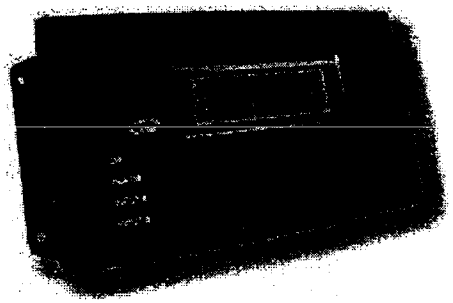
M4359-0806

Temperature and Power Monitor and Alarm

Models:
OMA-VM540
OMA-VM540-DCP
OMA-VM541
OMA-VM541-DCP



User's Guide

Manual and Installation Instructions

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General Description

The Temperature and Power Monitor and Alarm is a complete multiple temperature and powered input monitor and alarm system with an integrated autodialer.

The Temperature and Power Monitor and Alarm monitors up to four (4) RTD temperature sensors, four (4) powered inputs, one (1) dry contact input, and wall outlet power.

The Temperature and Power Monitor and Alarm has programmable high and low temperature limits and an alarm time delay for each sensor. An identification message can be recorded for each sensor, indicating where the sensor is located to allow a quick response to a problem.
The Temperature and Power Monitor and Alarm has programmable normal power state and an alarm time delay for each power input.
The Temperature and Power Monitor and Alarm has numerous options that allow it to be configured for any application.

The Temperature and Power Monitor and Alarm can monitor an auxiliary dry contact (switch closure) input. An alarm time delay can be programmed for this input as well.

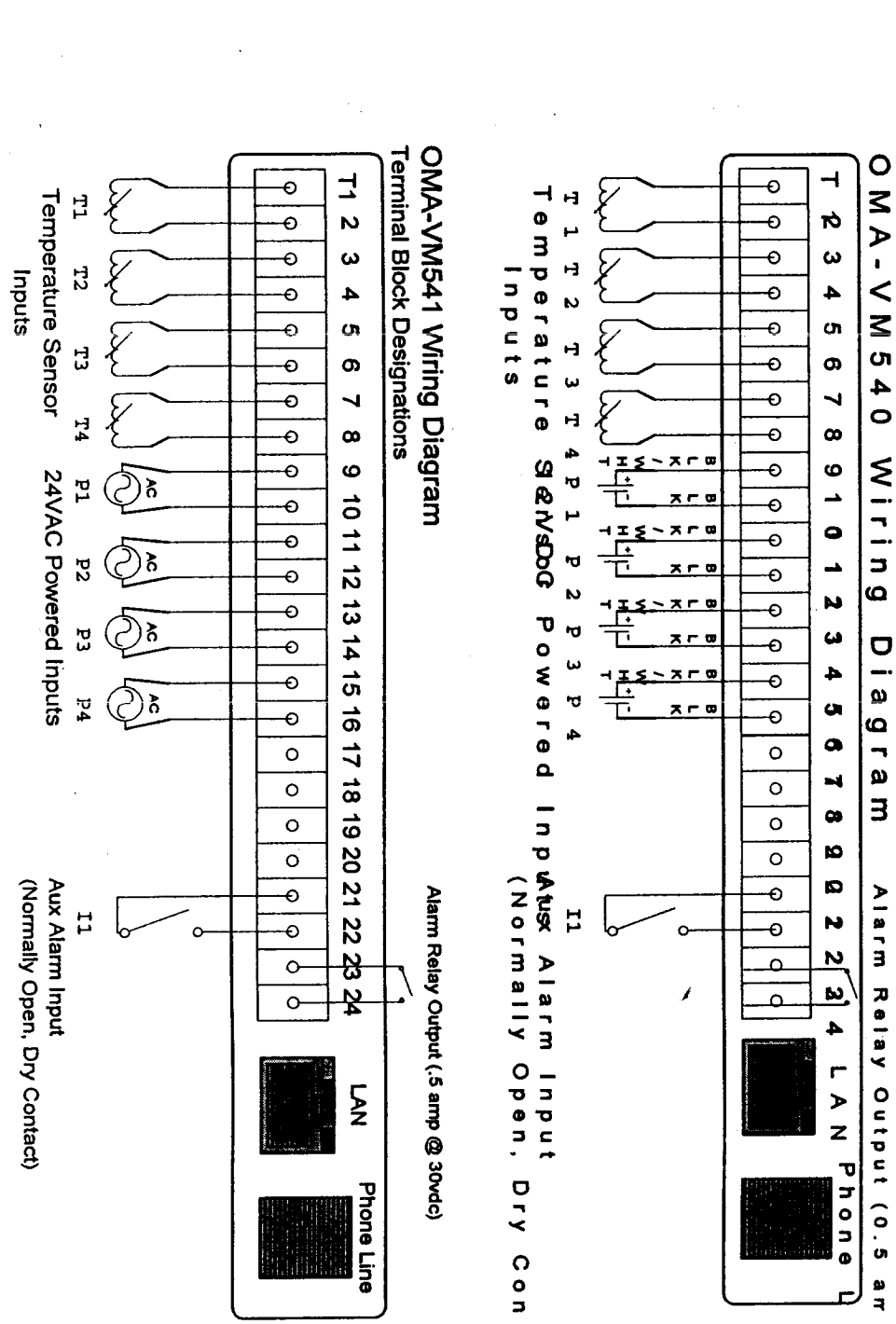
The Temperature and Power Monitor and Alarm will turn on the alarm relay and buzzer and begin making emergency notification calls when either:

