

VENTIUM™
with Hog Perfect™

INSTALLATION

RAYDOT
Incorporated

FRESH IDEAS IN
VENTILATION
TECHNOLOGY™

MADE IN U.S.A. BY: BLUE EARTH RESEARCH™

WARRANTY

PLEASE READ THIS PAGE CAREFULLY. IF YOU DO NOT AGREE WITH THE WARRANTY LIMITATIONS OR ITS TERMS AND CONDITIONS, PROMPTLY RETURN THE PRODUCT, UNUSED, TO THE PLACE WHERE YOU OBTAINED IT FOR A FULL REFUND.

LIMITED WARRANTY

All Hardware Components: Except for the sensors, Blue Earth Research warrants all hardware components (product) against defects in material and workmanship for a period of one (1) year from date of installation, or two (2) years from the date of manufacture, whichever comes first. The company will repair or replace the defective components at no charge to the customer except for shipping and handling charges.

Sensors: Blue Earth Research warrants all sensors (product) against defects in material and workmanship for a period of six (6) months from date of installation, or two (2) years from the date of manufacture, whichever comes first. The company will repair or replace the defective components at no charge to the customer except for shipping and handling charges.

Hog Perfect™ Software: Blue Earth Research warrants that this software product will perform substantially according to this manual for one (1) year from date of purchase.

Improvements: Blue Earth Research reserves the right to alter or improve this product without notice and without incurring obligation to alter or improve existing products.

TERMS AND CONDITIONS

1. The product must have been properly installed, operated and maintained according to factory recommendations.
2. The product must be shipped, freight prepaid and insured, or delivered to Raydot or an authorized repair facility.
3. The product must not have been previously altered or repaired by an unauthorized source.
4. Evidence of the installation date to establish warranty eligibility must be provided.

LIMITATION OF LIABILITY

THESE PRODUCTS ARE PROVIDED "AS IS" WITHOUT ANY KIND OF WARRANTIES FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. IN THE EVENT BLUE EARTH RESEARCH (BEaR) CANNOT DO EITHER, THEN THE PURCHASER'S ALTERNATIVE EXCLUSIVE REMEDY SHALL BE A REFUND OF THE PURCHASE PRICE IN EXCHANGE FOR THE RETURN OF THE DEFECTIVE PRODUCT TO BEaR. BEaR SHALL NOT BE LIABLE FOR ANY LOSS OF PROFITS, LOSS OF USE, INTERRUPTION OF BUSINESS, NOR FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGE OR FOR BREACH OF ANY EXPRESSED OR IMPLIED WARRANTY ON THESE PRODUCTS.

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BEFORE YOU START

This manual only covers installation of the Ventium control system components. Before enabling Ventium to take over control of the building environment, be sure that all associated ventilation equipment has been properly installed, adjusted, and checked for proper operation.

We highly recommend that one circuit breaker be used for each output channel, plus another breaker to power the Ventium control center and its connected modules. This setup provides greater flexibility in maintaining or restoring the proper environmental balance should one breaker "trip."

Confirm the power requirements of each piece of ventilation equipment. The maximum rated load for any output channel (relay or Triac) is 10A or 1HP.

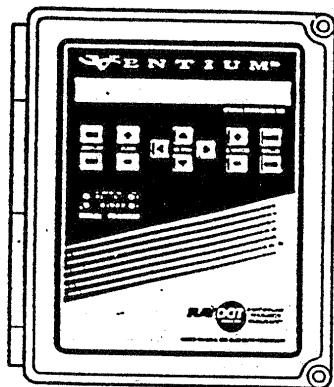
Ventium is protected against normal line voltage surges. However, voltage surges caused by electrical storms or faulty power systems may damage this equipment. It is recommended that surge and noise suppression devices be installed at the electrical power distribution panel for added security against damage.

Be sure the overall ventilation plan includes safeguards against a system failure. Installations should include an independent alarm system and emergency override thermostats for heating and ventilation.

WARNING: Ventium installation must be done by a qualified electrician. Failure to comply with all national and local electrical codes may void warranty. Failure to appropriately seal all conduit openings and cable entry points may also void warranty. The manufacturer is not responsible for moisture damage.

DESCRIPTION OF COMPONENTS

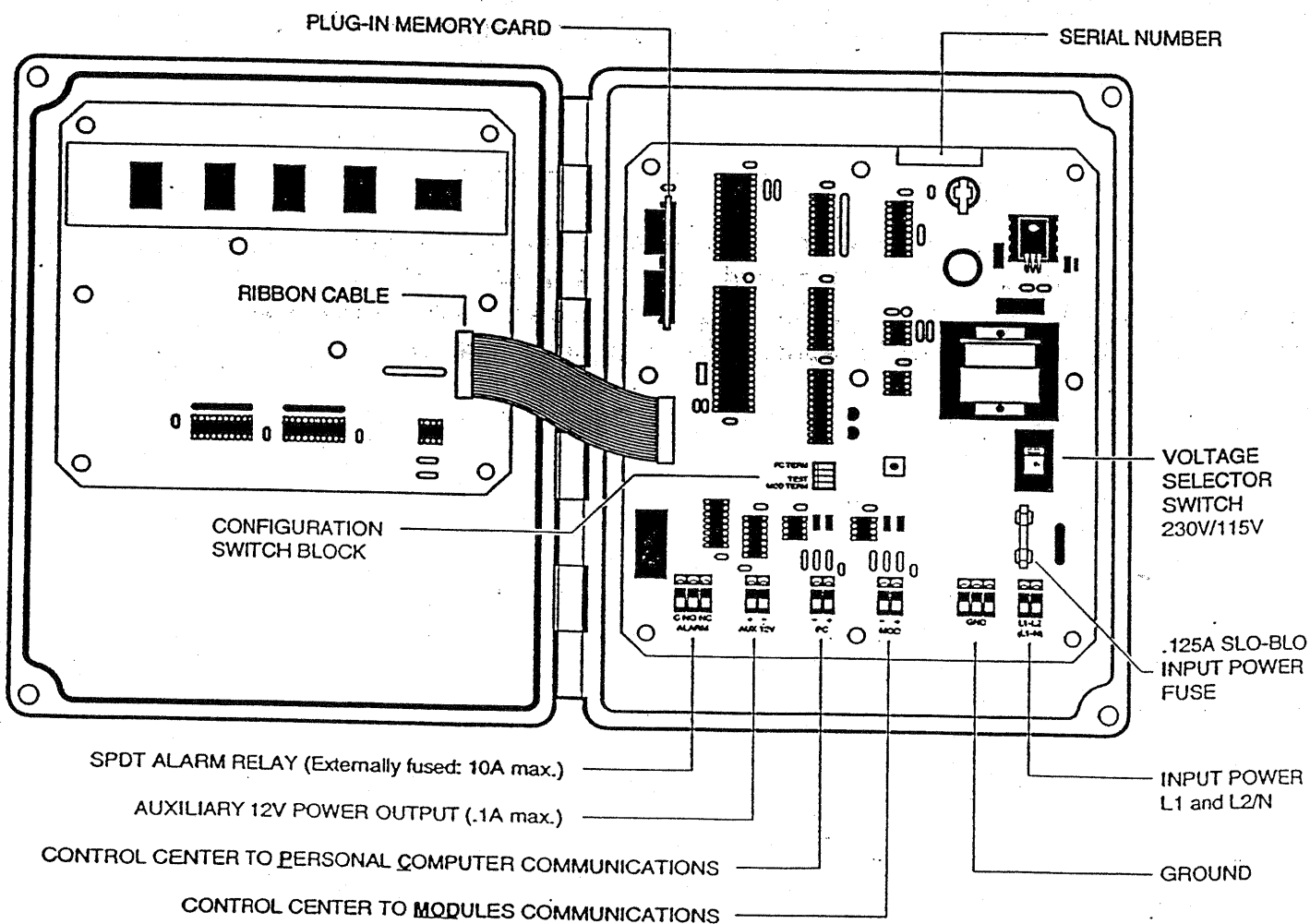
This section provides a detailed description of the Ventium Control Center and its associated modules and sensors.

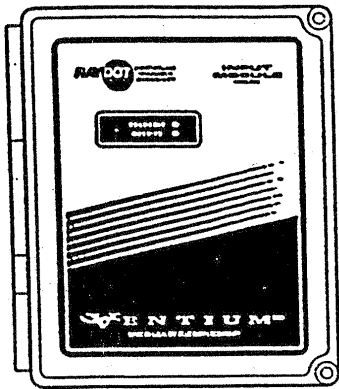


CONTROL CENTER

The control center is the "brain" of the Ventium system. One control center can support up to 16 modules. The control center sends/receives information to/from the modules using twisted pair wire connected to the MOD terminal block. A second pair of twisted wire connected to the PC terminal block allows one or more control center(s) to be connected to a Personal Computer. A PC connection requires either a Ventium PC/Modem Interface or a Ventium Modem Module.

