emperature
uard ®

Input Guard

Models
VM506
VM506R
VM506-LV
VM506R-LV

Manual and Installation Instructions

Made in the U.S.A.

Index	Page

General Description

The Input Guard is a complete multi-input monitor and auto-dialer. The Input Guard monitors up to eight (8) inputs.

The Input Guard allows the user to program individual normal states and a time delay for each input. When an input goes into an alarm condition, the Input Guard will call up to four programmable voice or pager numbers.

The Input Guard also monitors the power to which it is connected and will call its programmed numbers if a power outage exists.

The Input Guard will turn on its alarm relay and buzzer when any zone or input is in an alarm condition. The alarm relay and buzzer is turned off by pressing the black button on the face of the dialer.

For models with the -R option:
The Input Guard never activates the alarm relay. The Input Guard allows the user to control the alarm relay. See page 12 Using the Input Guard.

Installing the Input Guard

Select a location with access to power and a telephone line.

Connect the phone line to an active phone jack.

Plug in the wall mount transformer into a power socket of which you want monitored.
Connect the wall mount transformer power jack to the Input Guard on the top of the unit.

For ease of wiring, remove the terminal blocks. See wiring diagrams on pages 4 and 5.

If desired, connect additional signaling devices to the alarm relay contacts at terminals 23 and 24.
Alarm relay is dry contact rated at 1A 30VDC, or 0.3A 60VDC.

Wiring Diagram (side view of enclosure)
Terminal Block Designations

Alarm Relay Output
Contact Ratings: 1a 30vdc
.5a 120vac

Phone Line

1
12 13
24

Terminals 17 to 22
are NOT USED

Input 1 Input 2 Input 3 Input 4 Input 5 Input 6 Input 7 Input 8
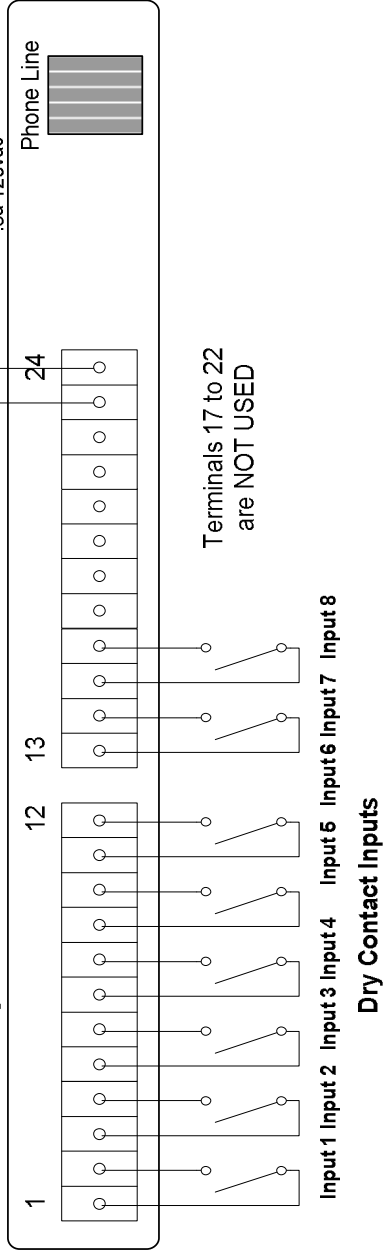
Dry Contact Inputs

VM506
Dry Contact Inputs

Wire each dry contact input to
the terminal block as shown.

4

Wiring Diagram (side view of enclosure)
Terminal Block Designations

Phone Line

Alarm Relay Output

Terminals 17 to 22 are NOT USED

24

13   12

1

Input 1   24 VAC   Input 2   24 VAC   Input 3   24 VDC   Input 4   Input 5   Input 6   Input 7   Input 8

