# Temperature Guard

# Operation Manual
## For model CM706E R4 and above

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## General Description

The CM706E is an environmental monitor with built in Ethernet and Cellular alarming and reporting capabilities. This unit can monitor up to ten dry contact inputs. Inputs one through eight are N/O (normally open) or N/C (normally closed). Nine and ten can be configured to accept a water sensor as well as N/O or N/C. Alarms are sent via the cellular modem as text messages. Our Data Capture Software running on a PC can also send email alerts. Data Capture also collects data and stores it on the computer.

There is the option for daily status, password protection, naming the unit and each input. Time delays can be set for each individual input.

## Part numbers

| Model Number | Description |
| --- | --- |
| CM706E-TM | Wired Ethernet model with T-Mobile sim card installed at the factory. Ready to go with phone number at the time of shipment. |
| CM706E-AT | Wired Ethernet model shipped without a sim card. Unit will work on GSM networks, AT&T and T-Mobile. |
| CM706E-VZ | Wired Ethernet model shipped without a sim card. Unit will work on the Verizon network only. |
| CM706E-W-TM | Wireless Ethernet model with T-Mobile sim card installed at the factory. Ready to go with phone number at the time of shipment. |
| CM706E-W-AT | Wireless Ethernet model shipped without a sim card. Unit will work on GSM networks, AT&T and T-Mobile. |
| CM706E-W-VZ | Wireless Ethernet model shipped without a sim card. Unit will work on the Verizon network only. |
| CM706 | Cellular only unit. No Ethernet installed. Programming must be done via text message. |

For GSM units
FCC ID: RI7LE910NAV2
IC: 5131A-LE910NAV2

For Verizon units.
FCC ID: RI7LE910SV
IC:5131A-LE910SV

For Combo (AT&T and Verizon) units (shipped after 01/25/2020 rev 11 or higher)
FCC ID: RI7LE910CxNF
IC:5131A-LE910CxNF

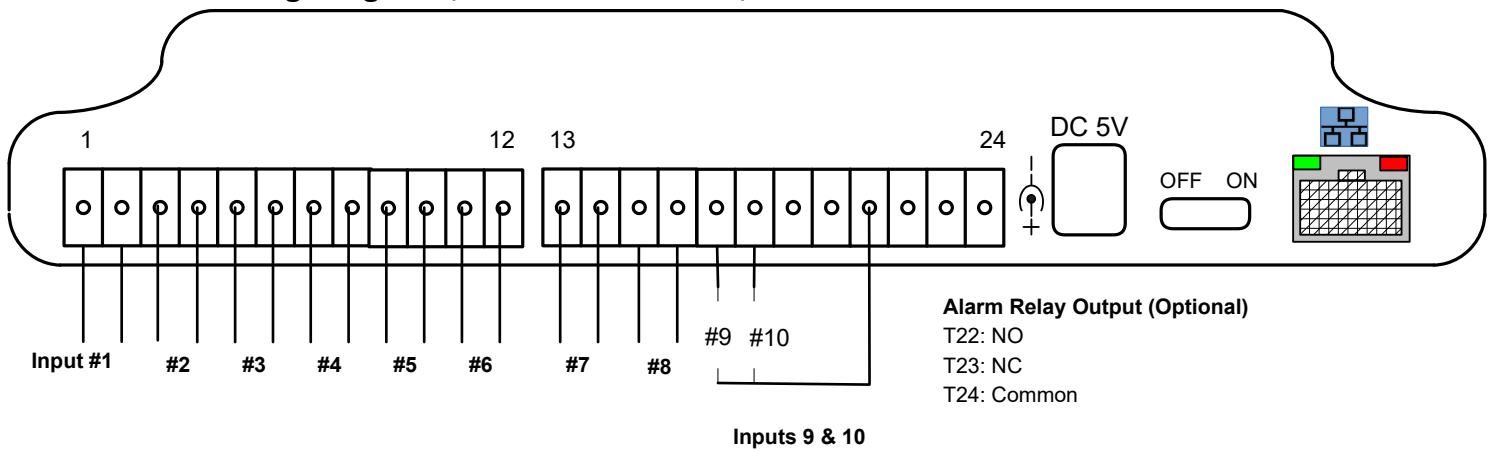For wireless Ethernet units
FCC ID: R68XPICOW
IC: 3867A-XPICOW

## Installation

Select a location with access to cellular signal, power and Ethernet if purchased with the network adapter.  Use only the provided 5VDC power adapter.  Wire all inputs to be used.  Wiring diagram below.