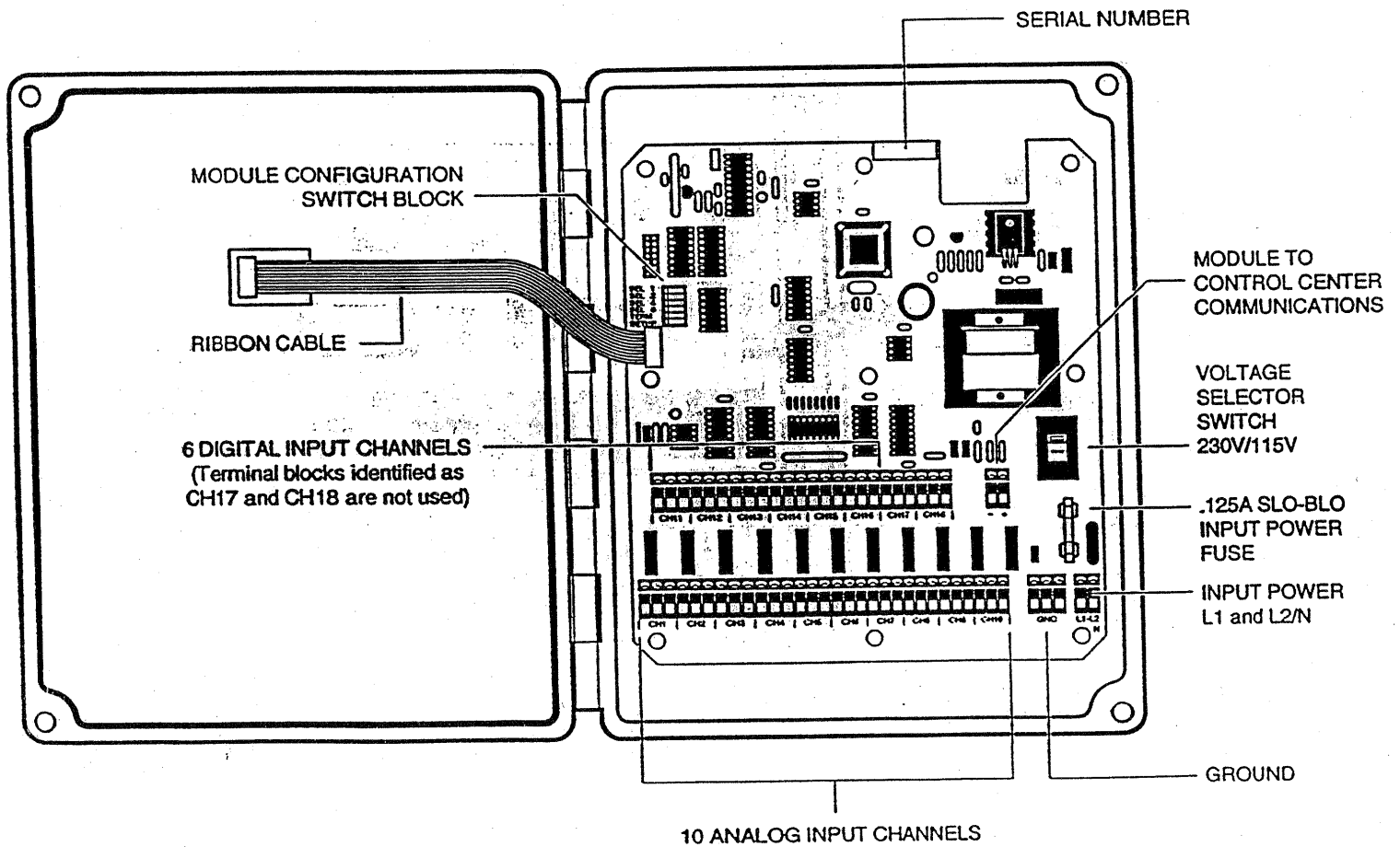
The control center also has screw terminals for power and an auxiliary alarm system.

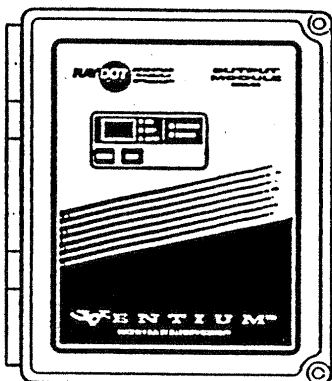




INPUT MODULE

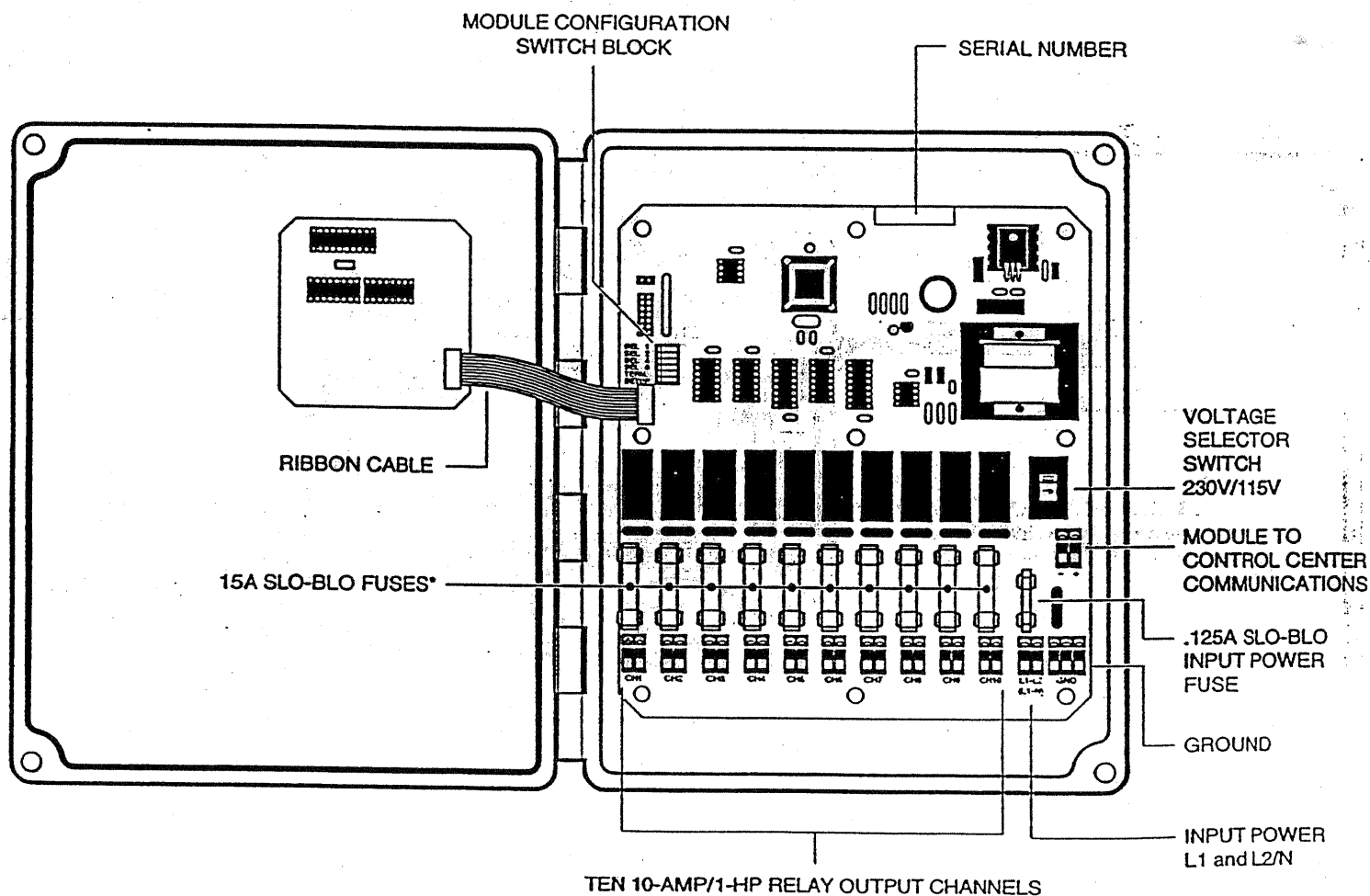
Input modules read signals from air, humidity, water, and feed sensors. On command, the module sends this information to the control center. 10 analog and 6 digital input channels are available.



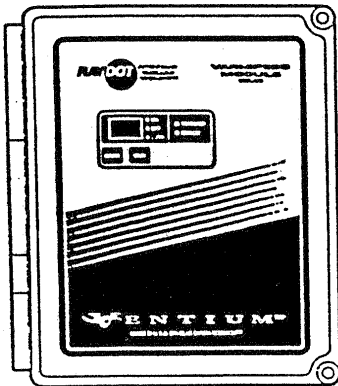


OUTPUT MODULE

Output modules receive commands from the control center over the module communications line and in turn, activate relays that turn ventilation equipment on or off. The ten output channels are rated at 10 amps/1HP each.

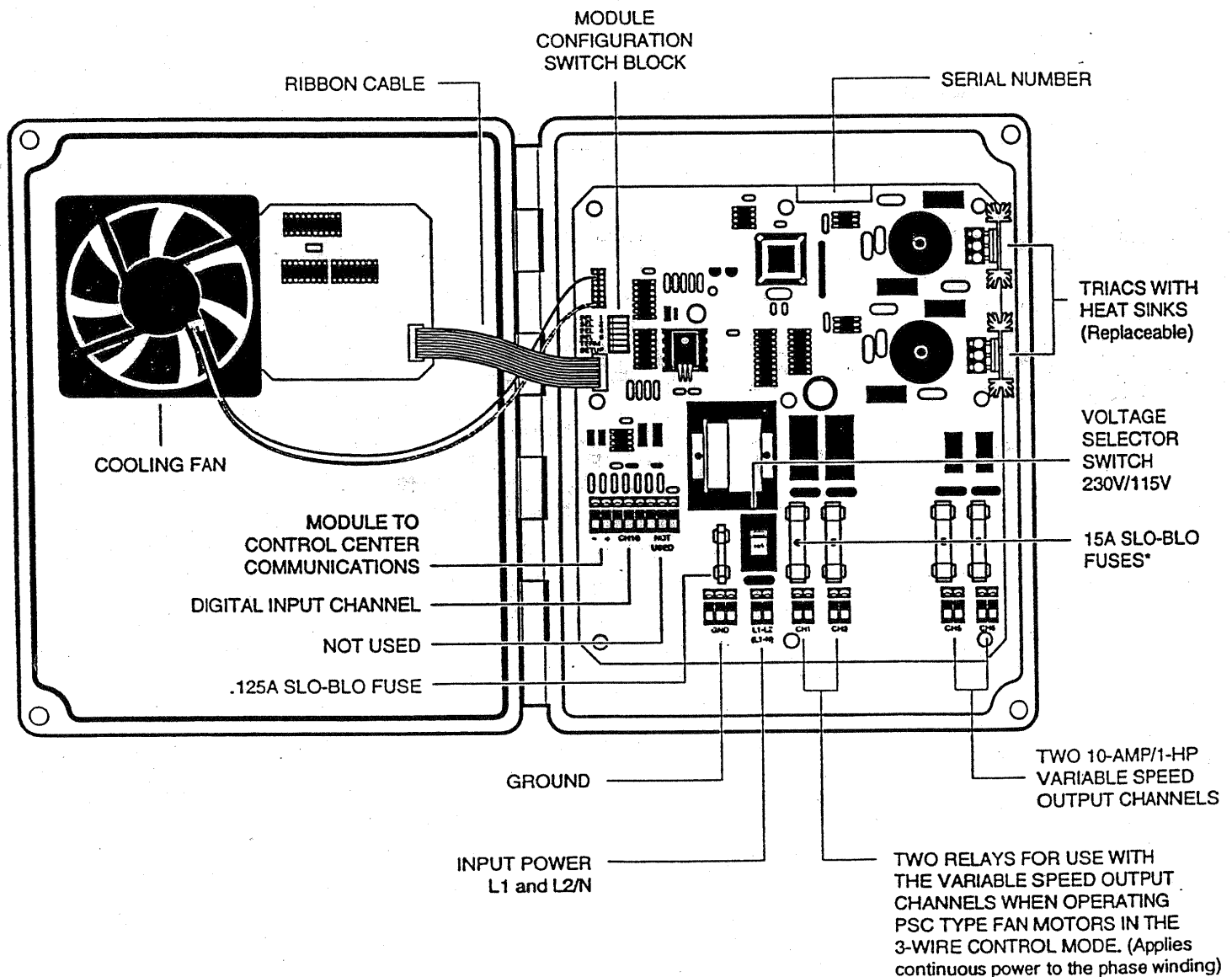


*NOTE: Some circuit boards may identify the output relay fuse size as 12A. The actual required fuse size, however, depends on the circuit breaker rating and the type of wire used. Modules are shipped from the factory with 15A Slo-Blo fuses which is the recommended size for an installation that uses a 20A breaker and 12 gauge wire.