The Inputs are switch selectable to be dry contact or 24v ac/dc inputs
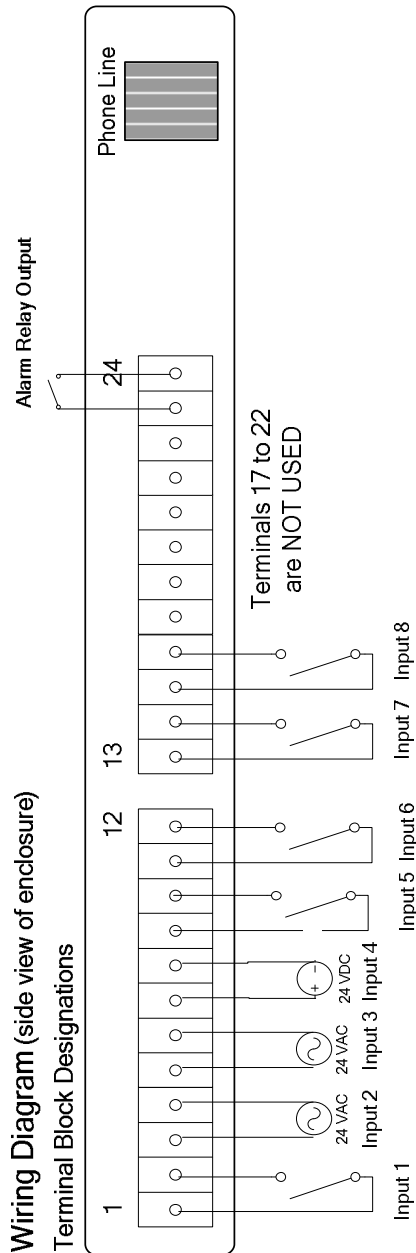
VM506-LV
Switch Selectable Inputs

Each input is switch selectable to be either a 24V AC/DC input or a dry contact input.

For inputs in the 24V AC/DC input setting, inputs are:

24 VAC 60 Hz, 24VDC (acceptable range 17 - 48 VAC, 6 – 48 VDC)

For inputs in the dry contact input setting, inputs are self powered dry contact inputs.

Setting the Input Type Select Switches

Turn off the power to the unit.

Remove the four screws holding the cover of the VM500-6-LV.

The eight switches are located on the center of the board and there is one for each input.

Input 1 Type Select Switch is on the far left, and Input 8 Type Select Switch is on the far right.

-For dry contact inputs, move the switch to the UP position.

-For 24V AC/DC inputs, move the switch to the DOWN position.

For the example above, the Input Type Select Switches for inputs 1, 5, 6, 7, 8 must be in the up position. For inputs 2, 3 and 4 the switches must be in the down position.

Setting up the Input Guard

Programming is accomplished over the phone and only has to be done once, unless it is necessary to make a change. Before programming, do the following:

1   Connect a phone line and power, and then turn on the Input Guard.
2   From another phone line dial the number where the Input Guard is located. The device will pick up after the first ring.
3   When prompted, enter the 4-digit PIN number (Factory default PIN number is 0000).
4   You will hear the Main Menu options (you may enter your selection at any time):
    1. Status
    2. To Set Limits (for inputs)
    3. Program
    4. Turn on relay (-R option only)
    5. Turn off relay (-R option only)
    0. Hang Up

Programming Input Parameters

Each input can be programmed to be either a normally closed or normally open input.

Each input has its own time delay for which the input must have changed state for, before the Input Guard begins making emergency calls. The time delay is programmed in minutes.

Each input has a unique Input ID message that can be recorded to give further detail during emergency calls.

TIP: To have the Input Guard callout immediately program a time delay of 0 minutes. (default is 0 minutes)

1. From the Main Menu, press 2 to setup inputs

2. You will hear "*Enter Input*"

3. Enter the number of the input which you wish setup (i.e. 1)

4. You will hear *"Input X is normally open, press 1 to change."*

5. Enter your selection (for LV models, power on is

closed and power off is open)

6. Press 1 to change , or any other key to skip. If you press 1 you will hear "Enter 1 for normally closed, 2 for normally open." Make your selection. Unit will state your selection.

7. You will hear the programmed time delay for the input (i.e. 0 minutes)

8. You will hear *"Input X time delay is X minutes, Press 1 to change"*

9. Press **1** to change the delay or press any other button to not change the delay. (If you do not press one, go to step 12)

10. You will hear "*Enter number then press pound"*

11. Enter the time delay in minutes (Valid times are 0 to 999 minutes), then press **#**.

12. You will hear the value you just entered (i.e. *5 minutes*)

13. You will hear the programmed identification message for the selected input. You will hear "Empty" on a new unit.

14. You will hear "Press 1 to change"

15. Press **1** to make a change or press any other button to not change the message (If you do not press one go to step 19)

16. You will hear a tone

17. Begin speaking after the tone. The Input Guard will record for about 4 seconds

18. After 4 seconds you will hear the tone again, marking the end of your message

19. You will hear the message you recorded

20. You will be returned to the Input Setup Menu. Repeat the above steps for each input used. Press 0 to get back to the main menu.

Programming the Power Outage Alarm Time Delay

The power must be out for this programmable amount of time before the Input Guard will call out due to the power input.