The temperature of any sensor is out of limits for greater than its alarm time delay.
A power input changes from its normal state for greater than its alarm time delay.
A contact closure occurs on the auxiliary dry contact input for greater than its alarm time delay.

Model Details:

Model: OMA-VM540, OMA-VM540-DCP
Maximum Temperature Sensor Range: -148°F to 96°F, -100°C to 35°C
Measurement resolution: 1°
Sensor Type: 1000 Ohm Platinum RTD (.00385 TCR)
Powered Alarm Input: 12VDC

Model: OMA-VM541, OMA-VM541-DCP
Maximum Temperature Sensor Range: -328°F to 482°F, -200°C to 250°C
Measurement resolution: 1°
Sensor Type: 100 Ohm Platinum RTD (.00385 TCR)
Powered Alarm Input: 24VAC



Installing the Temperature and Power Monitor and Alarm

- Select a location with access to 120 VAC power, an analog telephone line, and a network drop (DCP models).
- Mount the Temperature and Power Monitor and Alarm to the wall.
- Connect the phone line to an active analog telephone jack.
  A surge suppresser be used for the phone line.
- Plug the RJ45 patch cord to an active network drop and into the **LAN** jack (for OMA-VM540-DCP or OMA-VM541-DCP units)
- Plug the power jack into the **POWER INPUT** before plugging the power pack into a wall outlet.
  A surge suppresser must also be used for the power line.
- **Connect Sensors and Inputs**
  See the Wiring Diagrams on the previous page.
  Temperature Sensors must be installed before turning on the unit
- Turn on the Temperature and Power Monitor and Alarm by moving the power switch to the left of the terminal blocks to the **"1"** position.

Getting Started with OMA-VM540-DCP or OMA-VM541-DCP (optional data logging package)

Get the latest DCP software from: `http://www.omega.com`

Install the software on your computer

1 Extract the files to a new folder on your desktop.
2 Run setup.exe in the new folder.
3 Follow the onscreen instructions.
4 The installation program will install the Data Capture program, the Device IP Setup program, and documentation for both programs.

Power up the Temperature and Power Monitor and Alarm

After booting up the Temperature and Power Monitor and Alarm, the LEDs on the Ethernet jack will begin to blink first orange and then green. When fully power up the left LED will be on steady green and the right LED will blink green.
Verify that the left LAN LED is green and on steady, and the right LAN LED is blinking green. Below is a table that describes the meaning of the two LEDS.

Link LED (Left Side)		Activity LED (Right Side)	
Color	Meaning	Color	Meaning
Off	No Link	Off	No Activity
Amber	10 Mbps	Amber	Half-Duplex
Green	100 Mbps	Green	Full-Duplex

WARNING: DO NOT PULL OUT THE POWER JACK FROM THE TEMPERATURE GUARD WHILE THE POWER PACK IS PLUGGED INTO A WALL SOCKET.

Set the IP address of your Eight Zone Temperature Monitor

Click on Device IP Setup Manual and read the documentation for the Device IP Setup Program.

Collect data from your Eight Zone Temperature Monitor

Click on Data Capture Manual and read the documentation for the Data Capture Program.

Accessing the Temperature and Power Monitor and Alarm

1 From another phone line, call the Temperature and Power Monitor and Alarm. The device will pick up after the programmed number of rings (Default is 1).

2 To access all functions, enter the 4-digit "Full Access" PIN. (Factory default is 0000). To access only the "Confirmation Only" functions, enter the 4-digit "Confirmation Only" PIN 1234.
The "Confirmation Only" functions are:
A) Confirming Alarm Conditions Remotely
B) Checking Sensor Inputs Remotely

3 You will hear the Main Menu options:

Main Menu

Option	Function	
1	Status	
2	Set Limits	
3	Program	
4	Hear All Temperature Sensor Status	NOT SPOKEN MENU ITEM
5	Hear All Power Input Status	NOT SPOKEN MENU ITEM
6	Clear High and Low Temperature Data	NOT SPOKEN MENU ITEM
7	Field Calibrate Temperature Readings	NOT SPOKEN MENU ITEM
#	*Repeat Warning message (if any input is in alarm condition)*	NOT SPOKEN MENU ITEM
0	Exit (Hang Up the phone)	

Programming Temperature Sensor Parameters

Each temperature sensor has four (4) programmable parameters as well as a programmable temperature correction.

