

# Operation Manual

For model CM706E R20 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.

Inputs 1-8 can be configured for water as well by special order only. Please call.

### Part numbers

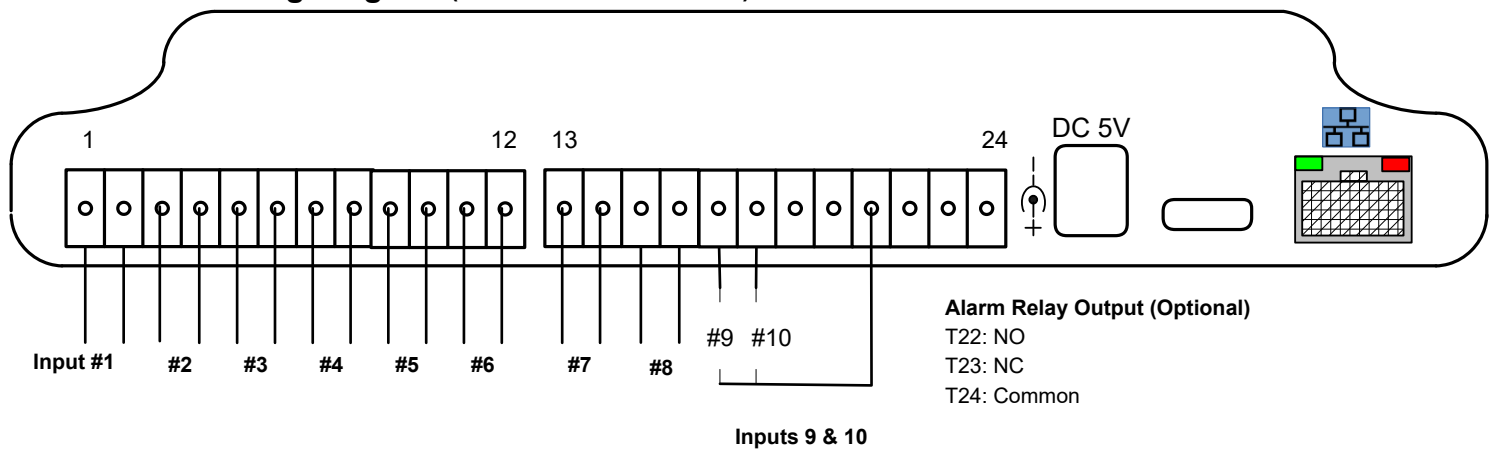
Model Number	Description
CM706E-GBL	Wired Ethernet model shipped without a sim card for use on AT&T, Verizon, T-Mobile, or select Global providers
CM706E-W-GBL	Wireless Ethernet model shipped without a sim card for use on AT&T, Verizon, T-Mobile, or select Global providers

## 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. Newer units no longer have a power switch.

### CM706E

Wiring Diagram (side view of enclosure)



## **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> 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](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 R19 and above shipped after 10/2023 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
NU:	Blank	20 characters max.	Nu: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
P5:	Blank	10 digit min. 20 max.	P5:8605551216
P6:	Blank	10 digit min. 20 max.	P6:8605551217
P7:	Blank	10 digit min. 20 max.	P7:8605551218
P8:	Blank	10 digit min. 20 max.	P8:8605551219
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. If you have a special order all water sensor model, Data Capture is required to set the inputs to water sensor.

### **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.

### **Delays**

The command **Delays?** can be sent to the unit to get the programmed timing delays for all inputs and other features.

### **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.

### **Checking Phone Numbers**

The command **Phone?** Can be sent to the unit to verify the phone numbers are programmed correctly.