1. From the Main Menu, press 2 to setup inputs
2. You will hear "*Enter Input*"
3. Enter the star key (*)
4. You will hear "Power off alarm time-delay is.. "
5. You will hear the programmed time delay (5 minutes)
6. You will hear *"Press 1 to change"*
7. Press **1** to change the delay or press any other button to not change the delay. (If you do not press one, go to step 9)
8. You will hear "*Enter number then press pound*"
9. Enter the time delay in minutes (Valid times are 0 to 999 minutes), then press **#**.
10. You will hear the value you just entered (i.e. *5 minutes*)

Program Menu Items

To access the Program Menu:

1. From the Main Menu, press 3

2. You will hear the Program Menu options (you may enter your selection at any time):

   1. Set Telephone Numbers (Contact Menu)
   2. Program Local ID
   3. Record a Message
   4. Set Number of Rings
   5. Change Pin Number
   6. Alarm Reminder
   7. Warning Message Repetition
   8. Not Used
   9. Not Used
   0. Exit (return to Main Menu)
      Option #'s 6-9 are not spoken.

Programming Telephone/Pager Numbers

The Input Guard stores up to four (4) emergency telephone or pager numbers. The Input Guard will call each phone number until the PIN number is entered. If Input Guard reaches an answering machine, it will leave your personal identification message, and then the alarm condition, but will continue calling.

First Time Number Programming:

1　From the Program Menu, Select **1** to set telephone numbers.

2　You will hear "*Select contact.*" *Select #1-4.*

3　*You will hear "Contact X is empty. Press 1 to change." After you enter 1 you will hear "Enter number then press #."*

3a　For voice phone numbers enter the full phone number

　　(1 + area code if necessary) followed by the **#** key.

3b　For pager numbers enter ***** then enter the full pager number

　　(1 + area code if necessary) followed by the **#** key.

4　You will hear the telephone number you just entered.

5　Repeat for all the contact numbers you wish to program.

6　Press 0 to return to previous menu.

Note: If an extra delay between digits is required, entering * will provide a two second delay. Do not enter * for the first digit unless programming a pager number.

To Change a Phone Number:

1　Select the phone number to change from the Contact Menu

2　You will hear the selected telephone number

3　You will hear "*Press one to change*"

4　Press **1** to change

5　You will hear "*Enter number then press pound*"

6a　For voice phone numbers enter the full phone number

　　(1 + area code if necessary) followed by the **#** key.

6b　For pager numbers enter ***** then enter the full pager number

　　(1 + area code if necessary) followed by the **#** key.

7　You will hear the telephone number you just entered.

8　You will be automatically returned to the Program Menu

To Delete a Phone Number:

1　Select the phone number to change from the Contact Menu

2 You will hear the telephone number you selected

3 You will hear "*Press one to change*"

4 Press 1 to make a change

5 You will hear "*Enter number then press pound*"

6 Enter the # key. This will erase the phone number

7 You will be automatically returned to the Contact Menu

Programming a Local Identification Number For Pagers

The local identification number is printed on the display of a pager when the Input Guard calls a pager number. The local identification number can be up to 20 digits long.

1 From the Program Menu, press **2** for the local ID

2 If this is the first time setup, go to step 4

3 You will hear the programmed number

4 You will hear *"Empty, press one to change"*

5 Press **1** if you wish to make a change or press any other button to return to the Program Menu

6 You will hear "*Enter number, then press pound*"

7 Enter the number, followed by a **#**

8 You will hear the number you just entered.

9 You will be automatically returned to the Program Menu

Recording a Personal Identification Message

When the Input Guard calls, it first plays this 8 second personal identification message. If no message has been recorded this message is skipped.

1 From the Program Menu, press **3** to record a message

2 If this is the first time setup you will hear "Empty, press 1 to change." go to step 5

3 You will hear the recorded message

4 You will hear "*Press one to change.*"

5 Press **1** if you wish to make a change or press any other button to return to the Program Menu

6 You will hear a tone

7 Begin speaking after the tone. The Input Guard will record for 8 seconds

8 After 8 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 Input Guard answers the telephone line after the programmed number of rings. Valid numbers of rings are 1 – 25.

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** if you wish to make a change or press any other button 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 PIN Number

The Input Guard uses a 4-digit PIN number (0000-9999) to identify you when calling the device or during callout procedures. After programming the PIN number write it down here.