Sensor Identification Message. The Sensor ID message will be played when the Temperature and Power Monitor and Alarm is reporting the status of that Sensor.

Sensor Low and High Temperature limits. The low and high temperature limit values are programmed in degrees. When a sensor's temperature exceeds either the high or low limit for longer than the programmed callout time delay, that sensor will be in alarm condition.

Sensor Alarm Time Delay. A sensor's temperature must be out of limits for greater than the alarm delay time for the sensor to be in alarm condition.

1. Accessing the Sensor Configuration

a) From the Main Menu, press 2 to Set Limits
► The "Full Access" PIN will be requested if the "Confirmation Only" PIN was entered initially. If the correct "Full Access" PIN is not entered, the Temperature and Power Monitor and Alarm will hang up.
b) You will hear *"Enter 1 for temperature input, 2 for power input, 3 for alarm input".*
c) Enter 1.
►To return to the Main Menu press 0.
d) You will hear *"Enter temperature input".*
e) Enter the temperature sensor you want to program (1-4) .
►To return to the Main Menu press 0.
f) Proceed to Step 2.a.

2. Programming the Sensor ID message

a) You will hear *"Sensor x message is ...., press 1 to change".*
b) Press **1** to change the message.
► Press 2 to skip and proceed to step 3.a or press 0 to stop programming this sensor and return to step 1.b.

TIP

Record something specific that will allow the people receiving the alarm calls to understand where the problem is.

c) You will hear a tone.
d) Begin speaking after the tone. The Temperature and Power Monitor and Alarm will record for about 3 seconds.
e) After 3 seconds you will hear the tone again, marking the end of your message.

f) You will hear the message you recorded.
g) Proceed to step 3.a.

3. Programming the Lower and Upper Temperature Limits

a) You will hear "Sensor x *lower limit is*" and the current low temperature limit for that sensor (i.e. 35°).
b) You will hear "*Press 1 to change*".
c) Press **1** to change the limit.
   ► Press 2 to skip and proceed to step 3.g or press 0 to stop programming this sensor and return to step 1.b.
d) You will hear "*Enter temperature then press pound*".
e) Enter the value then press **#**.
   ► Use * to program a negative number (i.e. **20 = -20°*).
   ► Acceptable temperature limits is -999 to 999.
f) You will hear the value you just entered (i.e. 39°).
g) You will hear "Sensor x *upper limit is* " and the current high temperature limit for the selected sensor (i.e. 60°).
h) You will hear "*Press 1 to change*".
i) Press **1** to change the limit.
   ► Press 2 to skip and proceed to step 3.g or press 0 to stop programming this sensor and return to step 1.b.
j) You will hear "*Enter temperature then press pound.*"
k) Enter the value then press **#**.
   ► Use * to program a negative number (i.e. **20 = -20°*).
   ► Acceptable range is -999 to 999.
l) You will hear the value you just entered (i.e. *50°*).
m) Proceed to step 4.a.

4. Programming the Alarm Time Delay

a) You will hear "*Alarm time delay is x minutes press 1 to change*" (default 0 minutes).
b) Press **1** to make a change.
   ► Press 2 to skip and return to step 1.b.
c) You will hear "*Enter time delay then press pound*".
d) Enter the time delay in minutes (i.e. 15 for 15 minutes or 0 minutes for an immediate callout).
   ► Acceptable range is 0 to 900 minutes.
e) You will hear the value you just entered.
f) Proceed to step 1.b.

Repeat the steps 1 to 4 for each sensor being used.

Field Calibrating Temperature Readings

The Temperature and Power Monitor and Alarm allows the user to correct small temperature measurement errors due to sensor cable extension length for each sensor. A calibrated standard must be used to obtain the actual temperature.

a) From the Main Menu, press 7.
   ► The "Full Access" PIN will be requested if the "Confirmation Only" PIN was entered initially. If the "Full Access" PIN is not entered correctly, the Temperature and Power Monitor and Alarm will hang up.
b) You will hear "Temperature Change. Enter Temperature Input".
c) Enter the number of the sensor you want to correct (1-4).
   ►To return to the Set Limits Menu press 0.
d) You will hear *"Enter Actual Temperature, then press pound*".
e) Enter the actual temperature measured using the standard, then press **#**.
   ► Use * for negative numbers (i.e. **20 = -20°*).
   ► The maximum the temperature measurement can be corrected is +-20° from the currently displayed temperature.
   (i.e. If the temperature currently being displayed is 20°, the max corrected value is 40° and the min corrected value is 0°. An "invalid" message is played for larger corrections.)
f) You will hear the corrected temperature and the corrected temperature will be displayed on the display.

Programming Powered Input Parameters

Each powered input has three (3) programmable parameters.

Identification Message. The Input ID message will be played when the Temperature and Power Monitor and Alarm is reporting the status of that power input.

Normal State of the power. The normal state of the power, normally on or normally off. When the power is not in it's normal state for longer than the time delay, that input will be in alarm condition.

Time Delay. This time delay is programmed in minutes.

