P5070B

HMI with 7" TFT LCD display

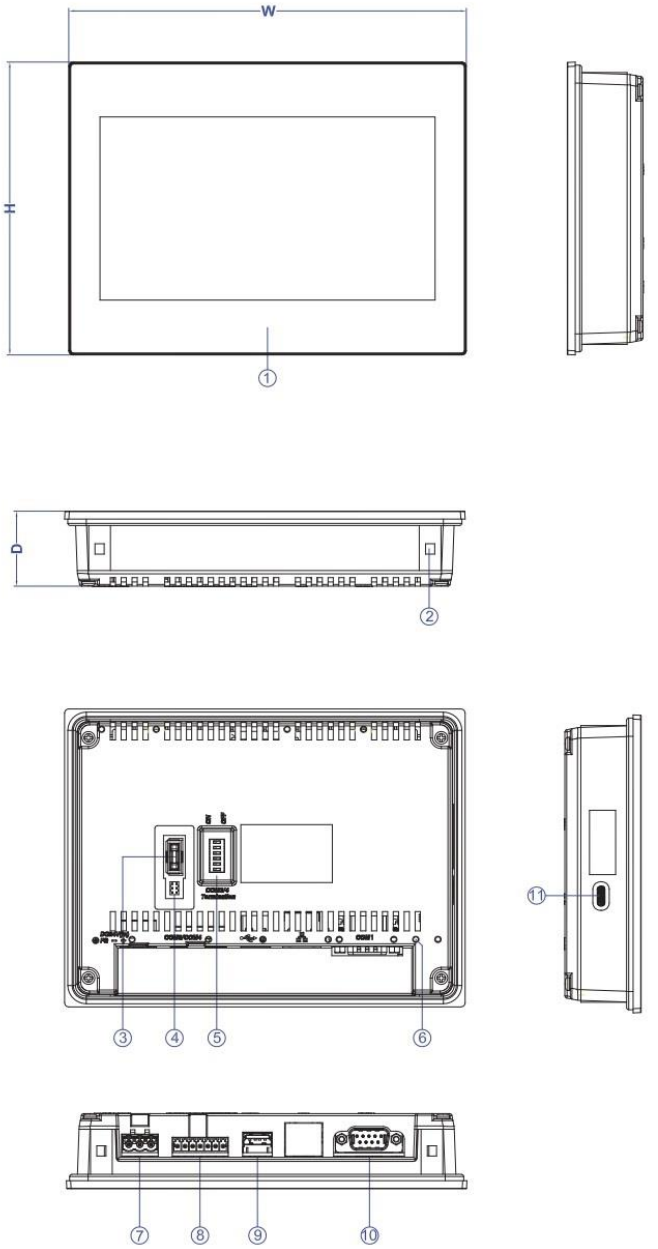
- Cortex 600 MHz Processor
- Built-in Power Isolation
- Built-in PLC Expansion function
- PCB coating for Stability in Harsh Environment
- Fan-less Design for Cooling Method
- High Noise Immunity Design for Industrial Application

Model		P5070SB	P5070NB	P5070ZB
Display	Panel Size	7.0" TFT (16:9)		
	Panel Resolution	800 x 480		
	Brightness	400 (cd/㎡)		
	Contrast Ratio	500		
	Backlight Type	LED		
	Backlight Life Time	>30,000 Hrs.		
	Colors	16.7M		
	LCD Viewing Angle	70/50/70/70 (T/B/L/R)		
Touch	Type	4-wire Resistive Type		
	Accuracy	X axis±2%; Y axis±2%		
Memory	Flash	256MB		
	RAM	128MB		
System	CPU	32 bit RISC Cortex 600MHz		
	RTC	Yes		
Dimension /Weight	Dimensions W x H x D	184.0 x 139.0 x 35.0 (mm)		
	Cut-out	175.0 x 130.0 (mm)		
	Weight	465 (g)	485 (g)	505 (g)
I/O Port	Serial 1 (DB-9)	COM1：RS-232 (2W)		
	Serial 2 (Terminal Blocks)	COM3：RS-422/485 (4W) COM4：RS-485 (2W)		

