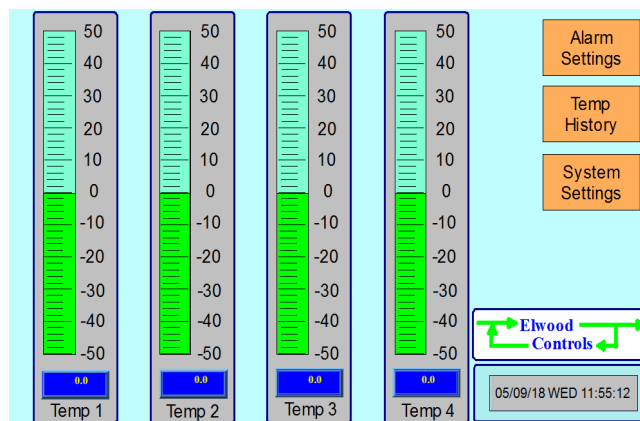




Temperature Monitor and Alarm System With Data Logging
Automatic Generator Control
And Cellular Alarm Texting

Installation and Operation
Manual



DISCLAIMER

Elwood Controls, LLC accepts no responsibility for damages arising from any circumstances involving system malfunction. The system should be tested thoroughly upon completion of installation and periodically to assure the user of proper function. Contact our technical support department when system operation is impaired.

The functionality of the EC-CLink is directly dependant on the cellular network to which it is connected. Coverage area should be carefully considered when selecting a cellular network for service . Elwood Controls, LLC accepts no responsibility for damages arising from malfunction of the EC-CLINK.

NOTE: Read this manual completely prior to starting any installation.



WARNING! All power sources **MUST** be de-energized during all installation procedures. Failure to comply with this will void all warranty and could lead to serious injury or death.

NOTE: If there are any questions during Installation please contact us at 561-714-0883 or techsupport@elwoodcontrols. We are here to help assure the installation is successful.

Installation

Installing the Touch Screen

Figure 1 includes the cutout dimensions for the touch screen. Figure 2 provides dimensional information and mounting details for the touch screen which should be referred to for depth clearance required prior to cutting an installation opening.

NOTE: The touch screen must be mounted using the supplied mounting clips only. Torque the mounting clip set screws to a maximum of 1 in-lb.