_____ Pin Number

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

1   From the Program Menu, press **5** to change the PIN number

2   You will hear the programmed PIN number

3   You will hear "*Press one to change.*"

4   Press **1** if you wish to make a change or press any other button to return to the Program Menu

5   You will hear "*Enter your PIN number*"

6   Enter a four digit number (do not put a # anywhere in your pin number)

7   You will hear the PIN number you just entered

8   You will be automatically returned to the Program Menu

Acknowledge Only Pin Number

There is a built in acknowledge only pin number. It is 1234. This allows checking of status and turning on/off the relay in the –R model. It also acknowledges the alarm condition and stops phone calls.

Programming the Reminder Call

The Input Guard can make reminder calls after a programmable amount of time if inputs are still active after the PIN number has been entered.

1   From the Program Menu, press 6

2   You will hear "Alarm *Reminder is Off,, press One to change*"

3   Press **1** to enable Reminder Calls

4   You will hear "Alarm *Reminder is On, Time Delay is 60- minutes, press One to Change*"

5   Press **1** to set a custom time delay for the reminder call, or 2 to return to the program menu.

6   You will hear "*Enter number then press pound*"

7   Enter the delay in minutes (Valid times are 0 to 999 minutes), then press **#**.

8   You will hear the time you just entered.

9   You will be automatically returned to the Program Menu

Programming Warning Message Repetitions

During callouts the Input Guard will repeat the recorded ID message and warning conditions a programmable number of times. (Default is 1, Valid numbers are 0,1,2)

1. From the program menu press 7.

2. You will hear "Warning reminder is 1, press 1 to   change." Press 1, and you will hear "Enter number, then press pound (#)."

3. Press 1 to change or 2 to return to the program menu.

4. Enter the number of times (0,1,2) that you would like the message repeated.

5. You will hear the value you entered and automatically be returned to the program menu.

Using the Input Guard

How does an input go into an alarm condition?

An input is in an alarm condition when its current state (on or off) is the opposite of its programmed state for longer than the programmed time delay.

The power must be on for the Input Guard to check the state of an input. During a power outage inputs are not monitored.

For example: Input 1 is programmed as normally off with a time delay of 1 minute.

Input 1 will be active when it is on for at least 1 minute.

What happens when an input goes into an alarm condition?

The Input Guard will close the alarm relay (-6, and –6-LV only)

The alarm buzzer will begin to sound.

The Input Guard will begin making emergency phone calls.

Pushing the black Cancel Alarm button on the face of the Input Guard will cause the alarm buzzer to turn off and the alarm relay to de-energize.   After the Cancel Alarm button has been pressed the Input Guard will stop making emergency phone calls until a new emergency is present, unless the Reminder Calls function is enabled.

How do I activate and deactivate the relay? (-R option only)

1   Call the Input Guard

2   Enter you PIN number

3   From the main menu press **4** to activate the relay or **5** to deactivate the relay

or

Press the black Cancel Alarm button on the face of the   Input Guard until the relay toggles. (about 4 seconds)

What happens during a call to voice number?

1   If you have recorded a Personal Identification Message, it will be played.

2   The Input Guard will report any alarm condition. For example "Alarm has been caused by Input 1, *(Your prerecorded input ID message)"*

3   The Input Guard will ask for the PIN number

4   Once a valid PIN number** has been entered, the Input Guard will not call again because the current alarm condition has been acknowledged. For units without the –R option, the alarm buzzer will turn off and alarm relay will de-energize. If Alarm Reminder has been programmed, the Input Guard will begin making calls again after the programmed amount of time.

**   If no pin number is entered, the Input Guard will wait 20   minutes and then begin calling all programmed numbers.

What happens during a call to a pager?

The Input Guard will print your Local Identification number, followed by the status of all inputs, followed by the power status on the pager screen.

For example, 1234**10100000**1, 1234 is the user ID, 10100000 would indicate input status, 1 and 3 are in alarm, and the last 1 indicates power is on.

The Input Guard will continue to make calls until either:

• The alarm condition goes away OR

• The Input Guard is called and the PIN number is entered

Calling the Input Guard to check the state of the inputs and power status

1. Call the Input Guard.
2. The Input Guard will report the following:

   • Any alarmed inputs

   • If the power is out

To check the state of an input

1. Call the Input Guard
2. Enter you PIN number
3. From the main menu press **1**
4. You will hear "*Enter Input*"
5. Enter the number of the input you wish to hear (i.e. 1)
6. If you wish to hear a full report of all inputs press **9.**

To check the status of the power

1. From the main menu press **1**
2. You will hear "*Enter Input*"
3. Enter *****

To check to status of the relay (Input Guard-R only)

1. From the main menu press **1**

2. You will hear "*Enter Input*"

3. Enter **#**

4. You will hear the status of the relay

Connecting the Input Guard to a Phone Line which has a fax or answering machine connected to it

Program the Input Guard to answer after one more ring than the other device. This allows the other device to always answer first.