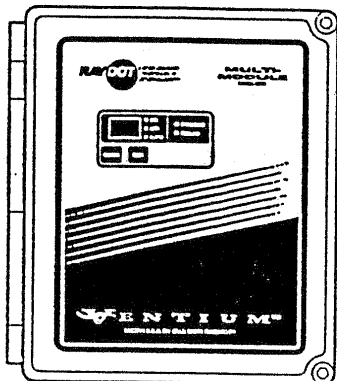


VARI-SPEED MODULE

Vari-speed modules receive commands from the control center over the module communications line and in turn, activate Triacs which control the amount of power applied to variable speed PSC type fan motors. An associated relay with each Triac may be used to apply continuous power to the phase winding (3-wire control mode). The two variable power Triac output channels and relays are rated at 10 amps/1HP each.

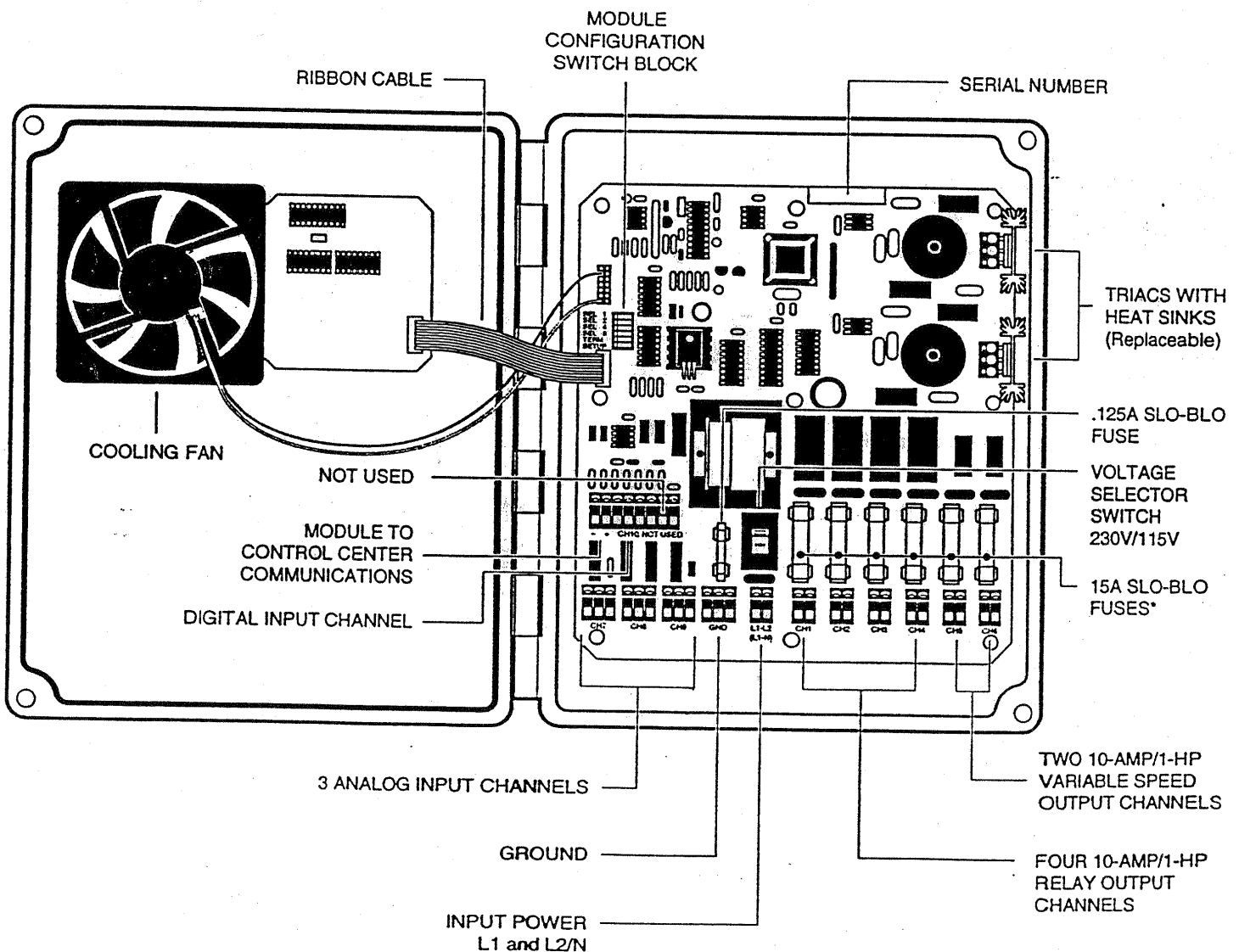


*NOTE: Some circuit boards may identify the output relay fuse size as 12A. The actual required fuse size, however, depends on the circuit breaker rating and the type of wire used. Modules are shipped from the factory with 15A Slo-Blo fuses which is the recommended size for an installation that uses a 20A breaker and 12 gauge wire.

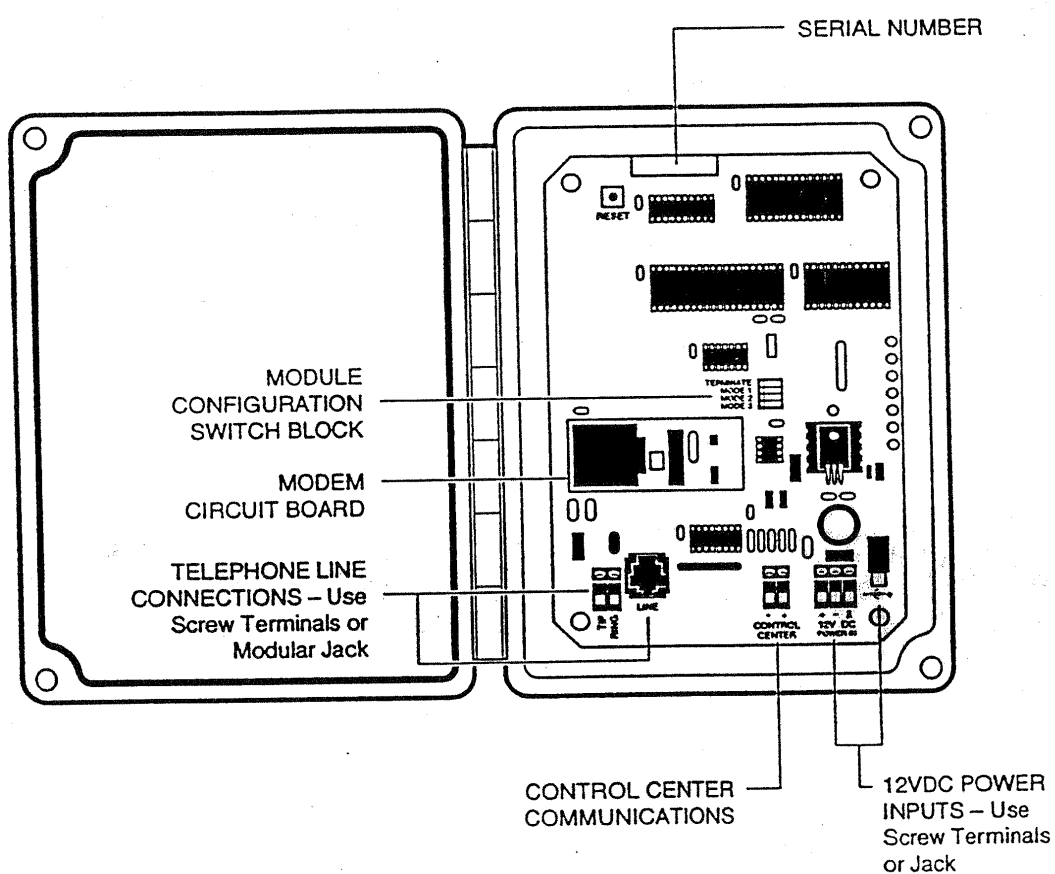


MULTI-MODULE

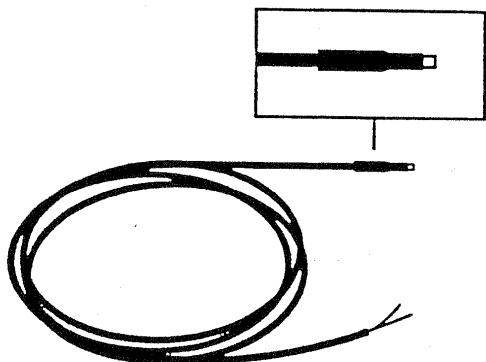
Multi-modules combine the functions of input and output into one module and communicate with the control center over the module communications line. They include three analog input channels, one digital input channel, four 10-amp/1HP relay output channels, and two 10-amp/1HP variable power Triac outputs.



*NOTE: Some circuit boards may identify the output relay fuse size as 12A. The actual required fuse size, however, depends on the circuit breaker rating and the type of wire used. Modules are shipped from the factory with 15A Slo-Blo fuses which is the recommended size for an installation that uses a 20A breaker and 12 gauge wire.