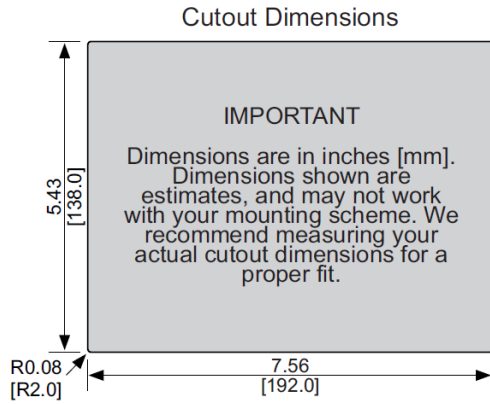


Fig. 1

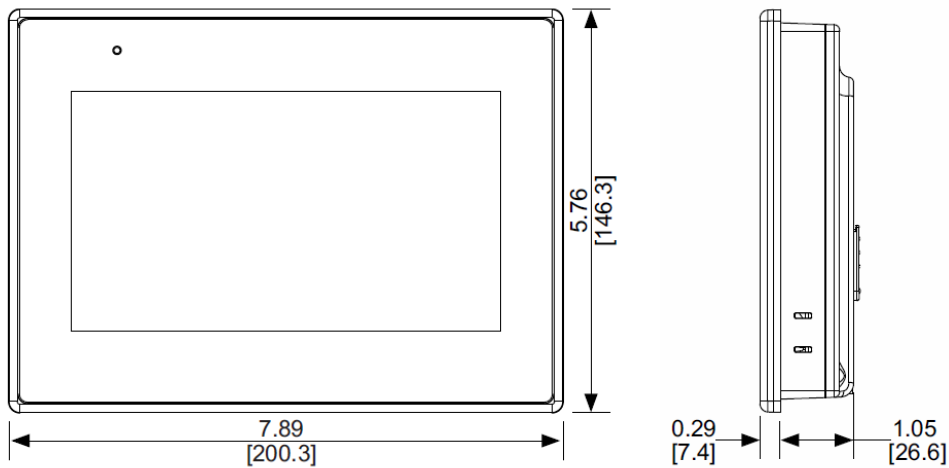
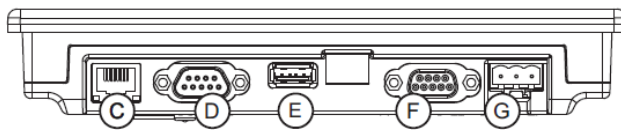
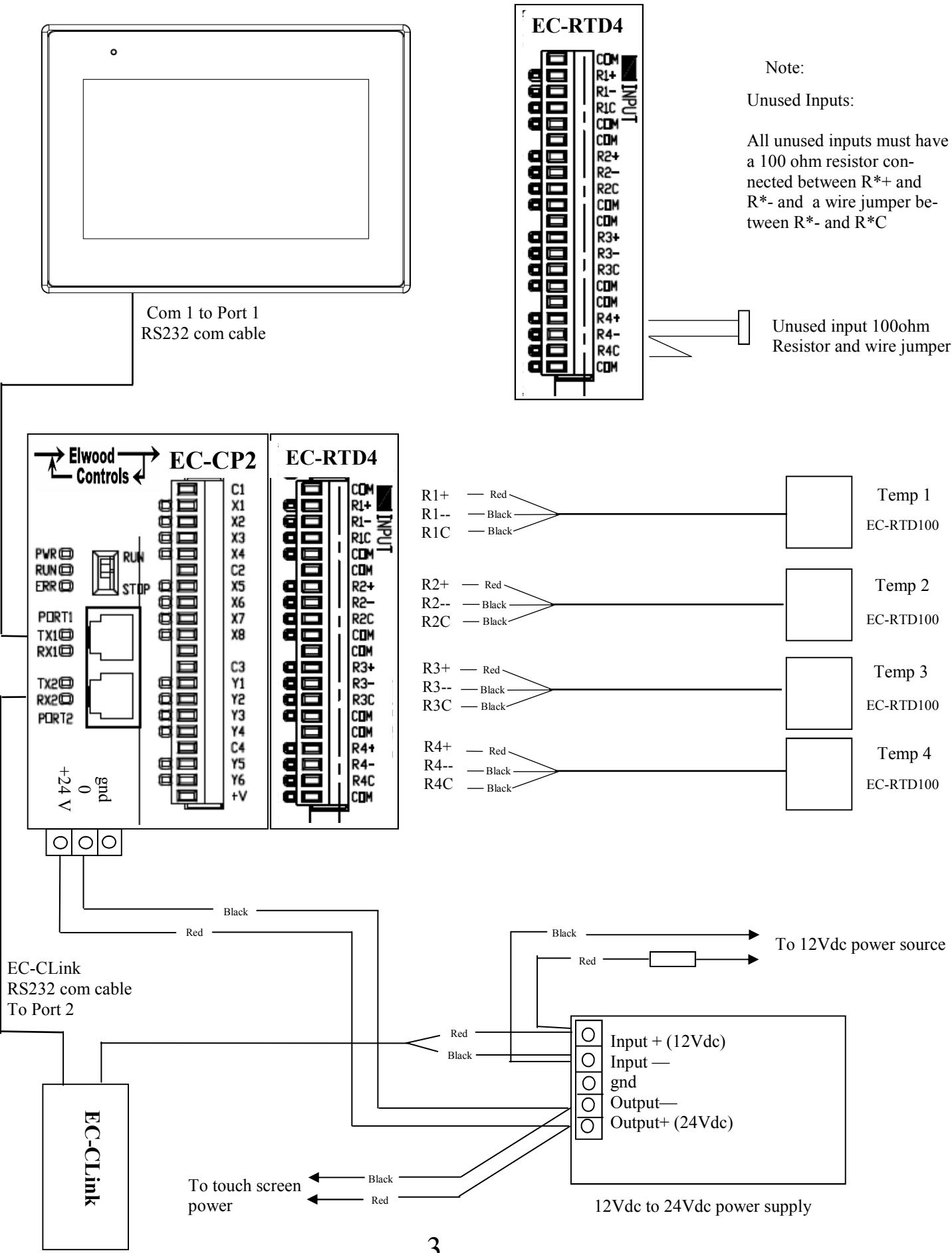


