MT8090/8092XE series

1 Installation and Startup Guide

This document covers the installation of MT8090/8092XE Series HMI, for the detailed specifications and operation, please refer to Brochure and EasyBuilder Pro User Manual.

Install Environment:

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NEMA Rating	MT8090/8092XE Series HMI is NEMA 4 rated.
Electrical Environment	MT8090/8092XE Series has been tested to conform to European CE requirements. This means that the circuitry is designed to resist the effects of electrical noise. This does not guarantee noise immunity in severe cases. Proper wire routing and grounding will insure proper operation.
Environmental Considerations	(1) Make sure that the displays are installed correctly and that the operating limits are followed. Avoid installing units in environments where severe mechanical vibration or shocks are present. (2) The HMI product is certified in accordance with ATEX zone 2/22 categories 3 G/D. The unit has to be installed in an additional enclosure ensuring a minimal protection level for 3G/D equipment. The enclosure equipped with the unit has to be certified and shouldn't be opened when an explosive atmosphere is present. (3) Do not install the unit where acid gas, such as SO2 exists. (4) This device should be mounted in the vertical position and for use on the flat surface enclosure. (5) Conform to UL508 (ISBN 0-7629-0404-6) machine safety for use in Pollution Degree 2 Environment. (6) Relative Humidity: 10% ~ 90% (non-condensing)

2 Unpacking the Unit

Unpack and check the delivery. If damage is found, notify the supplier.
NOTE: Place the operator panel on a stable surface during installation. Dropping it or letting it fall may cause damage.
(1) Installation Instruction, 2-sided A4 *1
(2) Human Machine Interface *1
(3) Power Connector *1
(4) Brackets & Screws *1 pack
(5) Fuse 1.25A/250V 5*20mm *1

The packing box can be transformed into an HMI stand. Please follow the steps to make the stand.
1. Remove the center of the box cover along the perforated line.
2. Pull the two inner flaps.
3. Press down along the perforated line inside the box.
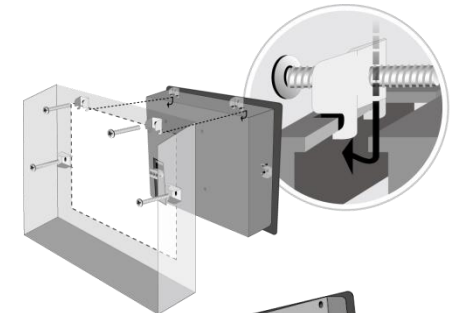4. Complete the stand as shown.
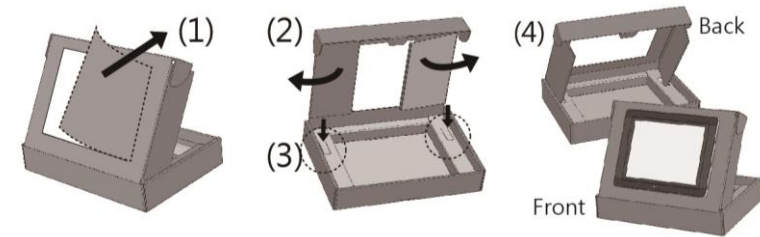
3 Installation Instructions

Secure the operator panel in position, using all the fastening holes and the provided brackets and screws. Screw Torque: 2.6 ~ 3.9 lbf.in. (For reaching waterproof effect and preventing the panel from being deformed.)
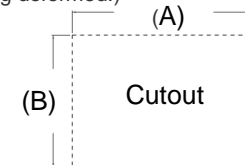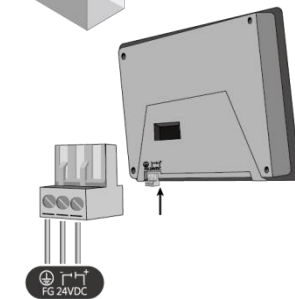

Type	A(mm)	B(mm)
MT8090XE	250	192
MT8092XE	250	192

4 Power Connections

NOTE:
1. Connect positive DC line to the '+' terminal and the DC ground to the '-' terminal.
2. When downloading project using a USB cable, do not connect HMI with PLC and PC simultaneously, for electric potential difference may result in damage to HMI or PC.

FG 24VDC

5 System Settings

MT8092XE:
When HMI is powered up and displays image, press the system setting button in the lower-right corner of the screen. (Default System Password: 111111)
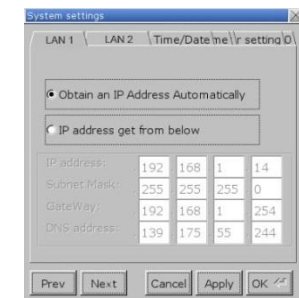Go to the Network tab, you may choose to auto get DHCP IP, or designate your own IP.
MT8092XE has two10/100/1000 Base-T Ethernet ports.
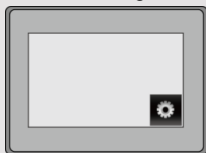The default IP addresses are:
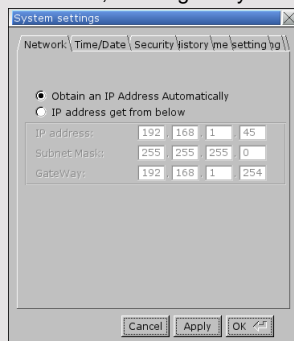LAN 1: DHCP
LAN 2: 192.168.100.1

MT8090XE:
When HMI is powered up and displays image, press the system setting button.
(Default System Password: 111111)
It is necessary to connect the HMI to your network through a RJ-45 cable.