	RS-422/485 Isolation	–		
	Ethernet	–	10M / 100M	10M / 100M
	USB HOST	USB2.0 x 1		
	USB Device	USB2.0 x 1(USB Type C)		
	Micro-SD Slot	–	–	Yes
	Audio Output	–		
	Video Input	–		
	Termination Switch	Yes		
I/O Extension	PLC Extension	Yes		
	HMI Extension	Yes		
	Wireless Module	Yes		
Power	Power Input Range	14 ~ 32VDC		
	Power Isolation	Yes		
	Isolation Resistance	Exceed 50MΩ at 500VDC		
	Power Consumption	11.5W (@24VDC)	12.0W (@24VDC)	12.5W (@24VDC)
Environment	Protection Structure	Front panel：IP65 / Rear Case：IP20		
	PCB Coating	Yes		
	Operating Temp	0~50°C		
	Storage Temp	-20 ~ 60°C		
	Relative Humidity	10%~90% (40°C Non-condensing)		
	Withstand Voltage	500VAC/20mA/1 Min. (between charger & FG terminals)		
	Vibration Endurance	5 to 9Hz Half-amplitude: 3.5mm ; 9 to 150 Hz Constant acceleration: 19.6m/s2 (2G) ; 3 directions of X, Y, Z : 10times (IEC61131-2 complaints)		
Software	FvDesigner V1.6.40 or later versions			
Certification	CE , UL			

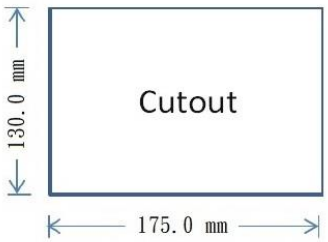
「 Dimensions Drawing 」

P5070SB

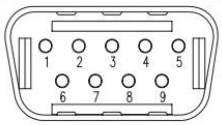


W	184.0 mm
H	139.0 mm
D	35.0 mm

①	Power Indicator Light
②	Fixing hole
③	Expansion module connector
④	HB1 P2C Connector
⑤	COM3/COM4 Termination Switch
⑥	HB1 PLC Screw Hole
⑦	Power Terminal Block
⑧	COM3/COM4 Pluggable Terminal Block
⑨	USB Connector
⑩	COM1:DB-9 Male Connector*
⑪	TYPE C Connector