Fig. 2

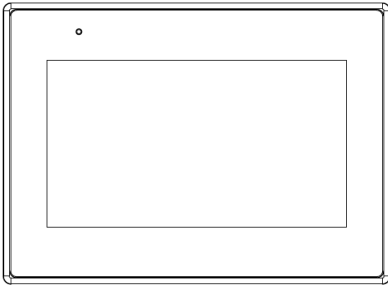


- | | |
|---------------------|----------------------|
| Ⓒ Ethernet Port | Not Used |
| Ⓓ Com Port DE9P | To EC-CP2 |
| Ⓔ USB 2.0 Host Port | Data log Thumb drive |
| Ⓕ Com Port DE9S | Not Used |
| Ⓖ Power Connector | 24Vdc power supply |

System and temperature sensor wiring



Auto Gen Start Wiring



WARNING!

SEE PAGE 5 FOR ADDITIONAL SAFETY INSTRUCTIONS

C1	24Vdc	
X1	EC-PSM-3 green	shore power sensing input
X2	EC-PSM-3 white	generator power sensing input
X3	EC-PSM-3 red	panel power sensing input
C3	Common (0Vdc)	common pwr supply
Y1	EC-GSI-1 black	gen start signal sink (gnd)
+V	+24 vdc	
All others	No Connection	



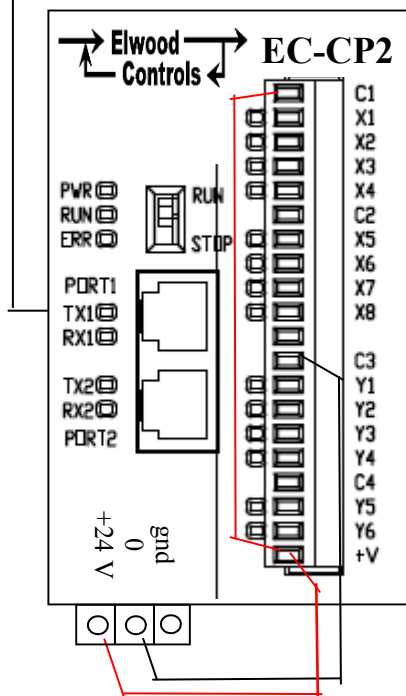
WARNING!

EC-PSM-3 Line voltage sensing wires shall not be extended

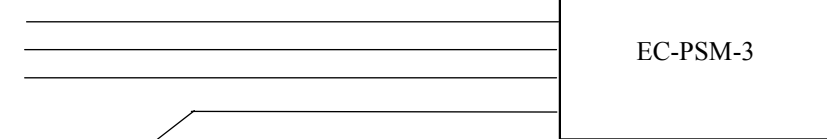
The module must be installed on or close enough to the transfer switch so that the line voltage sensing cable/wires Are not extended

EC-PSM-3 Line Voltage Sensing Wiring

Green	shore power L1
Red	shore power L2
Black	Generator power L1
White	Generator power L2
Blue	Panel power L1
Orange	Panel power L2



