Temperature Guard

www.temperatureguard.com

Operation Manual

For model CM705E or CM705E-W (rev 8 or higher)

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General Description

The CM705E is an environmental monitor with built in Ethernet (wired or wireless) and Cellular alarming and reporting capabilities. This unit can monitor up to eight temperature sensors, power, and four dry contact inputs, in addition to its optional built in temperature and humidity sensor. Alarms are sent via the cellular modem as text messages. Our Data Capture Software running on a PC can also send text messages as well as email alerts. Data Capture also collects data and stores it on the computer. The unit also stores up to 6 months' worth of data in its internal memory, which can be retrieved using the free program TG Status or Data Capture.

Programming the CM705E is accomplished via Data Capture 5 or later software.
http://www.temperatureguard.com/software.html
Once the unit has been wired to all appropriate sensors, connected to the Ethernet network, and is registered on the cellular network, programming should be completed.

For GSM units (AT&T or T-Mobile)
FCC ID: RI7LE910NAV2
IC: 5131A-LE910NAV2

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

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

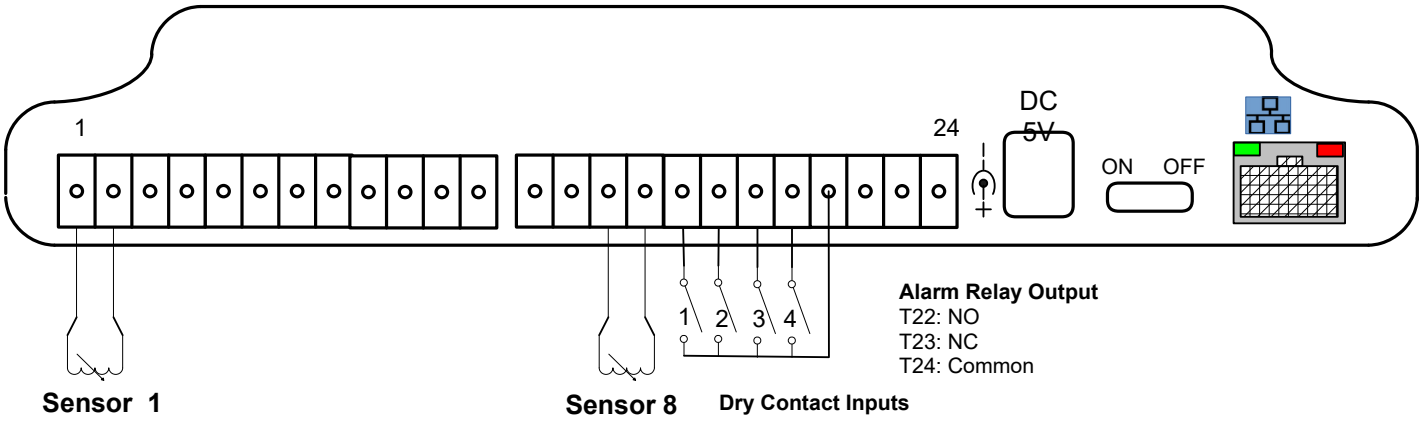
For wireless Ethernet units
FCC ID: R68XPICOW
IC: 3867A-XPICOW

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.

CM705E

Wiring Diagram (side view of enclosure)



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 CM705E will send a text 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."*

Sensors
At boot up, the unit will search for attached sensors. The unit will never alarm on a sensor it does not detect at boot up. If you need to add a sensor, turn off the CM705E, wire in the sensor, then turn the unit back on. If you need to remove a sensor, remove the wires from the unit, and reboot the unit. If you do not, the CM705E will alarm on the open sensor. It will also alarm if it detects a wiring short.

Checking Status
You can send a text message to the phone number of the CM705E to get the current status of all inputs. Send **Status?** to the unit's phone number.

Daily Status
The CM705E can be programmed to send a daily status text message. If all sensors are within limits, the daily stats will say all sensors are within limits. If one or more sensors are out of limits, it will report the out of limits sensors and the condition (temperature, humidity, open, closed, etc.).

What is an alarm condition?
An alarm condition is anytime a sensor exceeds the upper or lower limit for 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 CM705E immediately. Data Capture software will also send text and emails.