SENSORS

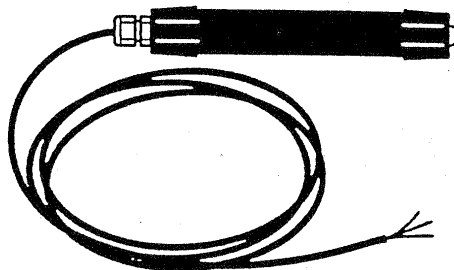


AIR SENSOR

Wire Color Coding:

Black – GND of analog input channel

Red – SIG of analog input channel



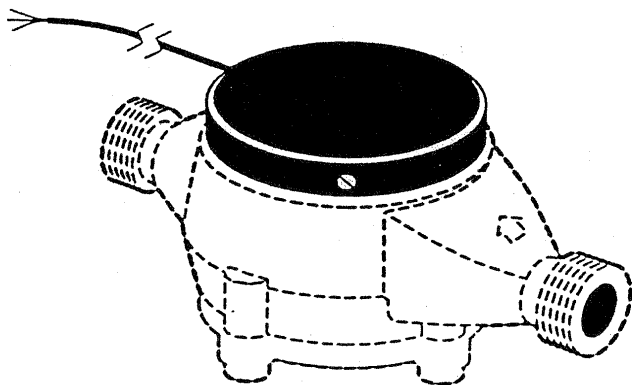
HUMIDITY SENSOR

Wire Color Coding:

Black – GND of analog input channel

Green – SIG of analog input channel

Red – 12v of analog input channel



Water

~~FEED~~ SENSOR

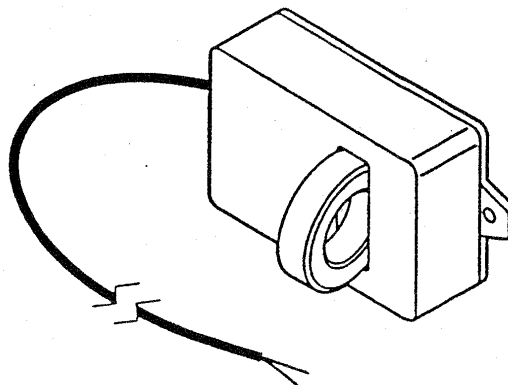
Compatible with Badger RCDL 25 flow meters. Consult factory for other compatible Badger models.

Wire Color Coding:

Black – GND of digital input channel

Green – SIG of digital input channel

Red – 12v of digital input channel



FEED SENSOR

Wire Color Coding:

Black – GND of analog input channel

Red – SIG of analog input channel

MOUNTING AND INSTALLATION GUIDELINES

Ventium should be installed in accordance with a professionally developed facilities plan. The plan should clearly indicate the quantity and location of all Ventium modules and sensors. It should also include the associated ventilation equipment, backup thermostats and auxiliary alarms. The following general guidelines apply to all installations.

PLACEMENT OF VENTIUM COMPONENTS

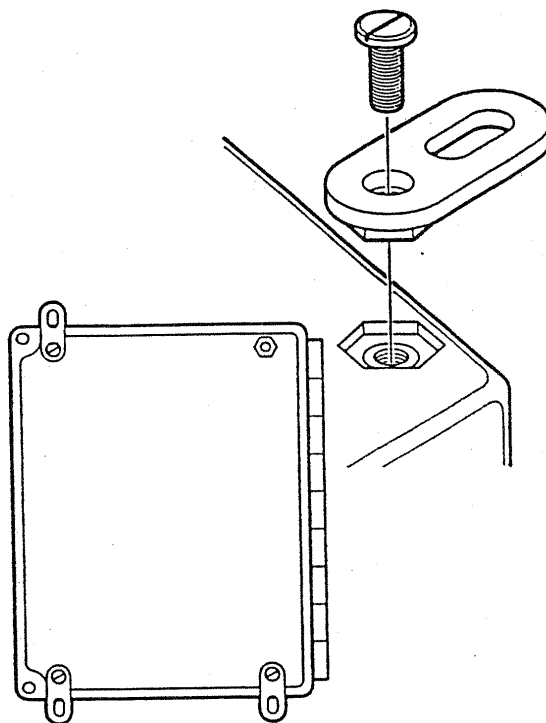
CONTROL CENTERS AND MODULES:

Control centers and modules may be grouped together at a central site or installed in separate buildings. The control center and modules can be separated by up to 1,000 feet with no loss of performance.

Enclosures must be mounted using the enclosed hardware. The mounting holes are on the back of the enclosure, external to the equipment cavity.

Enclosures must be mounted indoors.

Do not mount enclosures in direct sunlight or where the temperature will exceed 110°F or fall below 0°F. Keep away from motors and relays/contactors that switch high currents.

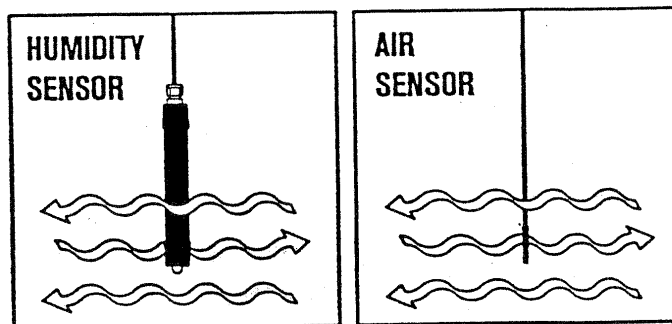


AIR AND HUMIDITY SENSORS:

Suspend air and humidity sensors from a roof member or ceiling to ensure free air flow.

Position sensors close to the animals, but beyond their reach.

Keep sensors away from direct sunlight, lights, heaters, power wiring, moving parts and the range of misters. Air sensors will be affected by nearby fans and heaters.

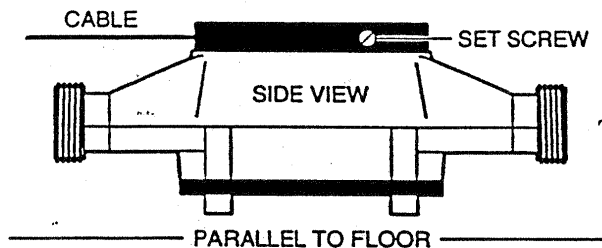


NOTE: All sensors should be covered when washing down a building.

MOUNTING AND INSTALLATION GUIDELINES

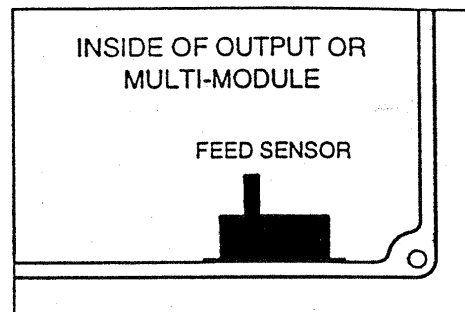
WATER FLOW METER:

The Badger flow meter is designed to be mounted as shown. Any other orientation may produce inaccurate readings or premature failure.



FEED FLOW SENSOR:

Typically, these sensors are mounted in a convenient location inside an output module where the wires to the feed auger drive motor(s) are easily accessible.



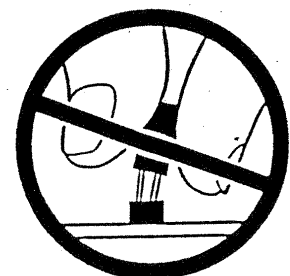
ENCLOSURE OPENINGS AND CONNECTIONS

Never run cables or conduit into the top of the Ventium enclosures. Before drilling any holes, check clearances to the circuit board. Removal of the circuit board is not recommended, but if it is required, proceed with caution! Static electricity can damage electronic components. Always touch something grounded before handling a circuit board.

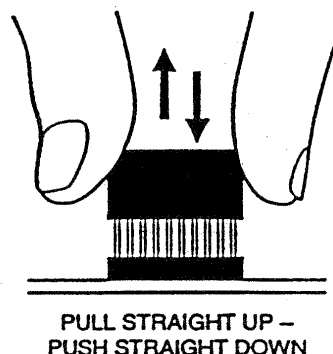
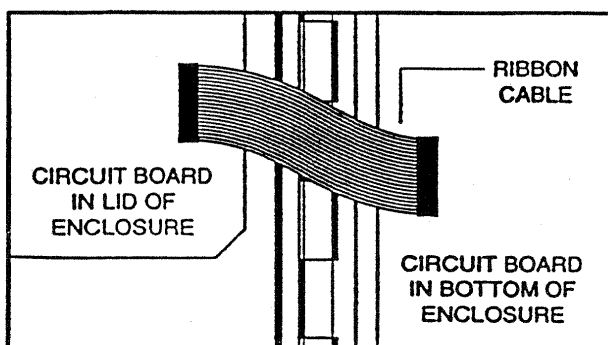
When connecting conduit to an enclosure, use only U.L. listed or recognized conduit hubs that have the same environmental type rating as the enclosure. Conduit hubs must be connected to the conduit before being connected to the enclosure.

Use liquid tight strain relief connectors for individual cables entering the enclosure.

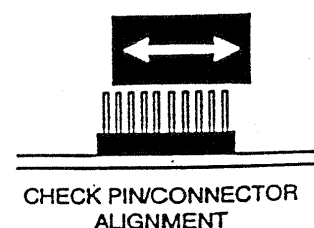
Seal any gaps or holes with an electrical grade silicone sealant.



REMOVAL AND REPLACEMENT OF RIBBON CABLE



DO NOT BEND CONNECTOR



MOUNTING AND INSTALLATION GUIDELINES

WIRING AND CONNECTIONS

WARNING: To prevent personal injury or damage to electronic components, **DO NOT** connect or disconnect wires while power is applied. Warranty does not cover damage due to improper handling.

Follow wire recommendations for each type of device to ensure proper operation. To connect wires to the Ventium circuit boards, strip back 1/4" of insulation and insert leads into the appropriate terminal block. If more than one wire is attached to the same terminal, twist the leads together before inserting. Tighten terminal screw, using care not to over-torque, then tug on the wire(s) to ensure it is secure.

If sensor and communication cables are run parallel to power lines, be sure to maintain a separation of at least 12".

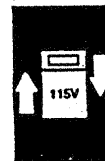
POWER, OUTPUT RELAYS AND VARIABLE SPEED OUTPUTS (TRIACS):

POWER WIRING: Use UL listed 12 or 14 gauge **stranded** wire rated for the application.

CIRCUIT BREAKERS: When possible, the Ventium control center and all modules should be wired to a single independent circuit breaker. Each Ventium output channel should also have its own breaker. This ensures that if one breaker trips, the rest of the system will be unaffected.

LINE POWER CONNECTIONS: Connect power to the control center and module L1, L2 and G (ground) terminals. A good ground connection is very important.

POWER SELECTOR SWITCH: The Ventium system can be powered with 115V or 230V. Locate the power selector switch inside each enclosure and set it appropriately. Note: This switch only selects the Ventium power supply and does not determine the operating voltage for output devices.



OUTPUT RATING: Relays and Triacs are designed to switch 115V or 230V circuits at up to 10 Amps/1HP. All channels are independent and can be wired to any combination of 115/230V loads.

TRIAC POWER: Ventium Multi- and Vari-Modules can run variable speed fans in either a two wire or three wire control mode. Wiring examples are illustrated on the following pages. Note that in the three wire mode, the Multi- or Vari-Module must be powered by the same pair of wires (phase) used to power the fans.