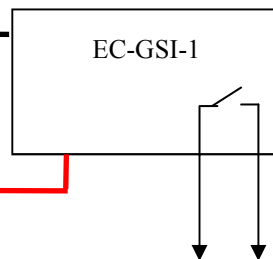
X1
X2
X3



0 V

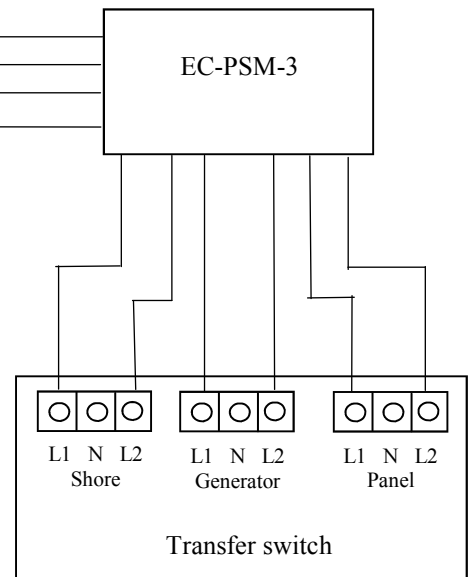
Y1

+V



EC-GSI-1 module Output

Green	generator control unit start signal
White	generator control unit start signal

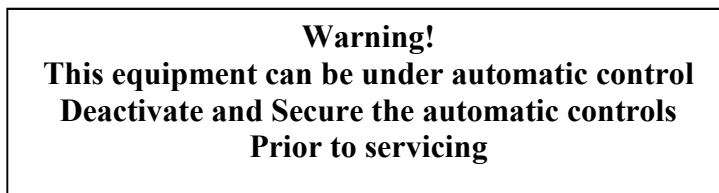


WARNING! GENERATOR SAFETY NOTICE

Labels are provided with this system that must be placed on the following:

- 1) on the generator where it can be seen by service and operating personnel.
- 2) on the distribution panel where it can be seen by service and operating personnel.
- 3) on the transfer switch where it can be seen by service and operating personnel

The labels state the following:



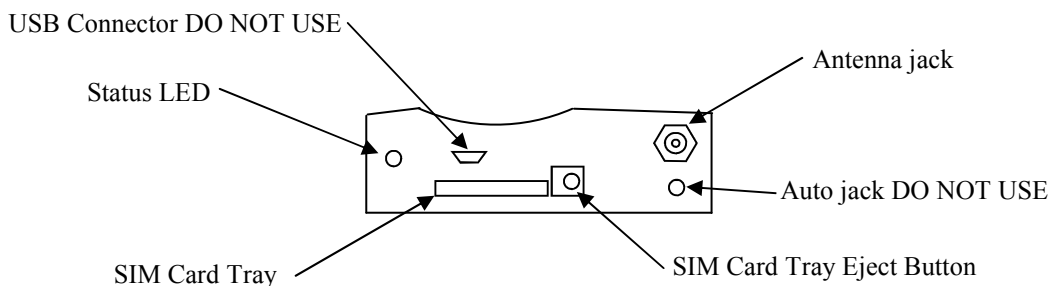
If these labels are not found with the parts supplied with this system or lost prior to installation please contact us immediately

Cellular Modem Setup



WARNING!

The power to EC-CLink must be de-energized prior to installing the SIM Card. Remove all system power prior to installing the SIM Card.



Getting SIM Card and account

EC-CLink system has been tested extensively using the T Mobile cellular network. It has also been tested on the AT&T network. We recommend that our customers use T Mobile as a network provider if possible. Please contact us for our T Mobile account representative's contact information if you require assistance.

Installing the SIM Card

Remove the SIM card tray by pressing on the SIM card tray eject button. Place the SIM card in the tray with the contact (gold) side up. Carefully slide the SIM card tray back into the EC-CLink.

Make sure the antenna is connected. When power is applied the LED will light then go OFF. The modem is booting and obtaining network connection while the LED is OFF. When a cell signal is locked the LED will blink slowly.

