cMT-XMBC series

Installation Instruction

1 Installation and Startup Guide

This document covers the installation of cMT-XMBC Compact Connection Box, for the detailed specifications and operation, please refer to Datasheet, Brochure and User Manual. Please read all warnings, precautions, and instructions on the device carefully before use.

Install Environment:

Electrical Environment	The product 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 units are installed correctly and that the operating limits are followed. Avoid installing units in environments where severe mechanical vibration or shocks are present. (2) Do not operate the unit in areas subject to explosion hazards due to flammable gases, vapors or dusts. (3) Do not install the unit where acid gas, such as SO_2 exists. (4) This unit should be mounted in the vertical position and for use on the flat surface enclosure. (5) For use in Pollution Degree 2 Environment and dry location. (6) Relative Humidity: 10% ~ 90% (non-condensing)
IP Rating	IP 66
Cleaning Considerations	Clean the device using dry cloths. Do not use liquid or spray detergents for cleaning.
⚠ Warning	Protection impairment if used in a manner not specified by the manufacturer. Déficit de protection si utilisé d'une manière non spécifiée par le fabricant.

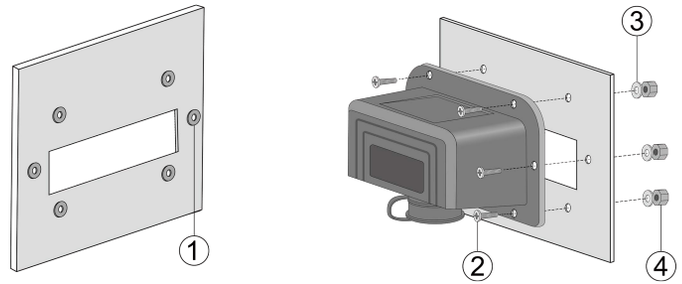
2 Unpacking the Unit

Unpack and check the delivery. If damage is found, please contact the supplier.
NOTE: Place the unit on a stable surface during installation. Dropping it or letting it fall may cause damage.
The package includes: (1) Installation Instruction, 2-sided A4 *1 (2) cMT-XMBC *1 (3) Screw Kit *1

3 Installation Instructions

Allow adequate clearance around the connection box for ventilation and cable routing. Also, consider heat generated by nearby devices and ensure the ambient temperature around the connection box remains within 0 ~ 55°C.
Minimum required clearances (from enclosure): Top: 10 mm / Sides: 10 mm / Bottom: 120 mm

Screw Installation with Protective Components



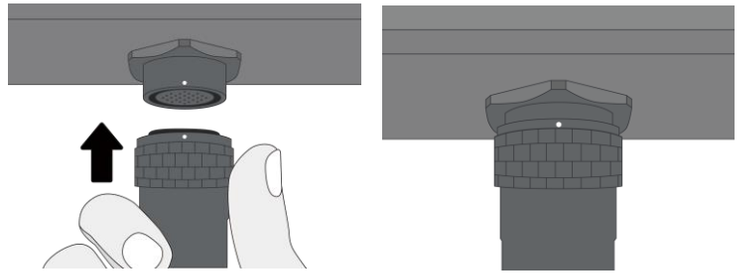
① Rubber washer
② Screw
③ Metal washer
④ Nut

Installation Steps

1. Confirm that the mounting hole diameter is 4.6 mm, and attach the rubber washers to the inner surface of the control box.
2. Insert the screws from the outside through the connection box and control box wall.
3. On the inside of the control box, place the metal washers onto the screws, then attach the nuts and tighten securely.

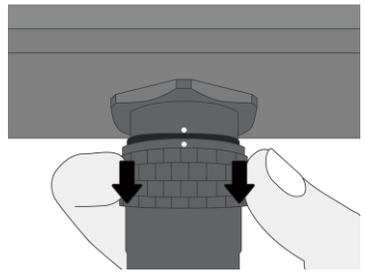
Connecting the Handheld HMI to the Compact Connection Box

1. Align the red dot on the handheld HMI's cable connector with the red dot on the connection box's cable connector.
2. Push the cable connector in firmly until you hear it snap into place indicating it's fully engaged.



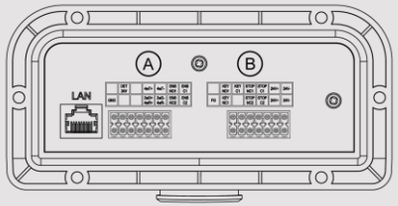
Removing the Compact Connection Box

1. Use your thumb and index finger to pull the cable connector's outer ring all the way back, and pull the connector straight out to detach.



4 Wiring Terminal Pin Assignment

Connector Specifications:
Wire AWG: 24~16
Wire Strip Length: 9~10 mm



A Wiring Terminal

GND	Detect		RS-485		3-Position Enable Switch	
	DET_24V		4W_TX+	4W_TX-	ENABLE NO_1	ENABLE COM_1
GND			2W_DATA+ 4W_RX+	2W_DATA- 4W_RX-	ENABLE NO_2	ENABLE COM_2

B Wiring Terminal

Ground	Key Switch		Emergency Stop Switch		24V Power	
	KEY NO_1	KEY COM_1	STOP NC_1	STOP COM_1	24V+	24V-
FG	KEY NC_1		STOP NC_2	STOP COM_2	24V+	24V-

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	Use power output that meets SELV (Safety Extra-Low Voltage) requirements. The unit can be powered by DC power only, voltage range: 24±20%, 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 Requirements	If the handheld HMI display does not turn on within 5 seconds of power-up, remove power. The handheld HMI features a resettable fuse to protect against overcurrent faults in the DC circuit; the fuse will reset automatically after a period of time. Check wiring for proper connections and try to power up again.
High Voltage	The handheld HMI's resettable fuse will prevent damage under overcurrent conditions; however, protection is not guaranteed. DC voltage sources must be properly isolated from main AC power and similar hazards.
Emergency Stop	A Hard-wired EMERGENCY STOP should be fitted in any system using an 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 to 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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Limited Warranty

This product is limited warranted against defects in design and manufacture.
The proven defective product will either be repaired or replaced, at Weintek's discretion.
This warranty shall not cover any product which is
(a) Out of warranty period which is 12 months from the manufacturing month of the HMI products.
(b) Damage caused by Force Majeure, accident, negligence, improper installation or misuse.
(c) Product has been repaired or taken apart by unauthorized technicians.
(d) Products whose identification markings have been removed or damaged.