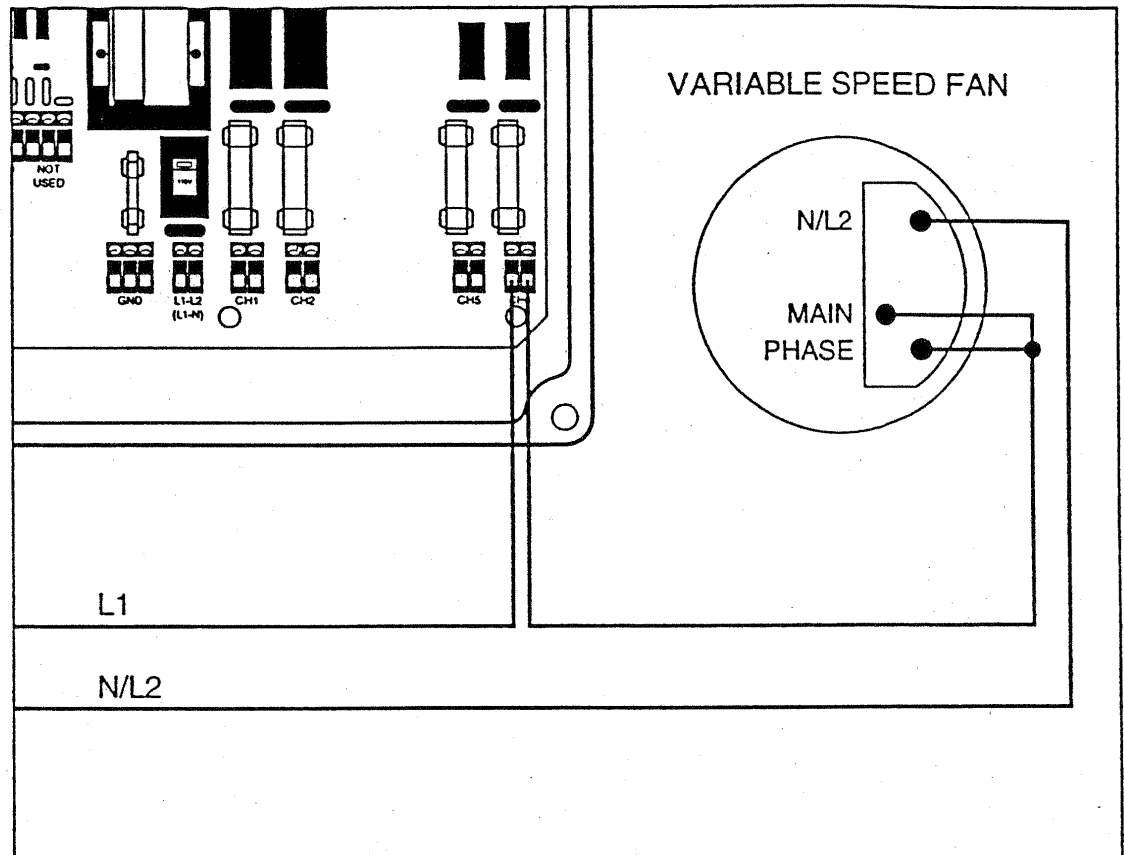
MOTOR LOADS: Must incorporate either a thermal overload protection sensing device or be designed as an impedance protected type motor.

MOUNTING AND INSTALLATION GUIDELINES

WIRING VARIABLE SPEED FANS WITH 115VAC OR 230VAC LINE POWER

2-WIRE CONTROL METHOD

Applicable to
Vari-Modules
or Multi-Modules

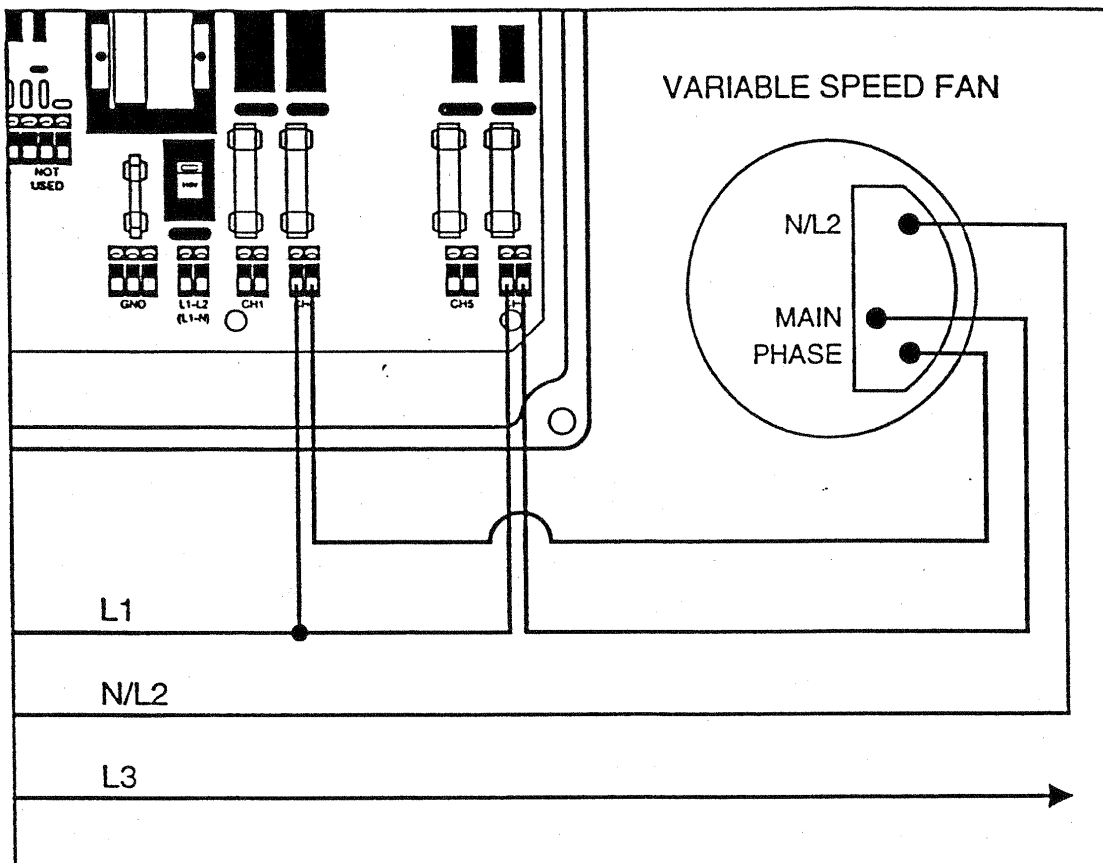


Motors must incorporate a thermal overload protection sensing device or be impedance protected

MOUNTING AND INSTALLATION GUIDELINES

CORRECT
WIRING FOR
3-PHASE,
3-WIRE
CONTROL
MODE
USING VENTUM
ARI-MODULE

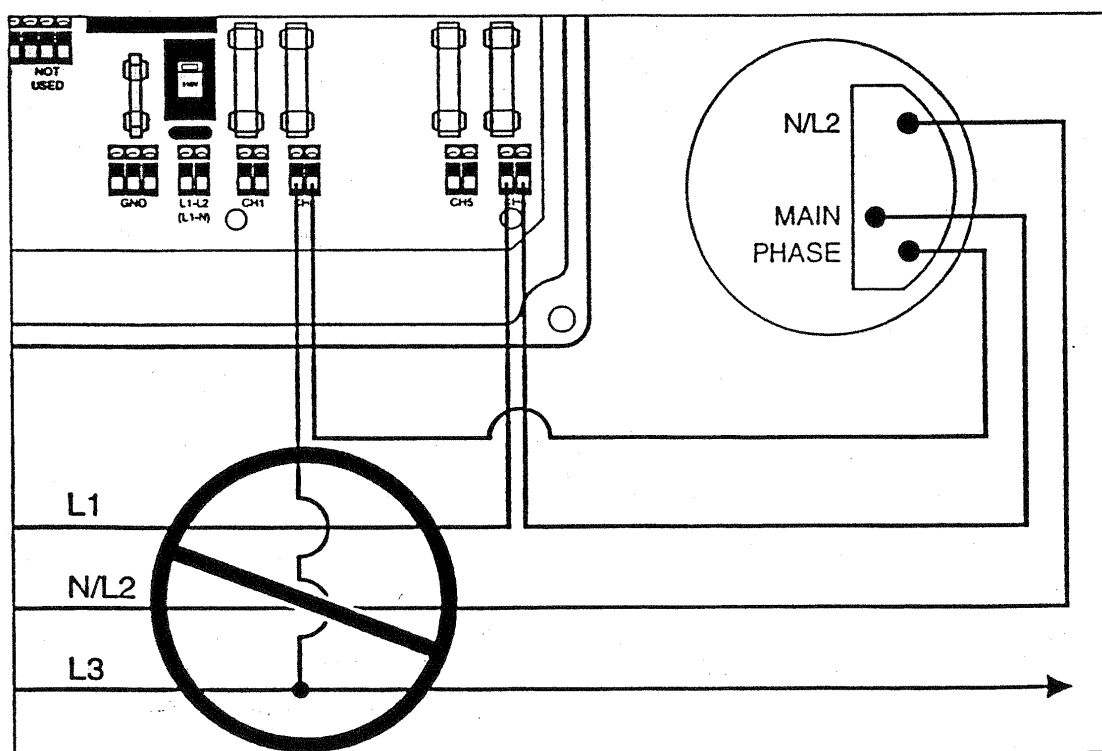
Ventum
ari-Module
and fan are
powered
from same
phase.



Motors must incorporate a thermal overload protection sensing device or be impedance protected

INCORRECT
WIRING FOR
3-PHASE,
3-WIRE
CONTROL
MODE

If module and fan
are powered from
different phases,
the fan may not
operate or may
run erratically.



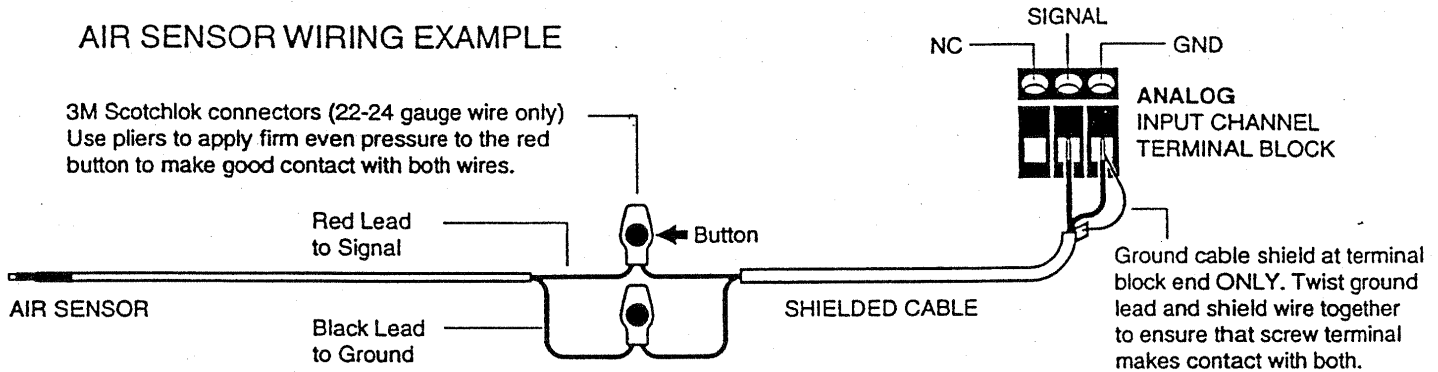
MOUNTING AND INSTALLATION GUIDELINES

SENSORS:

Use shielded wire (22 or 24 gauge) for connecting sensors and remote switch inputs. Wire may be stranded or solid, straight or twisted pair. 3M Scotchlok connectors provide a quick way to make low-resistance connections that are weather sealed and corrosion resistant.