To call and access the Input Guard

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 Input Guard will answer.

Example:

A fax machine on the same line as the Input Guard is set to answer after 4 rings.

The Input Guard is programmed to answer after 5 rings.

To access the Input Guard, dial the number, let it ring three times, then hang up. Wait 20 seconds and call again. After two rings, the Input Guard will answer.

Do not set the Fax/Answering Machine to 2 rings and the Input Guard to 3 rings. This will force both to answer at the same time.

Troubleshooting

Verifying that the Input Guard works with your phone line
To verify that the Input Guard works with your phone line, perform the following test.

1. Using another phone line, call the Input Guard and verify that it answers the phone

2. From the Main Menu, press **2** to setup inputs

3. Press **1** to setup input 1

4. Press **1** to make this input normally closed

5. Program a time delay of 0 minutes (See **Input Setup**)

6. Skip the input ID message recording for now.

7. Program the phone number you are calling from into the first phone number location. (See **Programming Telephone Numbers**)

8. Press '0' twice to exit the Program Menu and hang up the Input Guard

9. Remove the terminal blocks to ensure input 1 will be open

10. The Input Guard will close the alarm relay, sound the buzzer, and call out because input 1 is programmed to be normally closed and is currently open

If the Input Guard does not answer the phone
Verify that the phone line is working. Connect a standard phone to the line intended for the Input Guard. Verify that there is a dial tone.

Check that the phone line is plugged in securely.

Verify that the Input Guard is powered up and the status light is blinking.

If the Input Guard does not call out

Verify that the phone line is good. Connect a phone to the line intended for the Input Guard. Verify that there is a dial tone.

Check that the phone line is plugged in securely

Verify that the Input Guard is powered up and the status light is blinking

Verify that the Input Guard is programmed correctly. Call up the Input Guard and verify the programmed phone numbers and inputs setup.

Call the input Guard. When it says "Enter your pin number" enter #999 and hang up right away. The Input Guard will call all programmed phone numbers.

<u>Notes</u>

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 de-

vices 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

Limited Warranty:

1. Warrantor: Dealer, Distributor, Retailer, and Manufacturer

2. Warranty and Remedy

We believe that this is a high quality product. Although we test all products for proper functionality, we cannot guaranty that there will never be a defective unit, or that a unit will function on every phone line and all communication equipment in existence. For this reason, it must be clear that the **Warrantors are not insuring your premises or guaranteeing that there will not be damage to your person or property if you use this Product.** If this warranty is unacceptable please return the unused Product for a full refund.

One Year Limited Warranty - Microtechnologies, Inc. warrants its products to be free from defects in material and workmanship under normal use for one year, and is not responsible for consequential damage or installation costs of any nature.   In event that the Product does not conform to this Warranty at any time during the period of one year from original purchase date, Warrantor will repair the defect and return it to you at no charge. **Important: The Warranty is limited to replacement of the Product ONLY.** Secondly, because every phone line differs, we strongly encourage you to test this Product in its actual application.   This should include a full test, involving the Product actually dialing to its designated location and someone verifying the proper response.

This warranty shall terminate and be of no further effect at the time the Product is 1) damaged by extraneous causes such as fire, water, lightning, etc. or not maintained as reasonable and necessary: 2) modified: 3) improperly installed: 4) repaired by someone other than the Warrantor: 5) used in a manner or purpose for which the Product was not intended.

WARRANTORS' OBLIGATION UNDER THIS WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT ONLY. THIS WARRANTY DOES NOT COVER PAYMENT OR PROVIDE FOR THE REIMBURSEMENT OF PAYMENT FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

It must be clear that the Warrantors are not insuring your premises or guaranteeing that there will not be damage to your person or property if you use this Product. The Warrantors shall not be liable under any circumstances for damage to your person or property or some other person or that person's property by reason of the sale or use of this Product, or its failure to operate in the manner in which it is designed. The Warrantor's liability, if any, shall be limited to the original cost of the Product only. Use of this Product is at your own risk.

3. Procedures for obtaining performance for Warranty:

   In the event that the Product does not conform to this Warranty, the Product should be shipped or delivered freight prepaid to a Warrantor with evidence of original purchase. If in any way you are not comfortable with the product or its Limited Warranty, we encourage you to return it unused for a full refund.

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