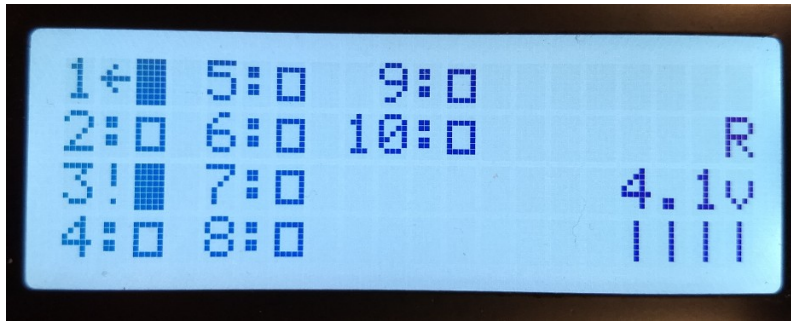
### **What is an alarm condition?**

An alarm condition is anytime an input is not in its normal state longer than the programmed time delay. 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.

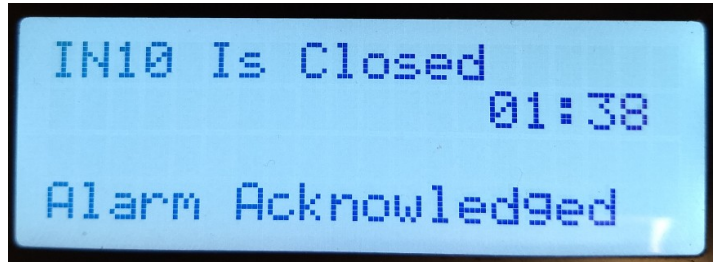
The 4.1v is the battery voltage. **R** means the cellular modem is registered on the cellular network. An **N** would be displayed if it was not registered. **Bars** under the battery voltage is the signal strength. 0 to 5 bars, 5 being the best, 0 being no signal. Unit will also beep periodically three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

## LCD Screen and Cancel Alarm Push button

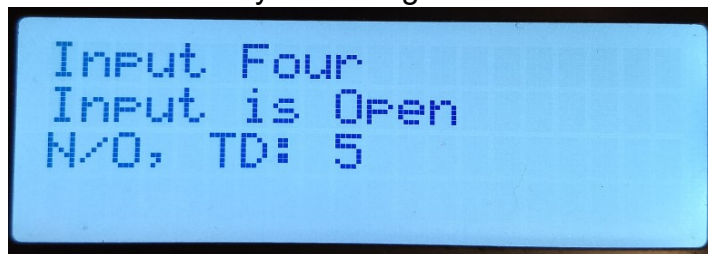
The Cancel Alarm push button, located on the top of the unit, is used to silence the buzzer during alarms and scroll through inputs for information.

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](http://10.0.0.198/secure/ltx_conf.htm)

The screenshot shows the 'Device Status' page of the Lantronix XPort Web Manager. The left sidebar contains a navigation menu with options: Network, Server, Serial Tunnel, Hostlist, Channel 1, Serial Settings, Connection, Email, Trigger 1, Trigger 2, Trigger 3, Configurable Pins, Apply Settings, and Apply Defaults. The main content area is titled 'Device Status' and contains a table with the following information:

Product Information	
Firmware Version:	V6.10.0.3
Build Date:	29-Dec-2017
Network Settings	
MAC Address:	00-80-A3-D2-1D-EC
Network Mode:	Wired
DHCP HostName:	TG
IP Address:	10.0.0.198
Default Gateway:	10.0.0.1
DNS Server:	0.0.0.0
MTU:	1400
Line settings	
Line 1:	RS232, 9600, 8, None, 1, None.

Click on Network and set your appropriate settings.

The screenshot shows the 'Network Settings' page of the Lantronix XPort Web Manager. The left sidebar is the same as in the previous screenshot. The main content area is titled 'Network Settings' and contains the following configuration options:

Network Mode:

IP Configuration

☐ Obtain IP address automatically

Auto Configuration Methods

BOOTP: ☒ Enable ☐ Disable

DHCP: ☒ Enable ☐ Disable

AutoIP: ☒ Enable ☐ Disable

DHCP Host Name:

☒ Use the following IP configuration:

IP Address:

Subnet Mask:

Default Gateway:

DNS Server:

Ethernet Configuration

☒ Auto Negotiate

Speed: ☒ 100 Mbps ☐ 10 Mbps

Duplex: ☒ Full ☐ Half

OK

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.

### **How do I set the CM706E 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.

Please see the WiFi setup manual for wireless Ethernet setup.