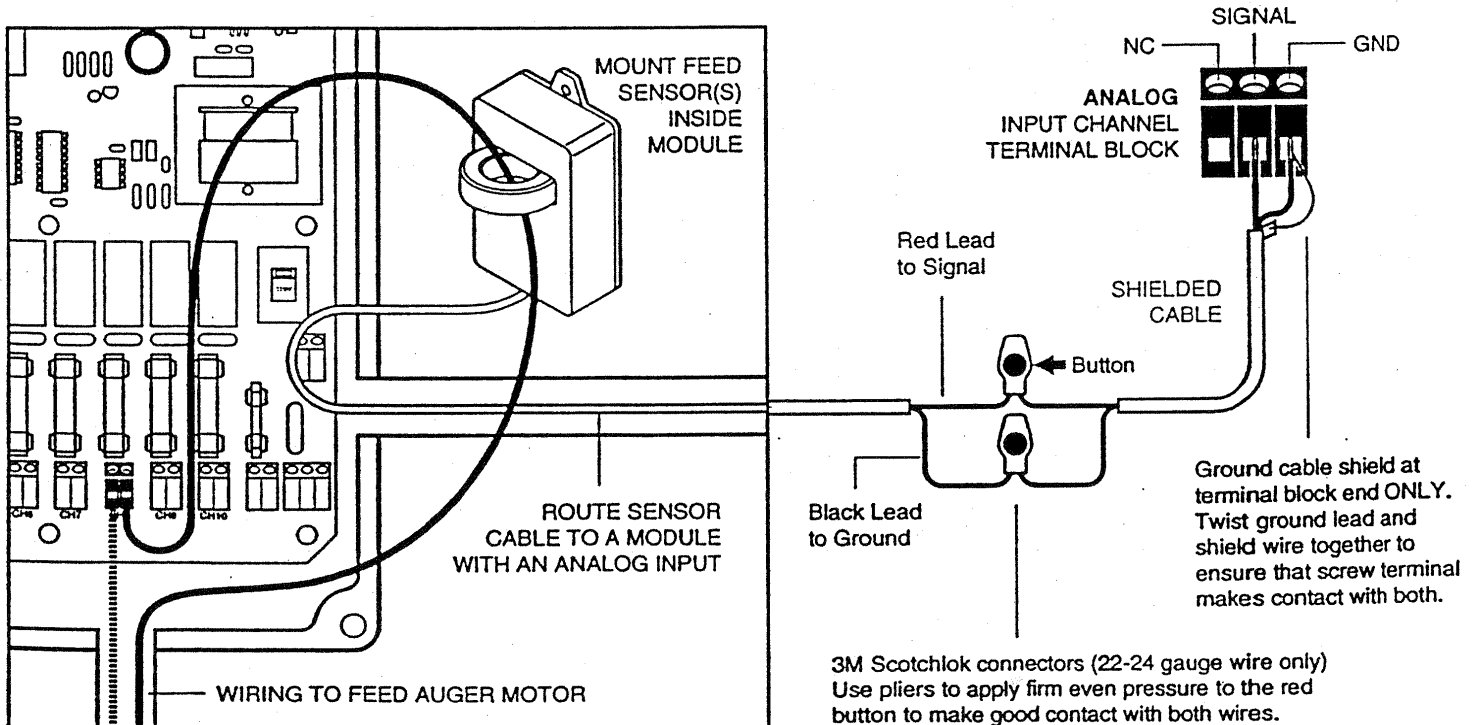
Air, humidity and feed sensors must be connected to analog inputs. The water sensor must be connected to a digital input.

AIR SENSOR WIRING EXAMPLE



FEED SENSOR WIRING EXAMPLE

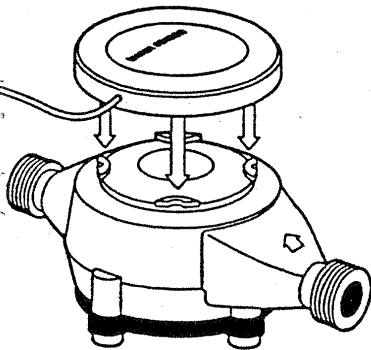
Feed sensors measure the flow of current in the wire that powers the feed system motors. One sensor is required for each independent feed system to be monitored. The switched leg of the wiring circuit is passed through the coil of the feed sensor. Motors must incorporate a thermal overload protection sensing device or be impedance protected



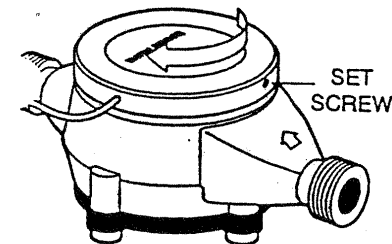
MOUNTING AND INSTALLATION GUIDELINES

WATER SENSOR WIRING EXAMPLE

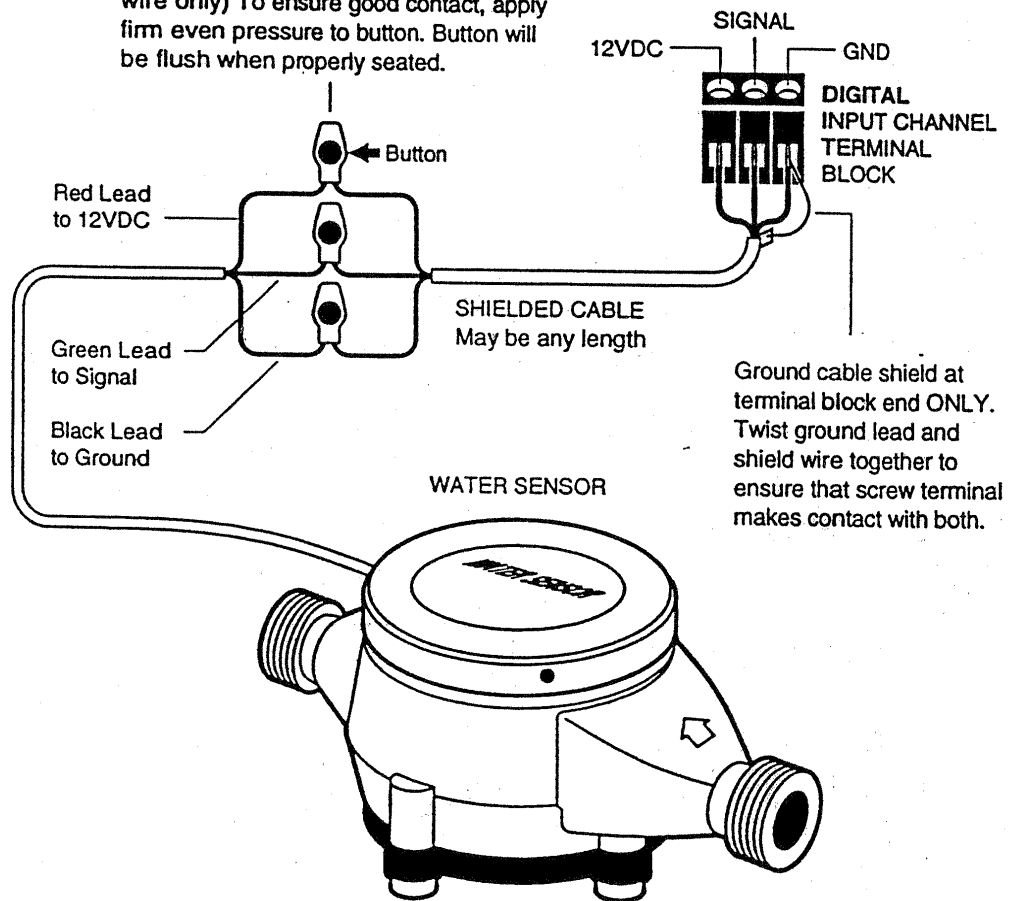
Align sensor with tabs on flow meter.



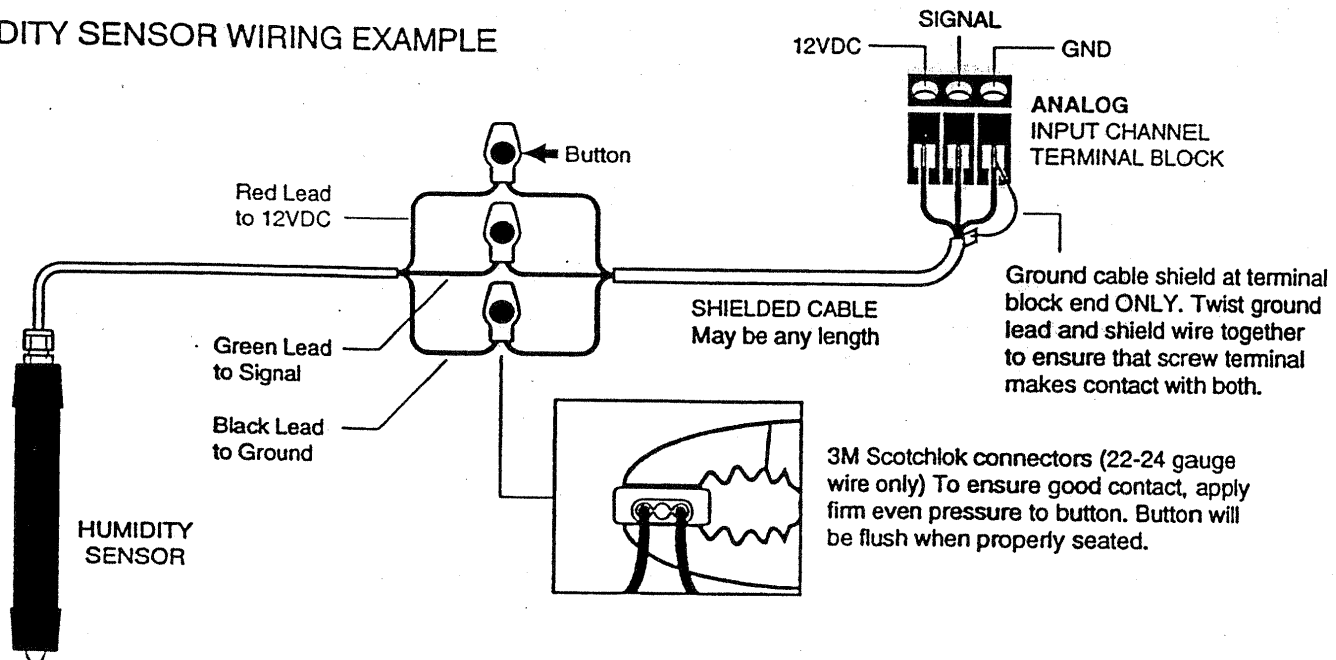
Rotate sensor 1/4 turn to engage tabs and tighten set screw.