DB-9 Male Connector

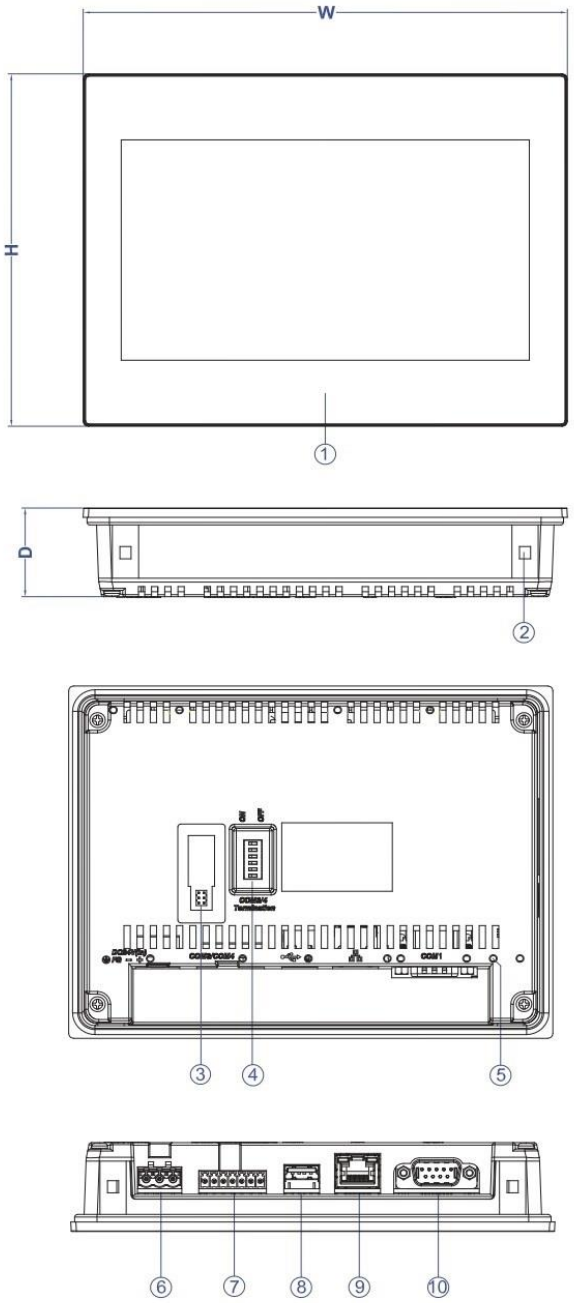


PIN#	COM1 [RS-232]
1	-
2	RX
3	TX
4	-
5	GND
6	-
7	-
8	-
9	-

Pluggable Terminal Block

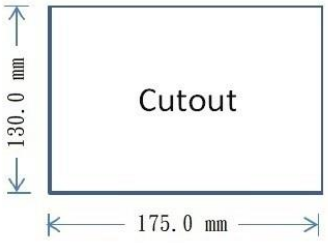
PIN#	COM3 [RS-422]	COM3 [RS-485]	COM4 [RS-485]
1	-	-	DATA+
2	-	-	DATA-
3	GND	GND	GND
4	RX+	-	-
5	RX-	-	-
6	TX+	DATA+	-
7	TX-	DATA-	-

P5070NB

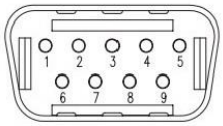


W	184.0 mm
H	139.0 mm
D	35.0 mm

①	Power Indicator Light
②	Fixing hole
③	HB1 P2C Connector
④	COM3/COM4 Termination Switch
⑤	HB1 PLC Screw Hole (M3)
⑥	Power Terminal Block
⑦	COM3/COM4 Pluggable Terminal Block
⑧	USB Connector
⑨	Ethernet RJ45 Connector (for Ethernet/ Multifunction model)
⑩	COM1:DB-9 Male Connector*
⑪	TYPE C Connector



