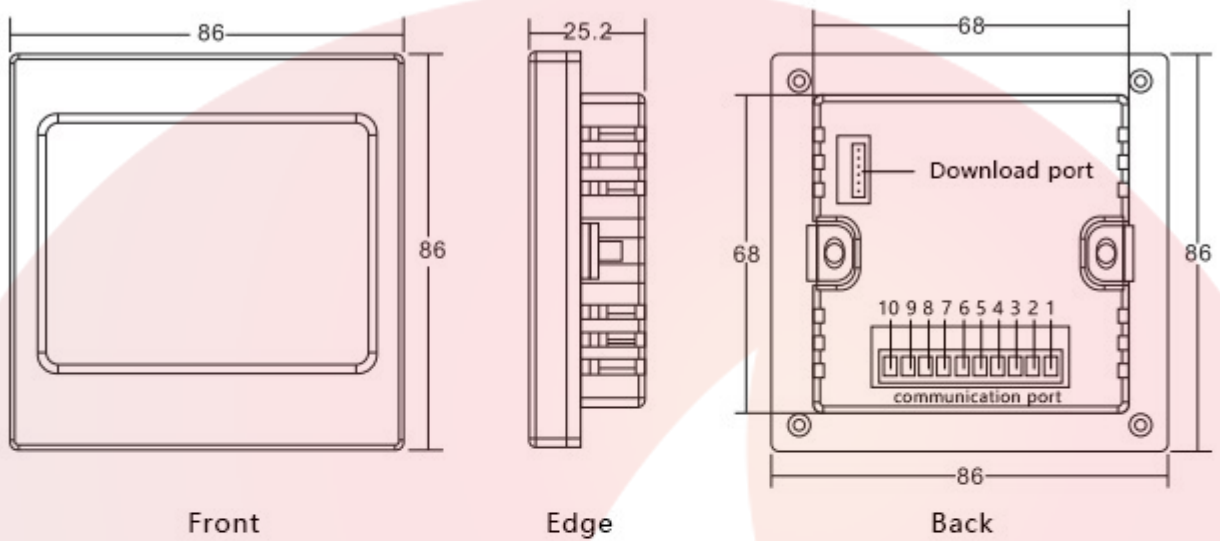
4. Hardware



5. Dimension&Pin Specification

5.1 WS-035AP:

display size	product size	install size	height
3.5inch	86mm x 86mm	68mm x 68mm	25.2mm

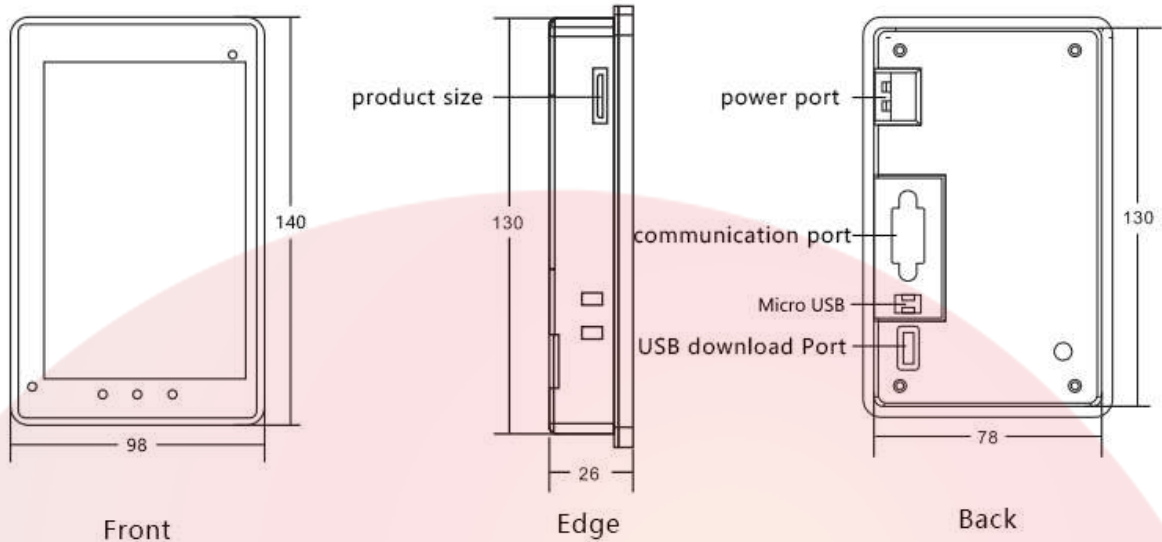


Communication Port Pin Definition:

pin	definition	COM1 RS485	COM1 RS232	COM2 RS485	DC
1	12-24V				+10-30V
2	GND				DC to GND
3	GND	GND	GND		
4	485 A1	RS485 A1			
5	485 B1	RS485 B1			
6	GND			GND	
7	485 A2			RS485 A2	
8	485 B2			RS485 B2	
9	TXD1		RS232 TXD		
10	RXD1		RS232 RXD		