Programming Powered Input Parameters

1. Accessing the Powered Input Configuration

a) From the Main Menu, press 2 to Set Limits.
► The "Full Access" PIN will be requested if the "Confirmation Only". PIN was entered initially. If the correct "Full Access" PIN is not entered, the Temperature and Power Monitor and Alarm will hang up.
b) You will hear "*Enter 1 for temperature input, 2 for power input, 3 for alarm input*".
c) Enter 2.
►To return to the Main Menu press 0.
d) You will hear "*Enter power input*".
e) Enter the powered input number you want to program (1-4).
►To return to the Main Menu press 0.
f) Proceed to Step 2.a.
►If programming the integrated power input, proceed to step 4.a.

2. Programming the Input ID message

a) You will hear "Power Input x *message is ...., press 1 to change.*"
b) Press **1** to change the message.
► Press 2 to skip and proceed to step 3.a or press 0 to stop programming this input and return to step 1.b.
c) You will hear a tone.
d) Begin speaking after the tone. The Temperature and Power Monitor and Alarm will record for about 4 seconds.
e) After 4 seconds you will hear the tone again, marking the end of your message.
f) You will hear the message you recorded.
g) Proceed to step 3.a.

3. Programming the Power's Normal State

a) You will hear "*Power Input x is normally off, press 1 to change*".
b) Press **1** to change to the opposite state.
► Press 2 to skip and proceed to step 4.a or press 0 to stop programming this input and return to step 1.b.
c) You will hear "*Normally on*".

4. Programming the Power Alarm Time Delay

a) You will hear "*Alarm time delay is x minutes press 1 to change.*"
b) Press **1** to make a change.
► Press 2 to skip and return to step 1.b.
c) You will hear "*Enter number then press pound*".
d) Enter the time delay in minutes (i.e. 15 for 15 minutes or 0 minutes for an immediate callout).
► Acceptable range is 0 to 900 minutes.
e) You will hear the value you just entered.
f) Proceed to step 1.b.

Repeat the steps 1 to 4 for each input.

Programming Aux Alarm Input Parameters

The Auxiliary Alarm Input is a dry contact alarm input which will go into alarm condition and generate alert callouts if a switch or contact is closed across the input for longer than the programmed alarm time delay. Note that when system power is off, the Aux relay and alarm will not operate.

1. Accessing the Aux Alarm Input Configuration

a) From the Main Menu, press 2 to Set Limits.
► The "Full Access" PIN will be requested if the "Confirmation Only". PIN was entered initially. If the correct "Full Access" PIN is not entered, the Temperature and Power Monitor and Alarm will hang up.
b) You will hear "*Enter 1 for temperature input, 2 for power input, 3 for alarm input*".
c) Enter 3
►To return to the Main Menu press 0.
d) Proceed to Step 2.a.

2. Programming the Alarm Time Delay

a) You will hear "*Alarm Input time delay is x minutes press 1 to change*" (default 0 minutes).
b) Press **1** to make a change.
► Press 2 to skip and return to step 1.b.
c) You will hear "*Enter number then press pound*".
d) Enter the time delay in minutes (i.e. 15 for 15 minutes or 0 minutes for an immediate callout).
► Acceptable range is 0 to 900 minutes.
e) You will hear the value you just entered.
f) Proceed to step 1.b.

Programming the Autodialer Functions

Accessing the Program Menu

From the Main Menu, press 3

► The "Full Access" PIN will be requested if the "Confirmation Only" PIN was entered initially. If the correct "Full Access" PIN is not entered, the Temperature and Power Monitor and Alarm will hang up.

Program Menu

Option	Function	
1	Program Contact Telephone Numbers	
2	Program Local ID Number	
3	Record Unit ID Message	
4	Program Number of Rings	
5	Change "Full Access" PIN	
6	Program Reminder Calls	NOT SPOKEN
7	Program Repeat Warning Messages	NOT SPOKEN
8	Set Temperature Readout Units (°C or °F)	NOT SPOKEN
9	Program Power Outage Delay Time	NOT SPOKEN
*	Change Callout Time Delay	NOT SPOKEN
#	Change "Acknowledge Only" PIN	NOT SPOKEN
0	Exit (return to Main Menu)	

Programming Contact Telephone/Pager Numbers

The Temperature and Power Monitor and Alarm stores up to four (4) contact telephone or pager numbers.

1 From the Program Menu, Select **1** to set telephone numbers.
2 You will hear "*Select contact one to four*".
3 Select **1** for the first contact number, **2** for the second contact number, **3** for the third contact number, or **4** for the fourth contact number.
► Press 0 to return to the Program Menu.
4 You will hear "*Contact* x *is xxxxxxx*" *or* "*Contact* x *is Empty, press one to change*".
5 Press **1** to make a change or enter a telephone number.
6 You will hear "*Enter number then press pound*".
7 Enter the number, followed by a **#.**
► For pager numbers, enter * as the first digit of the number.
► Enter the full telephone number **(1 + area code if necessary)** .
► If an extra delay between digits or after dialing is required, entering * will provide a two second delay. Do not enter * for the first digit unless programming a pager number.
► Entering only the # key will erase the currently programmed contact telephone number.
8 You will hear the telephone number you just entered.
9 You will be prompted to select another contact to program.
► Press 0 to return to the Program Menu.