3M Scotchlok connectors (22-24 gauge wire only) To ensure good contact, apply firm even pressure to button. Button will be flush when properly seated.



HUMIDITY SENSOR WIRING EXAMPLE



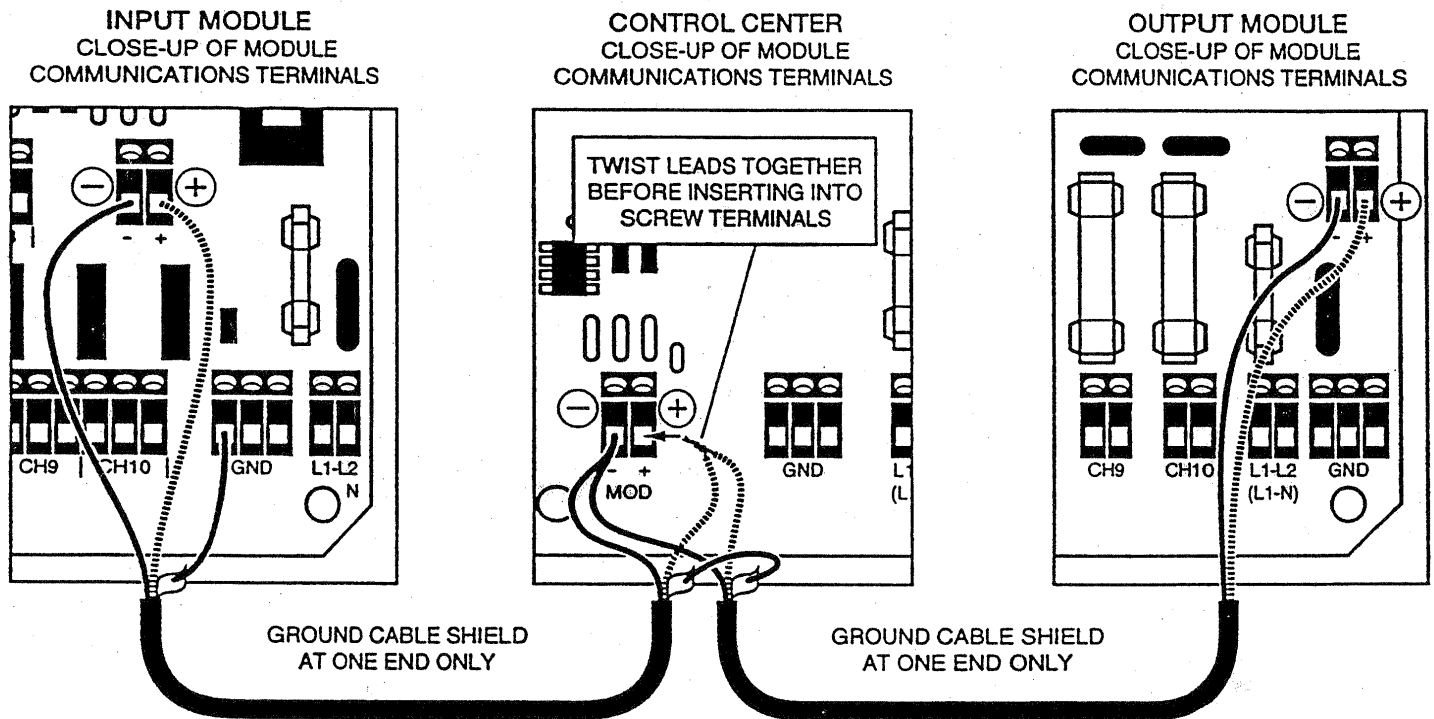
MOUNTING AND INSTALLATION GUIDELINES

COMMUNICATIONS:

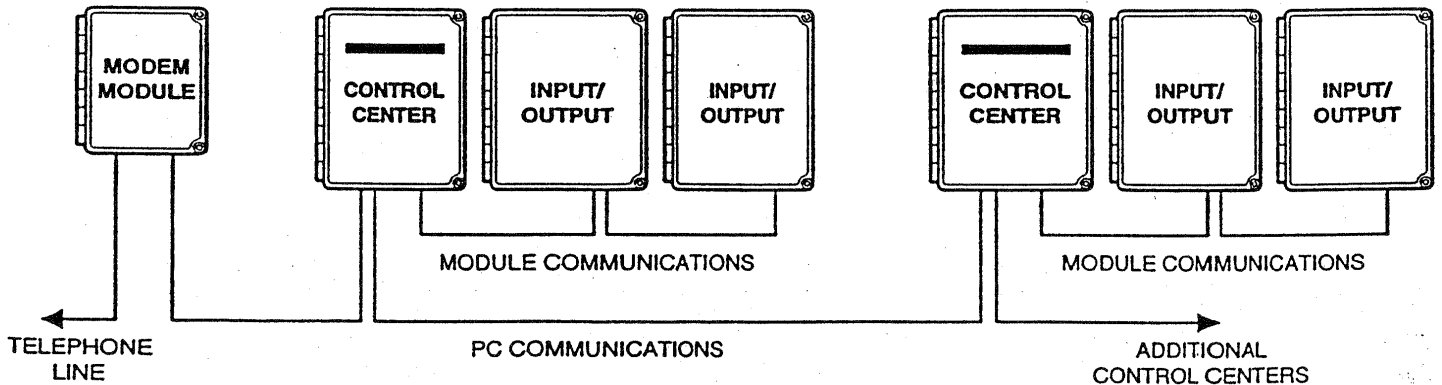
Shielded twisted pair (22 or 24 gauge) cable should be used between buildings to provide greater noise rejection.

DAISY-CHAINING: Refer to the examples below for wiring the module and the PC communications lines. Always connect "+" to "+" and "-" to "-". Note that the cable shield is grounded only at one end and that the daisy-chain does not form a closed loop. Units on each end of the daisy-chain will have a single cable entering the enclosure. All other units will have one incoming and one outgoing cable.

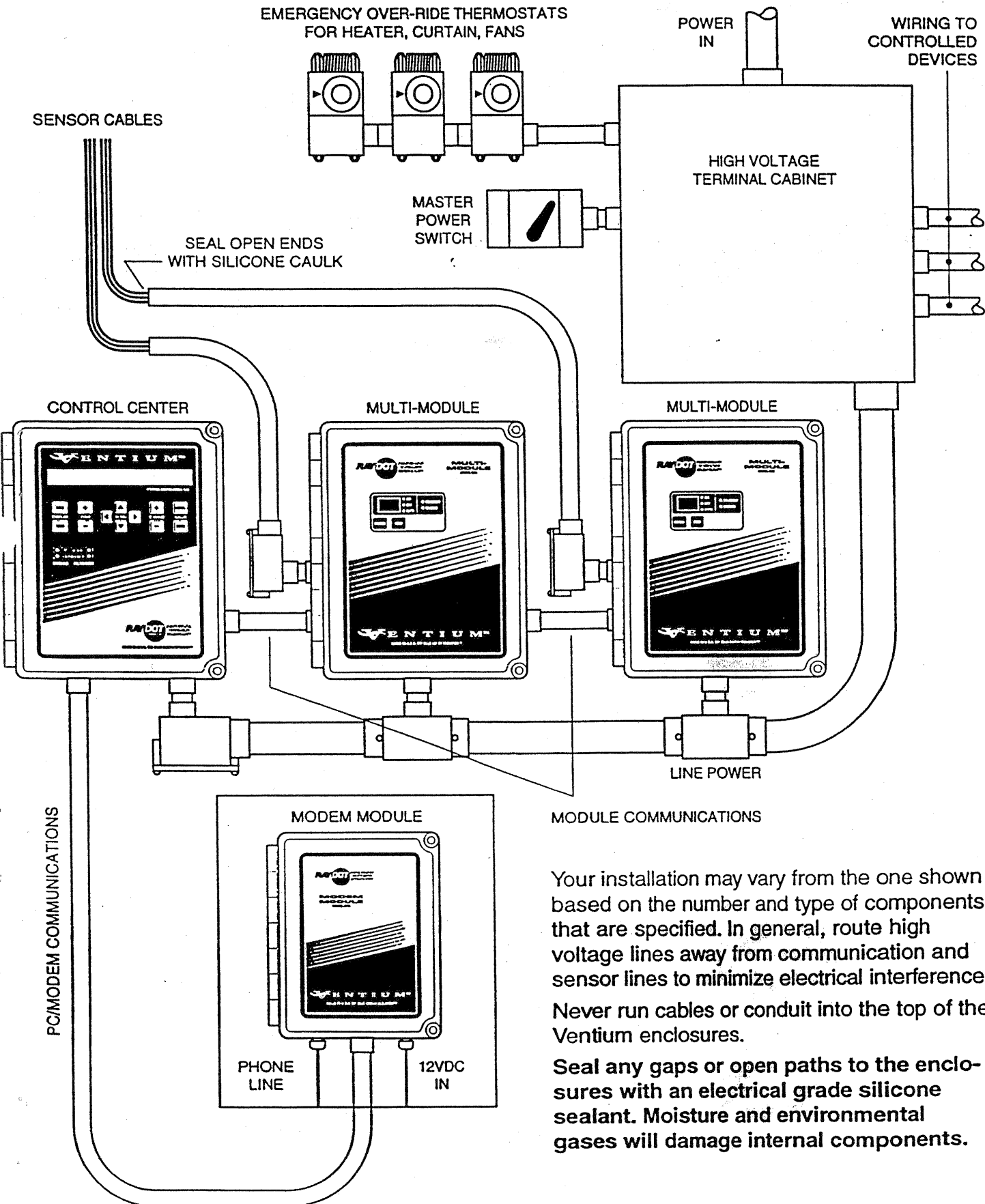
RECOMMENDATION: When communication lines are run between buildings, trench-in 3/4" PVC conduit to provide cable protection and upgrade capability.