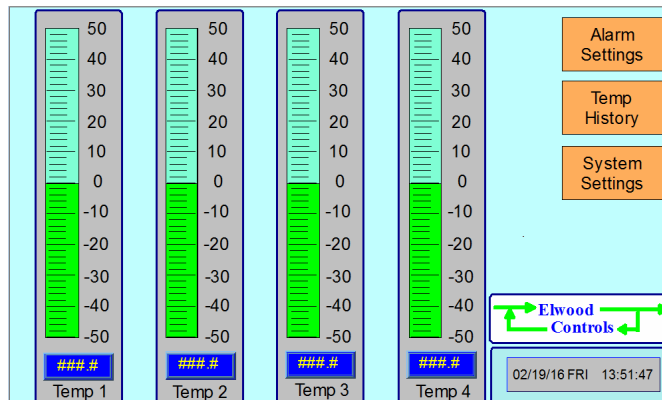
Setup and Operation

Temperature Display Screen

The temperature display screen shows the temperatures being monitored by the 4 temperature channels. When the temperature is between the high and low alarm set points the level bar will be green. If the temperature rises above the high alarm set point the level bar will turn red. If the temperature falls below the low alarm set point the level bar will turn blue.

The orange touch cells, Alarm Settings, Temp History and System settings are used to move to the respective display screens.

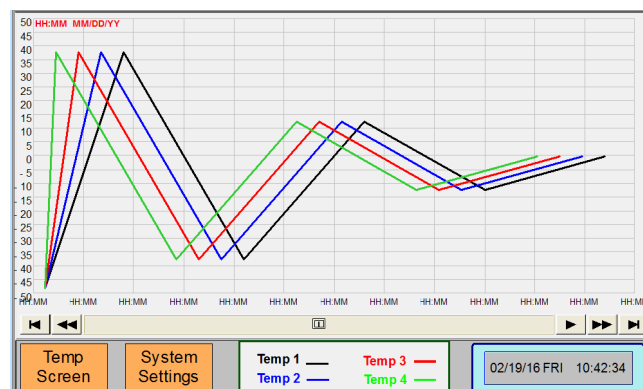
This system has a 15 minute automatic back light turnoff. If the back light is off simply touch the screen and it will turn on.



Temperature History Display Screen

The temperature history display screen shows the temperature history that is sampled at 2 minute intervals and stored in the temperature data log files on the USB thumb drive. The time sample frame can be scrolled forward or backward using the scroll buttons on the bottom of the history plot.

Please note: This is not a real time plot of the temperature channels, it is a graph of 2 minute samples. Use the temperature display screen for temperature readings in real time.



System Settings and Control Screen

The system settings and control screen is used to set the modem parameters, time and date and turn on the modem control and automatic generator control.

When any of the setting parameters (white boxes) are touched a numeric entry pad will be displayed on which that parameter may be entered.

Modem Settings

Text Phone Number entry is the cell phone number that the alarm text messages are sent.

Resend Times is the number of times an alarm text will be sent, e.g. if 3 were entered, when an alarm condition is triggered, 3 text alarm messages will be sent at 10 second intervals. This increases the likelihood that the messages is received. We recommend a setting of at least 3.

Resend Time is the time interval in minutes to resend the alarm text messages, e.g. if 20 were entered then 20 minutes after the first set of alarm texts are sent another sequence of alarm text messages will be sent. This increases the likelihood that the alarm texts get delivered due to possible temporary environmental conditions such as noise or location.

Modem Control

Modem Enable will enable the text message modem.

Modem Test will send test alarm text messages to verify operation and connection to the network.

Generator Control

The power source available is indicated next to the Shore power, Gen Power and Panels Power labels.

The generator is placed in automatic start/stop mode by pressing the green “Manual” box in the figure above. When the generator is in automatic mode and there is a loss of shore power the system will wait 60 seconds to start to make sure the shore power loss was not an intermittent loss. When the shore power is restored the system will wait 2 minutes before shutting down the generator to make sure the shore power is stable.