Programming a Local Identification Number For Pagers

The local ID number is printed on a pager's display, when calls are made to a pager. The ID number can be up to 20 digits long.

1 From the Program Menu, press **2** for the local ID.
2 You will hear the programmed number or the Temperature and Power Monitor and Alarm will say "Empty".
3 You will hear *"Press one to change".*
4 Press **1** to make a change or 2 to return to the Program Menu.
5 You will hear "*Enter number, then press pound".*
6 Enter the number, followed by a **#.**
7 You will hear the number you just entered.
8 You will be automatically returned to the Program Menu.

Recording a Unit Identification Message

During callouts, this message is played to identify the unit. Record a message to help ID where the Temperature and Power Monitor and Alarm is located.

1 From the Program Menu, press **3** to record a message.
2 If this is the first time setup, go to step 4.
3 You will hear the recorded message.

TIP

Record a message that will identify where the monitor is located to allow people receiving the call to understand what is calling them.

4 You will hear "*Press one to change."*
5 Press **1** to make a change or 2 to return to the Program Menu.
6 You will hear a tone.
7 Begin speaking after the tone. The Temperature and Power Monitor and Alarm will record for about 4 seconds.
8 After 4 seconds you will hear the tone again, marking the end of your message.
9 You will hear the message you recorded.
10 You will be automatically returned to the Program Menu.

Programming the Number of Rings

The Temperature and Power Monitor and Alarm answers the telephone line after the programmed number of rings. Valid rings are 1 – 25. The setting can be used to enable the Temperature and Power Monitor and Alarm to share a line with another device. See the Frequently Asked Questions sec-

tion for details.

1 From the Program Menu, press **4** to set the number of rings.
2 You will hear the programmed number of rings.
3 You will hear *"Press one to change."*
4 Press **1** to make a change or 2 to return to the Program Menu.
5 You will hear *"Enter number then press pound".*
6 Enter the number of rings, then press **#**.
7 You will hear the number of rings you entered.
8 You will be automatically returned to the Program Menu.

Programming the "Full Access" PIN Number

The Temperature and Power Monitor and Alarm has a programmable "Full Access" 4-digit PIN number (0000-9999) to allow users to access the Set Limits option and Program sub-menu, and to confirm alarm conditions.

PIN number must be 4 digits and must not include a # sign.

1 From the Program Menu, press **5** to change the "Full Access" PIN.
2 You will hear the programmed PIN number.
3 You will hear *"Press one to change."*
4 Press **1** to make a change or 2 to return to the Program Menu.
5 You will hear *"Enter your PIN number".*
6 Enter a four digit number.
7 You will hear the PIN number you just entered.
8 You will be automatically returned to the Program Menu.

Programming the "Acknowledge Only" PIN Number

The Temperature and Power Monitor and Alarm has a programmable "Acknowledge Only" 4-digit PIN number (0000-9999) to allow users to only to confirm alarm conditions.

PIN number must be 4 digits and must not include a # sign.

1 From the Program Menu, press **#** to change the "Acknowledge Only" PIN.
2 You will hear the programmed PIN number.
3 You will hear *"Press one to change."*
4 Press **1** to make a change or 2 to return to the Program Menu.
5 You will hear *"Enter your PIN number".*
6 Enter a four digit number.
7 You will hear the PIN number you just entered.

You will be automatically returned to the Program Menu.

Programming Reminder Calls

If a temperature is out of limits or a refrigerator/freezer door remains open after the alarm has been acknowledged, the Temperature and Power Monitor and Alarm can make "reminder calls". This feature alerts personnel that a problem still exists, and has not been fixed. The reminder call delay can be programmed from 15 to 900 minutes.

1 From the Program Menu, press **6.**
2 You will hear "Alarm Reminder is Off".

3 You will hear *"Press one to change."*
4 Press **1** to change this setting, or 2 to return to the Program Menu.
5 You will hear "Alarm Reminder is On".
6 You will hear "Time delay is XX minutes press 1 to change". (Default value is 60 minutes)
7 Press 1 to make a change or press 2 to not make a change.
8 You will hear "Enter number then press pound".
9 Enter the time delay in minutes (i.e. 120 for 2 hours).
10 You will hear the value you just entered.
11 You will be automatically returned to the Program Menu.

Programming Warning Message Repetitions

During callouts the Temperature and Power Monitor and Alarm will repeat the local ID message and warning conditions a programmable number of times (Default 1 repetition).