**CM706E**

**Wiring Diagram** (side view of enclosure)



Input #1   #2   #3   #4   #5   #6   #7   #8   #9  #10

Inputs 9 & 10

**Alarm Relay Output (Optional)**
T22: NO
T23: NC
T24: Common

**Wired Network Setup (CM706E models)**

Install Data Capture on a local PC.  Use Data Capture to find the IP address (page 7 of the Data Capture manual), or look at the LCD at boot up.  Units are set to DHCP mode.
https://www.temperatureguard.com/software
Once the IP is found it is recommended to set it statically.  Then follow the instructions in the Data Capture manual.  IP settings can also be set by going directly to the unit with a browser.  http://*10.0.0.209*/secure/ltx_conf.htm substituting your unit's IP address.

**Wireless Network Setup (CM706E-W models)**

The wireless models incorporate a network adapter with an always on soft AP.
There is an entire manual for wireless setup.  Please see our website for details.
https://6150cdc7-ed8d-41bf-8fc3-7b97c9bb3178.filesusr.com/ugd/
390fef_69c5d22fa4cb40fb9465ba897e2bdb0d.pdf

**Programming with software**

Programming the CM706E is accomplished via Data Capture 5.4.7.0 or later software.
http://www.temperatureguard.com/software
Once the unit has been wired to all appropriate inputs, connected to the Ethernet network, and is registered on the cellular network, programming should be completed.
Newer versions R4 and above shipped after 01/01/2020 have the capability of programming via text message as well and can be purchased without a network adapter.
See the software manual for specific programming instructions.

## Programming with text messages (all models)

See chart below for programming by text message.

| Command | Default Setting | Allowable Range | Example |
|---|---|---|---|
| UN: | Blank | 20 characters max. | Un:Greenhouse 2 |
| P1: | Blank | 10 digit min.  20 max. | P1:8605551212 |
| P2: | Blank | 10 digit min.  20 max. | P2:8605551213 |
| P3: | Blank | 10 digit min.  20 max. | P3:8605551214 |
| P4: | Blank | 10 digit min.  20 max. | P4:8605551215 |
| N1: | Blank | 20 characters max. | N1:Water pump |
| through | Blank | 20 characters max. | |
| N10: | Blank | 20 characters max. | N10:Exhaust Fan |
| D1: | 5 | 0-900 | D1:0 |
| through | 5 | 0-900 | |
| D10: | 5 | 0-900 | D10:0 |
| S1: | NO | NO or NC | S1:nc |
| Through | NO | NO or NC | |
| S10: | NO | NO or NC | S10:no |
| RT: | 45 | 45-900 | Rt:120 |
| ST: | Disabled | 0=Disabled or 1-24 | St:13 |
| PT: | 5 | 0-900 | Pt:60 |
| PW: | Blank | 4 characters case sensitive | PW:a65Z |
| CPW: | | 4 characters case sensitive | CPW:a65Z |

Commands and their settings are not case sensitive except the password programming.
Use PW: or CPW: only.  The password itself is also case sensitive.
Example **S1:NO** is equivalent to **s1:no**.

Inputs 9 and 10 cannot be used with water sensors unless you have an Ethernet model.

**Testing the programmed numbers**
Once the unit is programmed, the **TESTCELL** command will test all the programmed numbers.  Simply send the word **TESTCELL** (one word, in capital letters) to the cell number of the unit.  The CM706E will send a sms message to all programmed numbers. The phone sending TESTCELL will receive the message *"Please verify that a Status text msg is received at all programmed phone numbers."*

**Checking Status**
You can send a text message to the phone number of the CM706E to get the current status of all inputs.  Send **Status?** to the unit's phone number.  Please note, at least one input must be named to get a response.

**Daily Status**
The CM706E can be programmed to send a daily status text message.  If all sensors are within limits, the daily status will say all inputs are OK.  If one or more inputs are out of limits, it will report the out of limit input and the condition.

**What is an alarm condition?**
An alarm condition is anytime an input is not in its normal state <u>longer than the programmed time delay</u>.  Once an alarm occurs, the buzzer will start beeping (three loud beeps every 30 seconds); alarm text messages will be sent from the CM706E immediately.  Data Capture software can also send text and emails if using one of the Ethernet models.