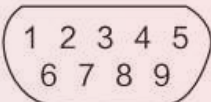
5.2 WS-043AP:

display size	The install size	The install size	height
4.3 inch	140mm x 98mm	130mm x 78mm	26mm



Communication Port Pin Definition:

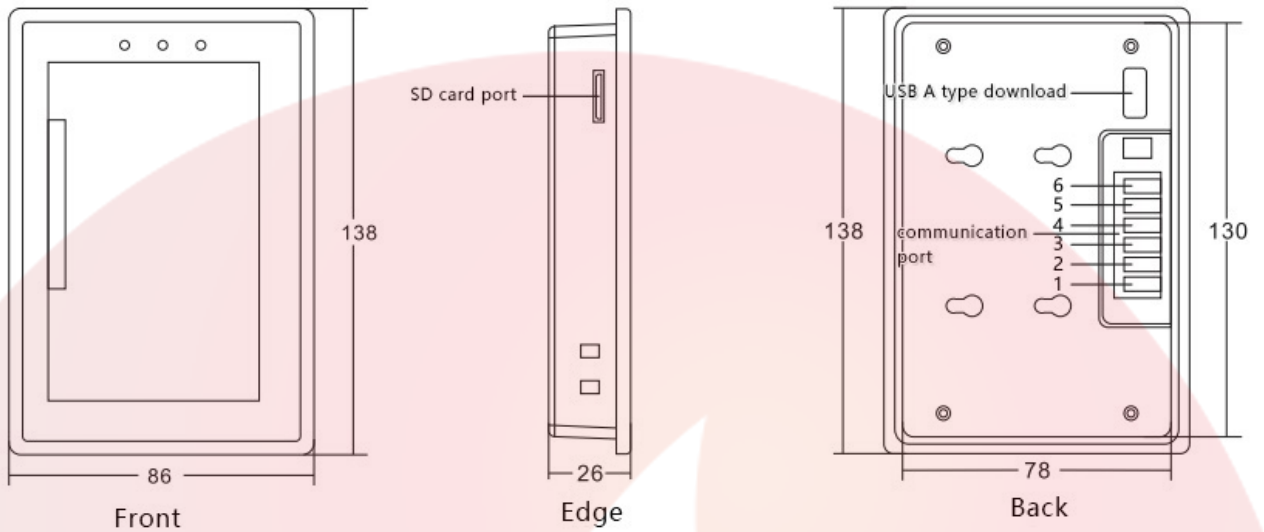
Serial Port:



pin	definition	COM1 RS422	COM1 RS485	COM1 RS232	COM2 RS232	COM2 RS485	
1					RS232 RX	RS485 B(-)	
2	RXD			RS232 RX			
3	TXD			RS232 TX			
4					RS232 TX	RS485 A(+)	
5	SG	Communication to GND					
6	RX-	RS422 RX-					
7	RX+	RS422 RX+					
8	TX-	RS422 TX-	RS485 B(-)				
9	TX+	RS422 TX+	RS485 A(+)				

5.3 WS-043B:

display size	product size	install size	height
4.3 inch	138mm x 86mm	130mm x 78mm	26mm

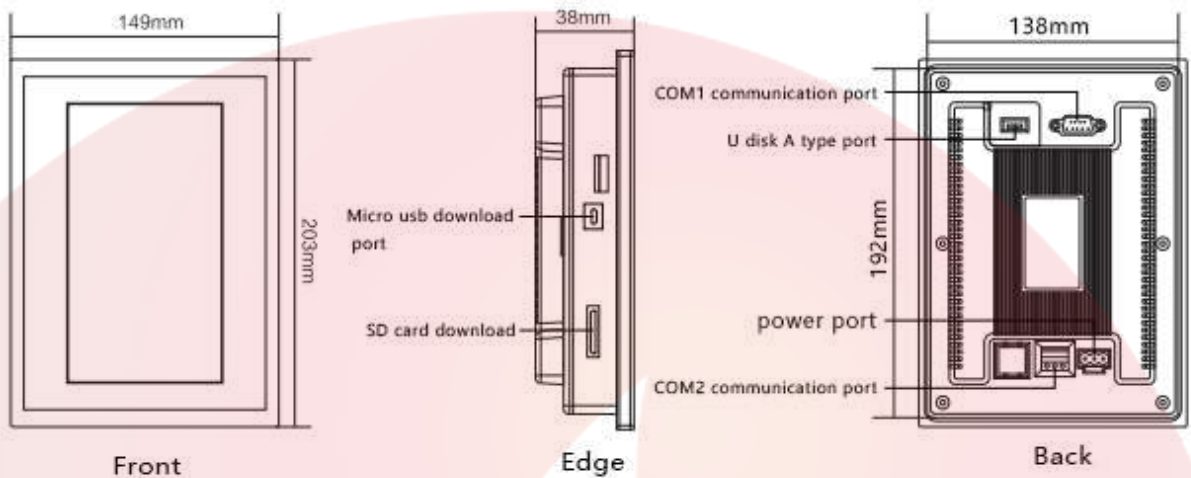


Communication Port Pin Definition:

pin	definition	DC	COM1 RS485	COM1 RS232
1	0V	DC Negative in		RS232 GND
2	RS232 RXD			RS232 RX
3	RS232 TXD			RS232 TX
4	RS485 B		RS485 B	
5	RS485 A		RS485 A	
6	+12~24V	DC Positive in		