When the sensor is back in limits for 5 minutes, the CM705E will also send a "back within limits" text message. (The 5 minutes is not user adjustable) **

Power outages alarms are treated in the same manner as temperature sensors. If the power out delay time is set to 10 minutes, the CM705E will send the alarm text after 10 minutes of continuous power loss. When power is restored for 5 minutes, the CM705E will send a "power is back on" text. The "power back on" text time delay is not user adjustable.

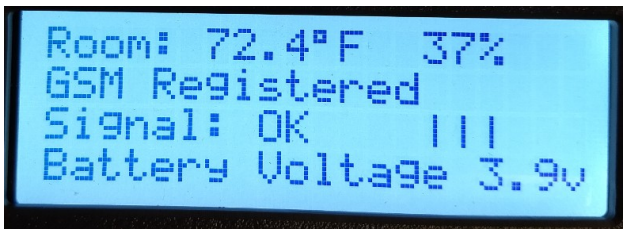
** If the unit is in alarm, text messages have been sent, and then the unit goes back in range it must be back in range for five continuous minutes. If it keeps going in and out of range, the buzzer will sound, depending on your "out of limits" time delay.

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. Buzzer will re-alarm if reminders are enabled.
If one or more sensors are in alarm, the **in alarm** sensor(s) will be shown after the second screen, then all others not in alarm in numerical order.

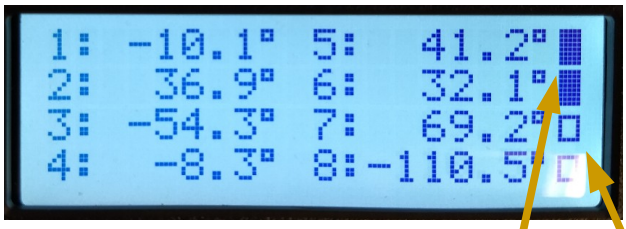
Under normal operation, the main LCD screen will be shown.
Main Screen

Second Screen

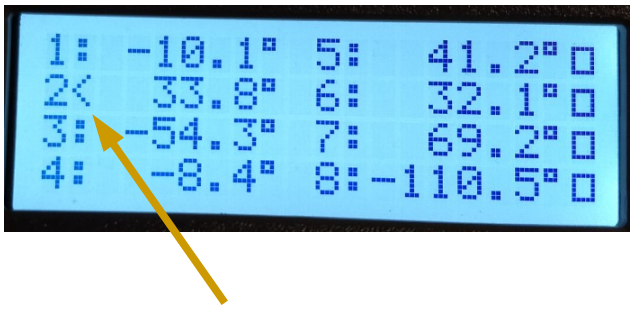


This screen displays the internal sensor current temperature and humidity, cellular module status, signal strength, and battery voltage after pressing the cancel alarm button once.

You can also scroll through all the temperature and humidity inputs using the cancel alarm button. The name of the sensor and the min max for the day since midnight are displayed.



The dry contact inputs are on the right side of the display of the main screen. The closed square means the input is **closed**, an **open** square is an open input. Top square is Input #1, second is Input #2 etc. If the input is set to water sensor, the open square is no water detected, the closed square is a wet condition. The inputs are not displayed in the scroll through menu unless they are in alarm.



Sensor 2 is below the lower limit.

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®** 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 version)

The CM705E must be plugged in and network cable attached to the network. Turn the Guard off. Hold down the Alarm Cancel button and turn the CM705E on. The screen will display ***Release Pushbutton***. 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 completely 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.

If the unit beeps and no sensors are out of limits

The unit will beep three short beeps, about every 10-20 seconds, if there is no cellular signal detected. Move it to a better location or install an external antenna.

Part Numbers

Model Number	Description
CM705E-AT-R3	Wired Ethernet model shipped without a sim card. Unit will work on GSM networks, AT&T and T-Mobile.
CM705E-VZ-R3	Wired Ethernet model shipped without a sim card. Unit will work on the Verizon network only.
CM705E-TM-R3	Wired Ethernet model with T-Mobile sim card installed at the factory. Ready to go with phone number at the time of shipment.
CM705E-W-AT-R3	Wireless Ethernet model shipped without a sim card. Unit will work on GSM networks, AT&T and T-Mobile.
CM705E-W-VZ-R3	Wireless Ethernet model shipped without a sim card. Unit will work on the Verizon network only.
CM705E-W-TM-R3	Wireless Ethernet model with T-Mobile sim card installed at the factory. Ready to go with phone number at the time of shipment.

Add **-NIST** to the part number for calibration certificate.