1 From the Program Menu, press **7.**
2 You will hear "Warning Reminder is 1".
3 You will hear *"Press one to change."*
4 Press **1** to change this setting, or 2 to return to the Program Menu.
5 You will hear "Enter number then press pound".
6 Enter the number of times (0,1, or 2) that you would like the warning message repeated.
7 You will hear the value you just entered.
8 You will be automatically returned to the Program Menu.

Program System Power Outage Delay Time

The Temperature and Power Monitor and Alarm can delay a programmable amount of time before alarming due to a system power outage. The default time is 5 minutes.

1 From the Program Menu, press **9.**
2 You will hear *"Connected power alarm time delay is 5 minutes press 1 to change".*
3 Press 1 to change, or 2 to return to the Program Menu.
4 You will hear *"Enter time delay then press pound".*
5 Enter the time delay in minutes (i.e. 15 for 15 minutes or 0 minutes for an immediate callout, acceptable range is 0 to 120 minutes).
6 You will hear the value you just entered.
7 You will be automatically returned to the Program Menu.

Changing the Callout Delay Time

When a temperature input is in alarm condition the Temperature and Power Monitor and Alarm will wait this programmable amount of time before making telephone alert calls. (Default 2 minutes) The delay can be programmed from 0 to 900 minutes.

NOTE: This callout delay will be skipped if Powered Input 1-4 or the Integrated Power Input is in alarm condition.

1 From the Program Menu, press ***.**

2 You will hear "Callout Time Delay is 2 minutes".
3 You will hear *"Press one to change."*
4 Press **1** to change this setting, or 2 to return to the Program Menu.
5 You will hear "Enter time delay then press pound".
6 Enter the time delay in minutes (i.e. 60 for 1 hour).
7 You will hear the value you just entered.
8 You will be automatically returned to the Program Menu.

Using the Temperature and Power Monitor and Alarm

Checking Inputs Locally
See the section on **Reading the Display.**

Checking Inputs Remotely
a) Call the Temperature and Power Monitor and Alarm.
b) From the Main Menu, press 1 to check Status.
c) You will hear *"Enter 1 for temperature input, 2 for power input, 3 for alarm input".*
d) Enter the input type you wish to check (or press 0 to return to the Main Menu).
   1 for temperature inputs
      You will hear *"Enter temperature input"*
      Enter the temperature input you wish to check (1-4)
   2 for power inputs (including the integrated power input)
      You will hear *"Enter power input"*
      Enter the power input you wish to check (1-4)
      ► Enter 5 for the integrated power input.
   3 for the aux alarm input

For **Temperature Inputs**, you will hear the sensor's temperature and the highest and lowest reading, and how long the sensor has been out of limits in minutes (if any).
For **Power Inputs**, you will hear whether power is on or off, and how long the power input has not been in its normal state in minutes (if any).
For the **Aux Alarm Input**, you will hear whether the input is on or off.
If system power is out, this will be reported instead of the alarm input. The Aux Alarm Input is not checked when system power is out.

Checking Status Remotely with a Web Browser (OMA-VM540-DCP OMA-VM541-DCP only)
1 Open a web browser such as Internet Explorer.
2 Enter the IP address of the device for the URL address.
The status of all connected sensors will be displayed.

Clearing High and Low Temperature Readings Locally
High and low temperature readings can be cleared by holding the black push-

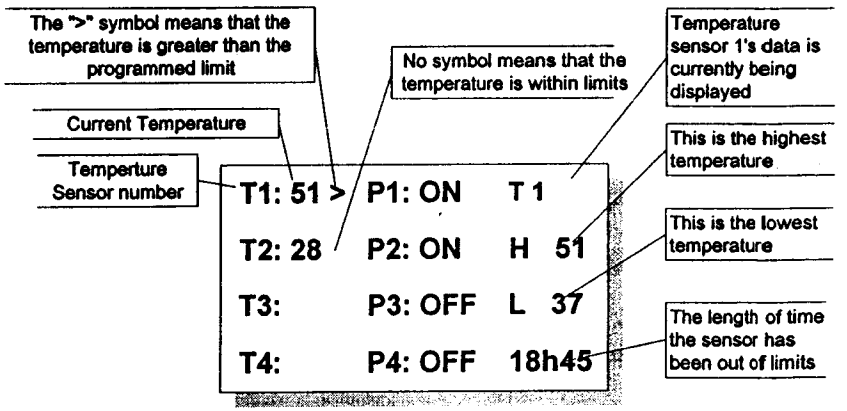
button on the front of the enclosure down for at least 5 seconds while that sensor's data is being displayed.

Clearing High and Low Temperature Readings Remotely
a) From the Main Menu, press 6.
   ► The "Full Access" PIN will be requested if the "Confirmation Only" PIN was entered initially. If the correct "Full Access" PIN is not entered, the Temperature and Power Monitor and Alarm will hang up.
b) You will hear "Change High and Low Temperature. Enter Temperature Input".
c) Enter the number of the sensor you want to clear (1-4).
   ►To return to the Main Menu, press 0.