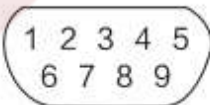
5.4 WS-070AP:

display size	The install size	The install size	height
7inch	149mm x 203mm	192mm x 138mm	38mm



Communication Port Pin Definition:

Serial Port:



CMO1 Communication port

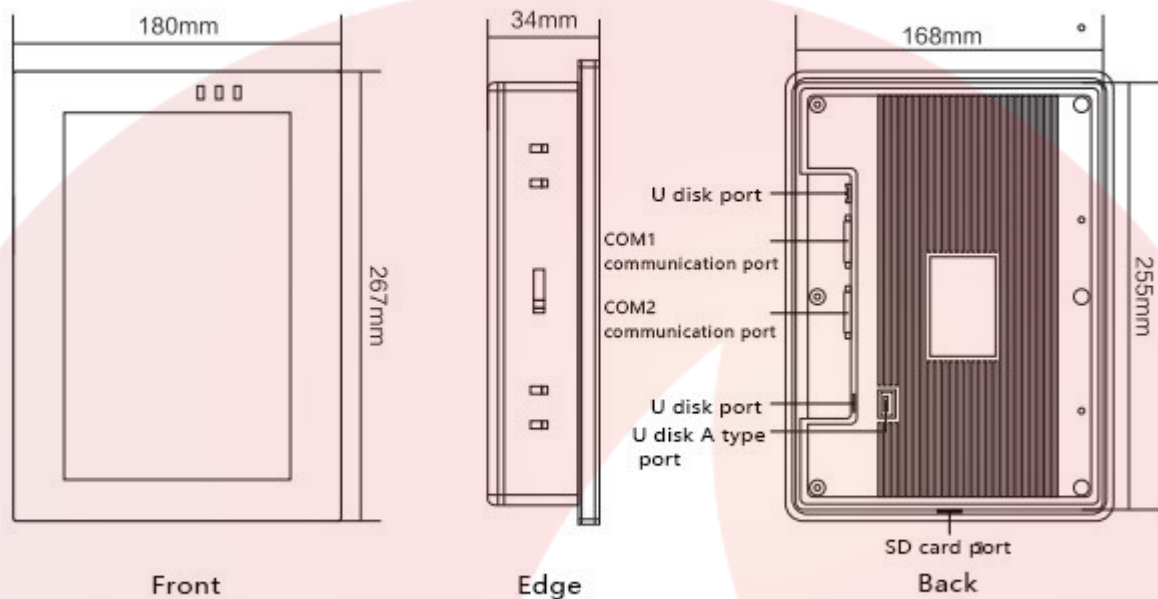
pin	definition	RS232	RS485	RS422
1	N.C.			
2	RXD	RS232 RX		
3	TXD	RS232 TX		
4	N.C.			
5	GND	Communication GND		
6	RX-			RS422 RX-
7	RX+			RS422 RX-
8	TX-		RS485 B-	RS422 TX-
9	TX+		RS485 A+	RS422 TX-

CMO2 Communication port

pin	definition	RS232	RS485
1	RX/B	RS232 RX	RS485 B-
2	TX/A	RS232 TX	RS485 A+
3	GND	Communication GND	

5.5 WS-101AP:

display size	product size	install size	height
10.1inch	180mm x 267mm	255mm x 168mm	34mm



Communication Port Pin Definition:

Serial Port:

CMO1 Communication port



pin	definition	RS232	RS485	RS422
1	N.C.			
2	RXD	RS232 RX		
3	TXD	RS232 TX		
4	N.C.			
5	GND	Communication GND		
6	RX-			RS422 RX-
7	RX+			RS422 RX+
8	TX-		RS485 B-	RS422 TX-
9	TX+		RS485 A+	RS422 TX+

CMO2 Communication port

pin	definition	RS232	RS485
1	N.C.		
2	RXD	RS232 RX	
3	TXD	RS232 TX	
4	N.C.		
5	GND	Communication GND	
6	RX-		
7	RX+		
8	TX-		RS485 B-
9	TX+		RS485 A+

6. Warranty

6.1 Warranty period:

The product provides a one-year warranty period from the date of delivery. During the warranty period, our company will provide free maintenance services for the product.

6.2 Prohibited Behavior:

- Improper wiring, such as reverse connection of positive and negative poles of power supply.
- Use beyond voltage range or environmental requirements
- Unauthorized changes to internal component
- Unappropriated operation for screen damage