When the sensor is back in limits for 5 minutes, the CM706E will also send a "back within limits" text message.  (The 5 minutes is not user adjustable)

**LCD Screen Explained**

**Main Screen**
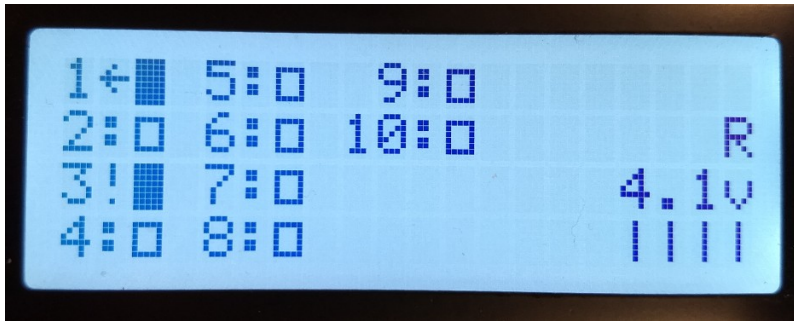


A closed block means the input is shorted or in the case of a water sensor, inputs nine and ten, water detected. An open block means the input is open or no water detected on nine and ten.

Exclamation point means the input is not in its normal state but the time delay has not expired yet. The arrow indicates it is in alarm, not in the normal state and time delay expired.

The 4.1v is the battery voltage. **R** means the cellular modem is registered on the cellular network. An **N** would be displayed if it was not registered. **Bars** under the battery voltage is the signal strength. 0 to 5 bars, 5 being the best, 0 being no signal. Unit will also beep periodically three times when there is no signal.

**LCD Screen and Cancel Alarm Push button**

The Cancel Alarm push button, located on the top of the unit, is used to silence the buzzer during alarms and scroll through inputs for information.
If one or more sensors are in alarm, the **in alarm** sensors will be shown first, then all others not in alarm in numerical order.

This is Input 10 in alarm for 1 minute 38 seconds. "Alarm acknowledged" is displayed when the buzzer has been silenced.
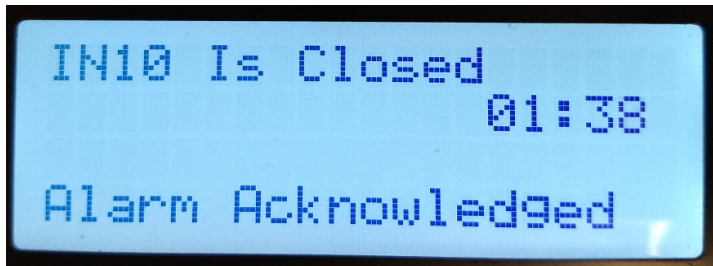


This is a normal, not in alarm input. First line is the Name of the sensor. Second is the status. Third are your settings.
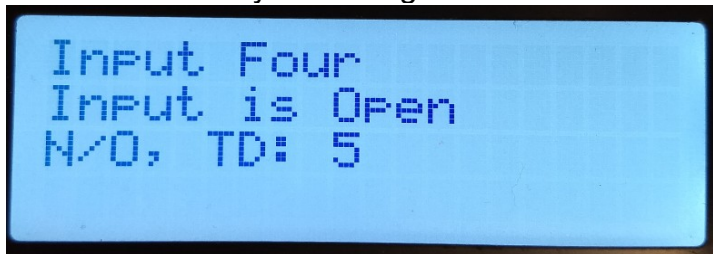
## Web Manager wired model

The IP address information can be set with the built in Web Manager.
Example below with IP address of 10.0.0.198.
http://10.0.0.198/secure/ltx_conf.htm



Click on Network and set your appropriate settings.



When finished, click OK **and** Apply Settings.

**Helpful hints**

Since the alarms are text messages and not phone calls, you may want to adjust your cell phone sms tones to be louder and more aggressive if you have critical monitoring needs. Free apps like **Ringo Lite**® and **Ringdroid**® can be very useful in setting up specific contacts for the sms tones and playing various sounds, even recordings.

**How do I set the Guard to DHCP? (wired model)**
The CM706E must have power plugged in and a network cable attached to the network. Turn the Guard off. Hold down the Alarm Cancel button and turn the CM706E on. The screen will display *Release Push button.* Release it before the 5 second count-down. The screen will display *Reset to DHCP? No.* Pressing and releasing the button again will toggle the *No* to *Yes*. Let it boot up while the *Yes* is displayed and it will be in DHCP mode.

**How do I set the Guard to DHCP? (wireless version)**
The CM705E cover must be removed. Power the unit on. When it has fully booted up, press the Reset_Defaults button for 6 seconds, or until the led goes out. Please note, the network adapter will be set to defaults, not just DHCP. All wireless settings will be lost. If you just need to set to DHCP and have access to the soft AP, reset it through the soft AP.