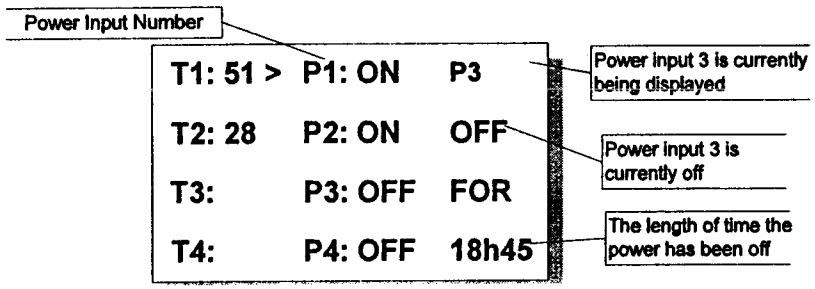
Confirming Alarm Conditions Remotely
During callouts, the Temperature and Power Monitor and Alarm will prompt you to enter a PIN number, enter either the Full Access PIN or the Confirmation Only PIN.
If you have received a page or a voice mail message regarding an alarm condition that you wish to confirm. Simply call the Temperature and Power Monitor and Alarm and enter either the Full Access PIN or the Confirmation Only PIN, The alarm relay will de-energize, and the Temperature and Power Monitor and Alarm will stop making callouts for the current alarm condition. **This action does not override the Reminder Call feature.**

Confirming Alarm Conditions Locally
To confirm an alarm condition locally push the black button on the left side of the Temperature and Power Monitor and Alarm. The alarm relay will de-energize, and the Temperature and Power Monitor and Alarm will stop making callouts for the current alarm condition. **This action does not override the Reminder Call feature.**

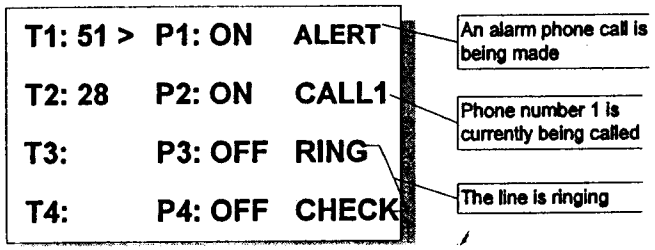
Temperature Sensor Status
The Temperature and Power Monitor and Alarm continuously monitors and displays all data. The maximum and minimum values for each sensor in the right side of the screen.



Power Input Status
The Temperature and Power Monitor and Alarm continuously displays the current state of the power inputs. If the power is not in its normal state, the display will indicate the length of time it has been out of its normal state.



Alarm Callouts
When the Temperature and Power Monitor and Alarm is making callouts, the status is displayed in the right side of the screen. While the Temperature and Power Monitor and Alarm is making telephone calls, the display is not updated with new temperature readings.



Frequently Asked Questions

When does the Temperature and Power Monitor and Alarm callout?
The Temperature and Power Monitor and Alarm will callout when any sensor/input is in an alarm condition and has not been confirmed.

When an alarm condition first occurs, the Temperature and Power Monitor and Alarm turns on the alarm relay and buzzer, and then waits two minutes (programmable) to allow local personnel time to react to the alarm.
NOTE: The callout delay will be skipped if Powered Input 1-4 or the Integrated Power Input is in alarm condition.

When is a sensor/input in alarm condition?
When a temperature sensor has been out of limits for greater than its programmed alarm time delay.
When a temperature sensor opens or shorts after having been connected.
When a power input is not in its "normal state" for longer than its programmed alarm time delay.
When the plug-in power has been out for greater than its programmed alarm time delay.
When the Aux Alarm Input is active for greater than its programmed alarm time delay.

What happens when the Temperature and Power Monitor and Alarm calls?
1 The Temperature and Power Monitor and Alarm will dial the contact number exactly as it was programmed.
► If the contact number was programmed as a pager number (* is the first digit. The Temperature and Power Monitor and Alarm will dial all digits following the *.
2 The Temperature and Power Monitor and Alarm will wait for a person or voice mail system to answer the call.
3 The Temperature and Power Monitor and Alarm will beep while it waits for a person to stop speaking or the voice mail system's outgoing message to stop.
4 For voice contact numbers, the Temperature and Power Monitor and Alarm will play the recorded personal identification message.
For pager contact numbers, the Temperature and Power Monitor and Alarm will print the Local Identification number on the pager screen.
The Temperature and Power Monitor and Alarm will then hang up and call the next programmed contact number.
5 The Temperature and Power Monitor and Alarm will report any alarm conditions (i.e. "Warning, Sensor *2, "sensor 2 recorded message", is 89 degrees and has been out of limits for, x hours and y minutes.*
6 The Temperature and Power Monitor and Alarm will ask for the PIN number.

Once the PIN number has been entered, the Temperature and Power Monitor and Alarm will not call again because the current alarm condition has been acknowledged, unless the alarm still exists and the reminder call has been enabled.