DB-9 Male Connector

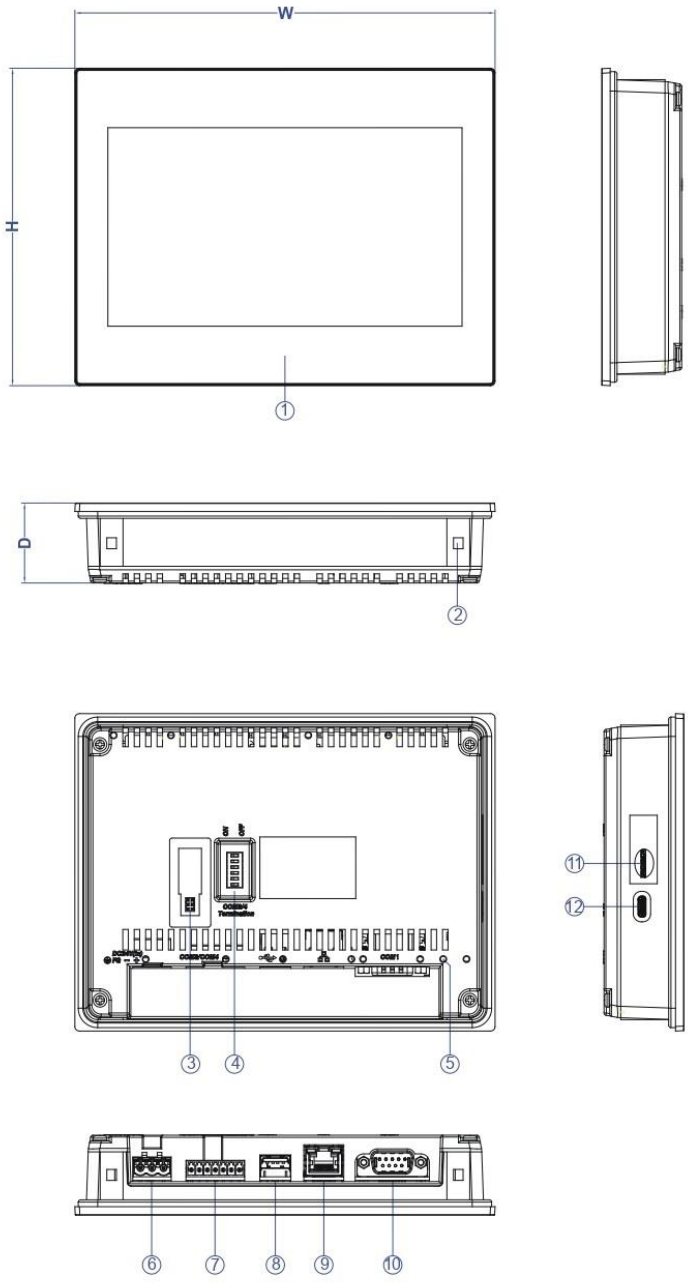


PIN#	COM1 [RS-232]
1	-
2	RX
3	TX
4	-
5	GND
6	-
7	-
8	-
9	-

Pluggable Terminal Block

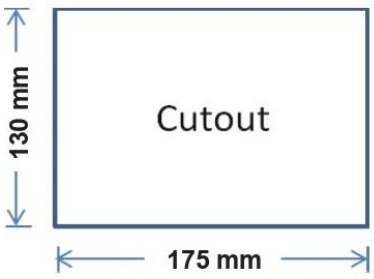
PIN#	COM3 [RS-422]	COM3 [RS-485]	COM4 [RS-485]
1	-	-	DATA+
2	-	-	DATA-
3	GND	GND	GND
4	RX+	-	-
5	RX-	-	-
6	TX+	DATA+	-
7	TX-	DATA-	-

P5070ZB

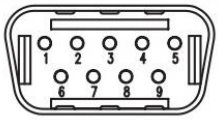


W	184 mm
H	139 mm
D	35 mm

①	Power Indicator Light
②	Fixing hole
③	HB1 PLC Connector
④	COM3/COM4 Termination Switch
⑤	HB1 PLC Screw Hole (M3)
⑥	Power Terminal Block
⑦	COM3/COM4 Pluggable Terminal Block
⑧	USB Connector
⑨	Ethernet RJ45 Connector (for Ethernet/ Multifunction model)
⑩	COM1:DB-9 Male Connector*
⑪	Micro-SD Card Slot (for Multifunction model)
⑫	TYPE C Connector



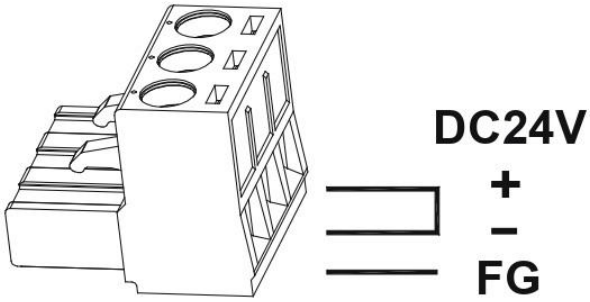
DB-9 Male Connector



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

Pluggable Terminal Block

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

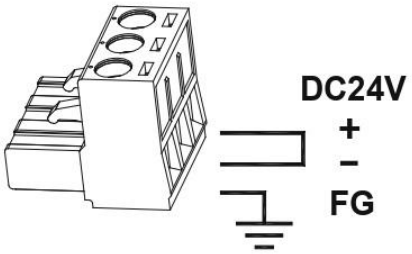


- Be sure to connect the ground FG terminal to a class-3 ground (Ground resistance should not exceed 100Ω). Try to make the ground wire as short as possible.
- Use 22 – 14 AWG (0.6 – 1.5 mm^2) wire for the power connections.

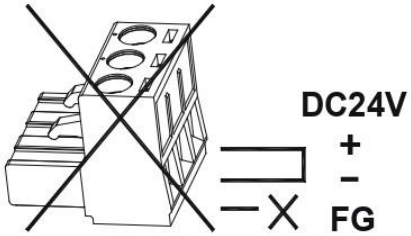
⚠ Caution	Please use solid wires between 22AWG and 14AWG. Maximum 300V and rated temperature to 105°C for input power pins.

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

Recommended



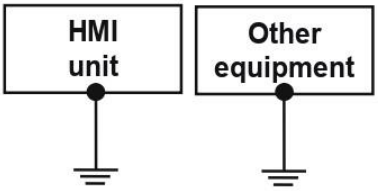
Prohibited



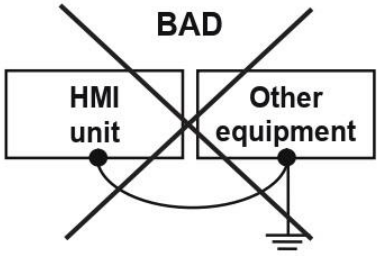
No Connected

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

GOOD



BAD



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 portect if 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.

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.