Go to the Network tab, you may choose to auto get DHCP IP, or designate your own IP.

6 EasyBuilder Pro Software Settings

Launch EasyBuilder Pro software, select your project file, press F7 shortcut key to open the download dialog box:
Select Ethernet > IP tab > Enter your HMI IP > Click Download to download this project file to HMI.
Using screensaver and backlight saver is recommended in order to avoid image persistence caused by displaying the same image on HMI for a long time.
(Please refer to EasyBuilder Pro User Manual for software operation details)

7 Communication Connections

NOTE:
1. **COM2 and COM3 [RS485] 2W support MPI 187.5K, please use one at a time.**
2. **Only Tx & Rx (no RTS/CTS) may be used for COM1 RS-232 when COM3 RS-232 is also used.**

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1 2 3 4 5
 6 7 8 9    Con.B
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5 4 3 2 1
 9 8 7 6    Con.A
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COM1/3 [RS232] 9 Pin, Male, D-sub

PIN#	COM1 [RS232]	COM3 [RS232] (MT8092XE only)
1		
2	RxD	
3	TxD	
4		
5	GND	
6		
7	RTS	TxD
8	CTS	RxD
9		

COM2/3 [RS485] / CAN Bus 9 Pin, Female, D-sub

PIN#	COM2 [RS485] 2W	COM2 [RS485] 4W	COM3 [RS485]	CAN Bus
1	Data-	Rx-		
2	Data+	Rx+		
3		Tx-		
4		Tx+		
5	GND			
6			Data-	
7				CAN_L
8				CAN_H
9			Data+	

*CAN Bus is not applicable for MT8090XE1 model.

8 Calibration Mode

To enter touch screen calibration mode, press and hold anywhere on the screen for more than 2 seconds when HMI starts.

9 Battery Replacement

Battery replacement shall be performed by qualified personnel only and care must be taken when handling lithium batteries. For more information on battery replacement and disposal considerations, please refer to the following link:
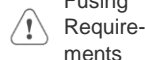http://www.weintek.com/download/MT8000/eng/FAQ/FAQ_103_Replace_Battery_en.pdf

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CAUTION

NOTE: Make sure that all local and national electrical standards are met when installing the unit. Contact your local authorities to determine which codes apply.

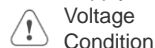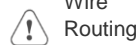|	
⚠ Power	The unit can be powered by DC power only, voltage range: 24±20% Volts DC, compatible with most controller DC systems. The power conditioning circuitry inside the unit is accomplished by a switching power supply. The peak starting current can be as high as 2A.
⚠ Fusing Require-ments	If the display does not come on within 5 seconds of power up, remove power. An internal fuse will prevent damage if the polarity of the DC power is incorrect. Check wiring for proper connections and try to power up again.
⚠ High Voltage	An Internal fuse will prevent damage for overcurrent condition however it isn't guaranteed. DC voltage sources should provide proper isolation from main AC power and similar hazards.
⚠ Emergency Stop	A Hard-wired EMERGENCY STOP should be fitted in any system using HMI to comply with ICS Safety Recommendations.
⚠ Supply Voltage Condition	Do not power the unit and inductive DC loads, or input circuitry to the controller, with the same power supply. Note: The 24 VDC output from some controllers may not have enough current to power the unit.
⚠ Wire Routing	a. Power wire length should be minimized (Max: 500m shielded, 300m unshielded). b. Please use twisted pair cables for power wire and signal wire and conform to the impedance matching. c. If wiring is to be exposed to lightning or surges, use appropriate surge suppression devices. d. Keep AC, high energy, and rapidly switching DC power wiring separated from signal wires. e. Add a resistor and capacitor in the parallel connection between the ungrounded DC power supply and the frame ground. This provides a path for static and high frequency dissipation. Typical values to use are 1M Ohm and 4700pF.

DANGER
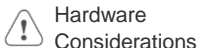
⚠ Hardware Considerations	The system designer should be aware that devices in Controller systems could fail and thereby create an unsafe condition. Furthermore, electrical interference in an operator interface can lead to equipment start-up, which could result in property damage and/or physical injury to the operator. If you use any programmable control systems that require an operator, be aware that this potential safety hazard exists and take appropriate precautions. Although the specific design steps depend on your particular application, the following precautions generally apply to installation of solid-state programmable control devices, and conform to the guidelines for installation of Controllers recommended in NEMA ICS 3-304 Control Standards.
⚠ Programming Considerations	To conform with ICS Safety Recommendations, checks should be placed in the controller to ensure that all writable registers that control critical parts of plant or machinery have limit checks built into the program, with an out-of-limit safe shut down procedure to ensure safety of personnel.

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