

### 1 Installation and Startup Guide

This document covers the installation of cMT-G01 Series HMI, for the detailed specifications and operation, please refer to Datasheet, Brochure and EasyBuilder Pro User Manual. Please read all warnings, precautions, and instructions on the device carefully before use.

#### Install Environment:

Electrical Environment	The HMI 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	<ol style="list-style-type: none"> <li>(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.</li> <li>(2) Do not operate the unit in areas subject to explosion hazards due to flammable gases, vapors or dusts.</li> <li>(3) Do not install the unit where acid gas, such as SO<sub>2</sub> exists.</li> <li>(4) This device should be mounted in the vertical position and for use on the flat surface enclosure.</li> <li>(5) Conform to UL 61010-2-201 safety requirement for use in Pollution Degree 2 Environment.</li> <li>(6) Relative Humidity: 10% ~ 90% (non-condensing)</li> </ol>
Cleaning Considerations	Disconnect this device from AC outlet before cleaning. Clean the device using cloths wetted with clean water. Do not use liquid or spray detergents for cleaning.

### 2 Unpacking the Unit

Unpack and check the delivery. If damage is found, please contact the supplier.

**NOTE: Place the operator panel on a stable surface during installation. Dropping it or letting it fall may cause damage.**

The package includes:

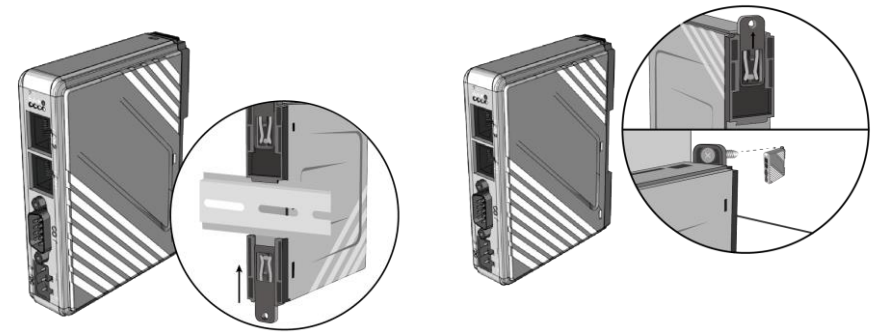
- (1) Installation Instruction, 2-sided A4 \*1
- (2) cMT-G01 \*1
- (3) Power Connector \*1

### 3 Installation Instructions

Rail mounting: DIN rail 35mm

Panel mounting: Use two M4 or #8 panhead screws, mounting hole size is 4.6mm

Plan for adequate space around the unit and inside the enclosure, for ventilation and cables. Consider the heat from other devices inside the enclosure. The ambient temperature around the unit must be 0 ~ 50°C



### 4 Power Connections

Power Connector Specifications:

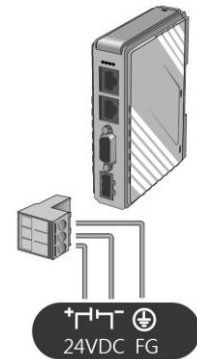
Wire AWG: 28~12

Operating Temperature: -40°C ~105°C

Screw Torque: 3.47 lbf-in (max.)

#### NOTE:

**1. Connect positive DC line to the '+' terminal and the DC ground to the '-' terminal.**



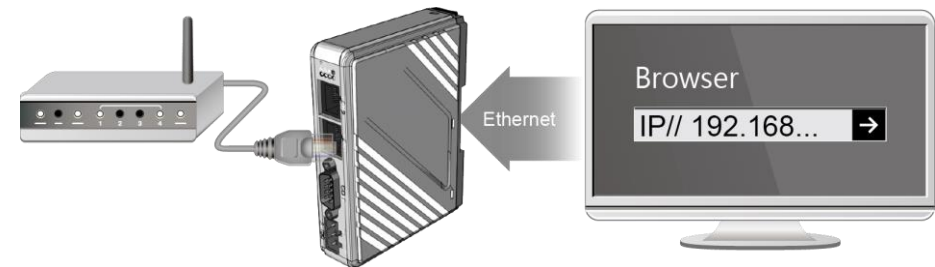
### 5 System Settings

There are two ways to connect cMT-G01.

Connect through Ethernet 1: Connect cMT-G01 with a router using a RJ-45 cable, launch EasyBuilder Pro on your computer, open Download window as shown in part 6 in this document to find this cMT-G01.

Connect through Ethernet 2: Connect cMT-G01 with a computer using a RJ-45 cable, assign IP address 192.168.100.2 to the computer, open a browser on the computer, and then enter IP address 192.168.100.1.

After connecting cMT-G01 successfully, use the default password "111111" to log in and configure cMT-G01.



Click the System Settings button and configure cMT-G01.  
The interface can be used to download or upload project files.



## 6 EasyBuilder Pro Software Settings

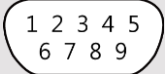
Launch EasyBuilder Pro software, select your project file, press F7 shortcut key to open the download dialog box: Select Ethernet > IP tab > Enter your HMI IP > Click Download to download this project file to HMI. ( Please refer to EasyBuilder Pro User Manual for software operation details )

## 7 Communication Connections

NOTE:

1. COM2 and COM3 [RS485] 2W support MPI 187.5K, please use one at a time.

9 Pin, Male, D-sub  
COM1 [RS232]  
COM2 [RS485]  
COM3 [RS485]



PIN#	COM1 RS-232	COM2 RS-485		COM3 RS-485 2W
		2W	4W	
1				Data+
2	RxD			
3	TxD			
4				Data-
5	GND			
6		Data+	Rx+	
7		Data-	Rx-	
8			Tx+	
9			Tx-	

## 8 Restore Factory Default

Press and hold on the Default button on the unit for more than 15 seconds to restore factory default.  
The IP setting will be restored to default:

Ethernet 1: DHCP  
Ethernet 2: 192.168.100.1

Please note that the projects and data stored in the unit are all cleared after pressing this button.

## 9 Battery Replacement

Battery replacement shall be performed by qualified personnel only and care must be taken when handling lithium batteries.

### 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 500mA.



Fusing Requirements

If the display does not come on within 5 seconds of power up, remove power. A resettable fuse will protect against overcurrent faults in DC circuit and the resetting will take place after a period of time. Check wiring for proper connections and try to power up again.



High Voltage

A resettable 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 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

- Power wire length should be minimized (Max: 500m shielded, 300m unshielded).
- Please use twisted pair cables for power wire and signal wire and conform to the impedance matching.
- If wiring is to be exposed to lightning or surges, use appropriate surge suppression devices.
- Keep AC, high energy, and rapidly switching DC power wiring separated from signal wires.
- 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

A copy of the Warranty and Limitation of Liability is contained in the product box. It can also be found on the Maple Systems website.