If the modem is enabled to send alarm texts it will also send power status texts, 3 times each, as follows:

- | | | |
|----|----------------|---|
| 1) | NO SHORE POWER | after the loss of shore power for 30 seconds |
| 2) | GENERATOR ON | generator on and supplying power |
| 3) | SHORE POWER ON | shore power restored and supplying power |
| 4) | POWER FAILURE | neither the generator or shore power is supplying power |

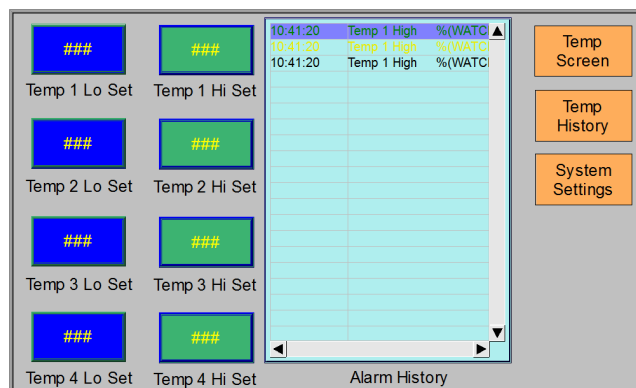
Set Clock is used to set the time and date. Please note that the hour setting is on a 24 hour basis.

Log Back Up The temperature data log is recorded continuously for all 4 temperature channels every 2 minutes and stored in a compressed log file on the USB thumb drive. The compressed log file is converted to and backed up as a .csv file at midnight every day. If the thumb drive is removed during the day then the log file for that day will not have been converted to .csv format. Press momentarily the Log Back Up button to convert the data logged to that point in the day before removing the USB thumb drive.

Alarm Settings

The alarm setting screen allows for the entry of high and low alarm set points for the temperature channels. The temperature alarm history is also displayed.

When an alarm condition is triggered the beeper will sound indicating an alarm condition is present. If the text modem is enabled an alarm text will be sent. In order to acknowledge an alarm and silence the beeper go to this screen and press the most recent alarm in the alarm history list. The acknowledged alarm text will change to red once it is acknowledged and will change to green once the temperature has moved back within an acceptable range.

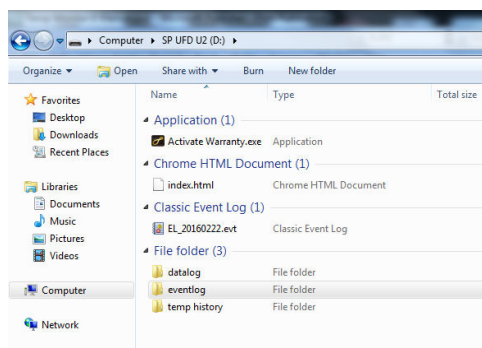


Data and Event Logging

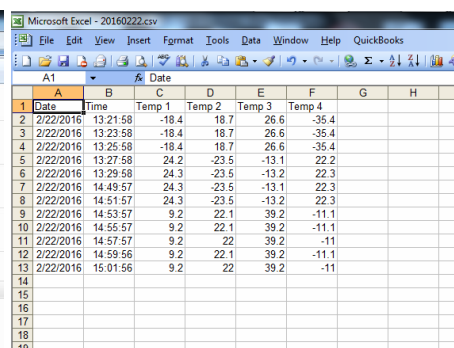
Temperature data and alarm event logs are stored on the USB thumb drive in their native formats .dlg and .evt respectively. These files are compressed unformatted files that are not readable by the system users. At the end of every day these files are automatically backed up on the thumb drive in the folders datalog and eventlog as comma separated variable (.csv) files. The .csv files can be opened in excel or any other .csv file viewer.

To view the data log or event log files remove the thumb drive from the system, insert it into a PC, navigate to the files and open them in excel.

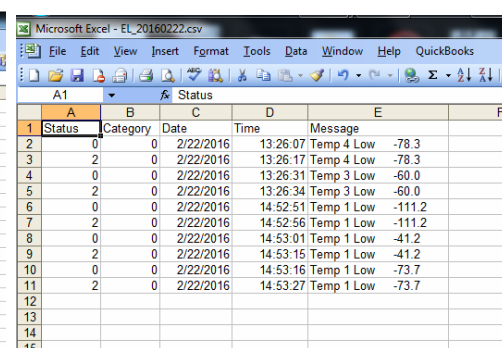
NOTE: When the USB thumb drive is removed from the system the data logging may be paused until the thumb drive is reinstalled.



Files on the USB thumb drive



Data log opened in excel



Alarm event log opened in excel