If the correct PIN number is not entered within 4 seconds the Temperature and Power Monitor and Alarm will repeat the warning message. This warning message can be repeated up to 2 times by changing the programmed value. See the **Programming Repeat Warning Messages** section.

If the correct PIN number is not entered the Temperature and Power Monitor and Alarm will call the next programmed contact telephone number.

If the Temperature and Power Monitor and Alarm has called all programmed contact numbers without having the correct PIN number entered, it will wait 20 minutes and repeat the sequence until the alarm condition goes away or the Temperature and Power Monitor and Alarm receives confirmation either locally or remotely.

How can I connect the Temperature and Power Monitor and Alarm to a Phone Line which has a fax or answering machine connected to it?
Program the Temperature and Power Monitor and Alarm to answer after one more ring than the other device. This allows the other device to always answer first. To call and access the Temperature and Power Monitor and Alarm:

1 Dial the phone number
2 Hang up one ring before the other device answers.
3 Wait no longer than 30 seconds, then dial the phone number again.
4 The Temperature and Power Monitor and Alarm will answer.

For Example:
A fax machine on the same line as the Temperature and Power Monitor and Alarm is set to answer after 4 rings. The Temperature and Power Monitor and Alarm is programmed to answer after 5 rings. To access the Temperature and Power Monitor and Alarm, dial the number, let it ring three times, then hang up. Wait 20 seconds and call again. After two rings, the Temperature and Power Monitor and Alarm will answer.

Verifying telephone communication
To verify telephone communications, perform the following test.

1 Using another phone line, call the Temperature and Power Monitor and Alarm and verify that it answers the phone.
2 Verify at least one programmed telephone number.
3 Hang up.
4 Call the Temperature and Power Monitor and Alarm again.
5 Enter #999 (including the "pound" sign) for the PIN.
6 Hang up.
7 The Temperature and Power Monitor and Alarm will perform a test call to your programmed telephone number's.
► Do not enter your PIN if you would like the Temperature and Power Monitor and Alarm to continue calling any remaining programmed telephone numbers.
8 Watch the display and note any messages present.

Troubleshooting

If the Temperature and Power Monitor and Alarm does not answer the phone
Verify that the phone line is a standard analog telephone line. Digital phone lines are not compatible with the Temperature and Power Monitor and Alarm.
Verify that the phone line is working. Connect a standard phone to the line intended for the Temperature and Power Monitor and Alarm. Verify that there is a dial tone.
Check that the phone line is plugged in securely.
Verify that the Temperature and Power Monitor and Alarm is powered up and some data a is being displayed on the display.

If the Temperature and Power Monitor and Alarm does not call out
Perform the telephone communication verification procedure. Connect a phone to the line intended for the Temperature and Power Monitor and Alarm. Verify that there is a dial tone.
Check that the phone line is plugged in securely
Verify that the Temperature and Power Monitor and Alarm is powered up and the status light is blinking
Verify that the Temperature and Power Monitor and Alarm is programmed correctly. Call up the Temperature and Power Monitor and Alarm and verify the programmed phone numbers and limits.

Standard 4 hour / 20 / 30 Hour Batteries
The rechargeable batteries used in the Temperature and Power Monitor and Alarm are trickle charged and can take up to a week to reach full capacity. The batteries are charging whenever the monitor is powered on. If your unit has been ordered with an extended battery, it is installed at the factory.

OMA-VM540-DCP, OMA-VM541-DCP Networking Issues
If you are not able to find the device on your network using Device IP Setup, pull the power jack from the device, wait 5 seconds, plug it back in and try to find the device again. If that does not work, try the items below.

Verify that the Temperature Guard is powered on from its power supply.
Verify that you connected a good Ethernet cable to the Temperature Guard.
Verify that the LED's on the LAN adapter are on as described on page 5, if not **recycle power by pulling out the power jack from the Temperature Guard** and consult your IS/IT staff.

Accessing advanced network setup
To set either the Subnet Mask or Gateway Address of the device, access the advanced network setup web page by entering:
http://{Device IP Address}/ltx_conf.html Click on the "Server Properties" button.
Enter the Subnet Mask and/or Gateway Address and click "Update Settings"

FCC PART 68 INFORMATION

This equipment complies with Part 68 of the FCC Rules. The FCC Part 68 Label is located on the bottom of the unit. This label contains the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. If requested, this information must be provided to your telephone company.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those device ring when your telephone number is called. In most, but not all areas, the sum of the RENs of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

Connection to the telephone network should be made by using standard modular telephone jacks, type RJ11. The plug and/or jacks used must comply with FCC Part 68 rules. If this telephone equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in it's facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance in order for you to make necessary modifications to maintain uninterrupted service.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to tariffs.

If trouble is experienced with this unit, for repair or warranty information, please contact customer service at the address and phone listed below. If the equipment is causing harm to the network, the telephone company may request that you disconnect the equipment until the problem is resolved.

DO NOT DISASSEMBLE THIS EQUIPMENT. It does not contain any user serviceable components.

MADE IN USA

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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