EXAMPLE OF COMMUNICATIONS CHAIN FOR MULTIPLE CONTROL CENTERS



SYSTEM INSTALLATION EXAMPLE



Your installation may vary from the one shown based on the number and type of components that are specified. In general, route high voltage lines away from communication and sensor lines to minimize electrical interference. Never run cables or conduit into the top of the Vention enclosures.

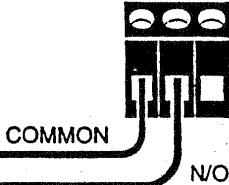
Seal any gaps or open paths to the enclosures with an electrical grade silicone sealant. Moisture and environmental gases will damage internal components.

BACKUP ALARM SYSTEM

ALARM RELAY WIRING OPTIONS

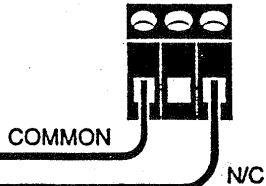
NO =
normal
during
alarm
conditions

NORMALLY OPEN
Will have continuity
during alarm condition

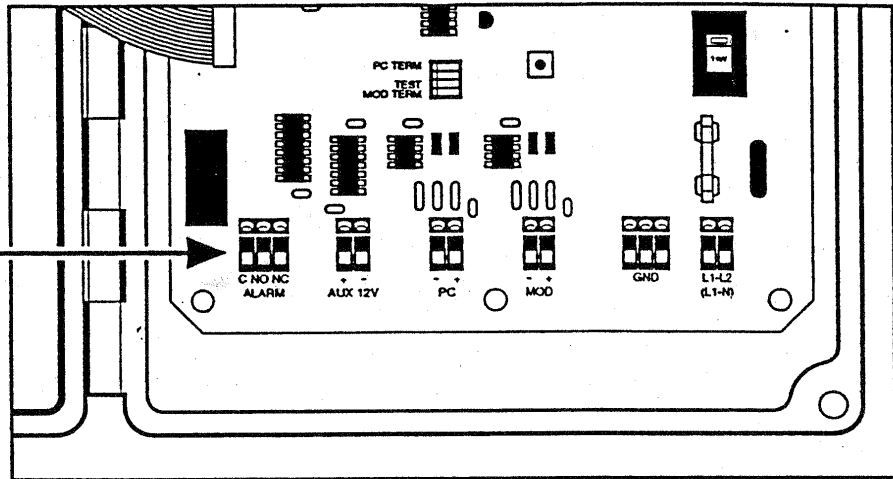


C =
closed
during
normal
conditions

NORMALLY CLOSED
Will have continuity when
there is no alarm condition

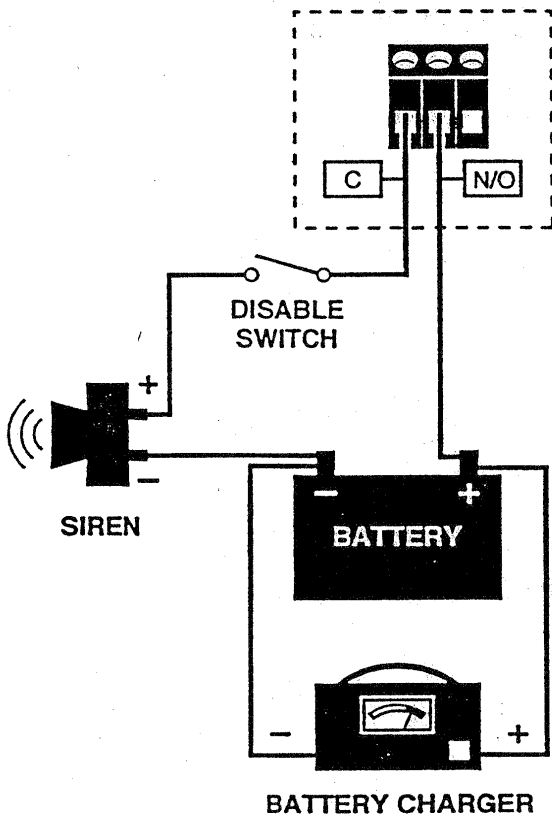


CONTROL CENTER

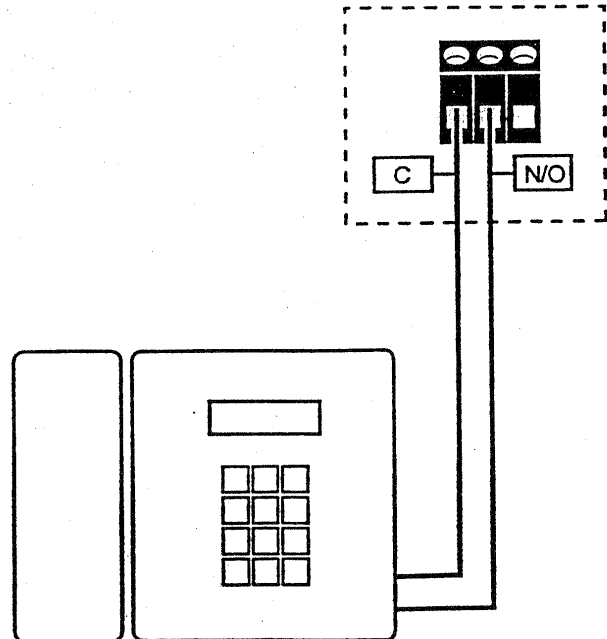


ALARM RELAY SPECIFICATIONS: SPDT 10A max.
(115/230V Alarm Devices should be externally fused)

EXAMPLE 1 12 VOLT SIREN



EXAMPLE 2 AUTO-DIALER



Various makes of dialers are designed to use either normally open or normally closed contacts. Consult manufacturer's instructions for specific information and power requirements.

SETTING MODULE CONFIGURATION SWITCH BLOCKS

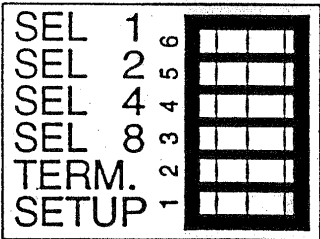
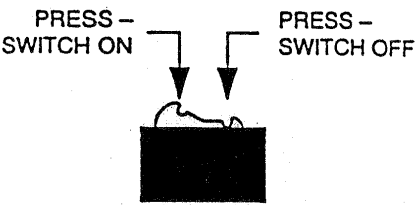
VENTIUM MODULES

Each Venti module, i.e., input module, output module, etc., has a block of rocker switches located on the main circuit board. These switches must be set correctly before powering-up the system.

SEL SWITCHES – The first four switches, SEL 1, 2, 4, 8, are used to assign an address number to the module (1 through 16). 16 is the maximum number of modules that can be connected to one control center. Each module must be given a number that is different from any other module. The control center uses these address numbers for sending control commands to specific modules.

The table below shows the switch settings for each possible address number. **EXAMPLE:** To assign an address number of (4), the switches would be set as follows : SEL 1 - ON, SEL 2 - ON, SEL 4 - OFF, SEL 8 - OFF.

END VIEW OF SWITCH BLOCK



TOP VIEW OF SWITCH BLOCK

SWITCH POSITION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SEL 1	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON
SEL 2	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON
SEL 4	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	ON	ON
SEL 8	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON	ON	ON	ON

Record the assigned module address numbers in a place that is readily available to the operator.

TERM. SWITCH – When the "TERM." (terminate) switch is in the on position, a resistor is connected across the "Control Center to Modules Communications" line. This prevents communication errors that may result from signals reflecting back on the line. **ONLY** the module at the beginning and end of a communications daisy-chain should have its "TERM." switch turned on.

SETUP SWITCH – The "SETUP" switch disables the periodic check for a valid command from the control center. The electrician/installer can then operate individual system components without a control center powered up. With this switch in the off (normal) position, the module will turn all of its outputs off should it fail to receive at least one valid command from the control center every 10 minutes.

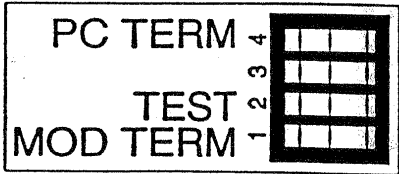
CONTROL CENTER

The control center configuration switch block has four rocker switches – only three are used.

The "TEST" switch is for factory use only. It should be set to off.

The "MOD TERM" works the same as the "TERM." switch described in the section above. If the control center is at the beginning or end of a communications daisy-chain, this switch should be set to on.

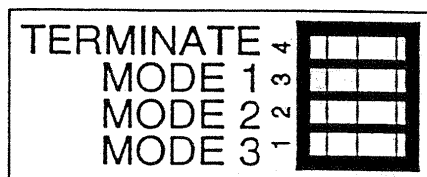
The "PC TERM" also works like the "TERM" and "MOD TERM" switches. Set this switch to on if the control center is at the beginning or end of the "Control Center to Personal Computer Communications" line.



SETTING MODULE CONFIGURATION SWITCH BLOCKS

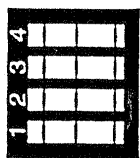
MODEM MODULE

The modem module's configuration switch block is used to set the communications termination status and the number of rings that will be allowed before the modem responds.



TOP VIEW
OF
SWITCH
BLOCK

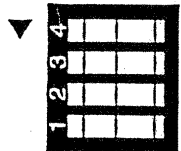
ON OFF



STANDARD CONFIGURATION: All switches in the off position.

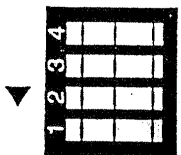
The "Control Center to Personal Computer Communications" line is not terminated at the modem module.

The modem will answer after the first ring.



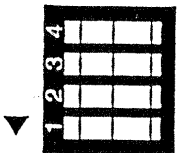
COMMUNICATIONS TERMINATION

If the modem module is at the beginning or end of the "Control Center to Personal Computer Communications" daisy-chain, set the top switch (4) to the on position.



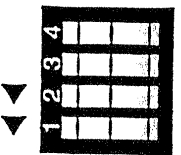
3 RINGS

To have the modem answer after three rings, leave switch no. 1 (bottom) in the off position, and place switch no. 2 (second from bottom) in the on position.



4 RINGS

To have the modem answer after four rings, place switch no. 1 (bottom) in the on position and leave switch no. 2 (second from bottom) in the off position.



5 RINGS

To have the modem answer after five rings, place both switch no. 1 and no. 2 in the on position (bottom two switches).

PRE-START-UP CHECKLIST

POWER WIRING:

Inspect all power wiring to the control center, modules, and ventilation equipment. Confirm that all terminal block connections are properly tightened. Loose connections can get hot, possibly melting the terminal block insulators, and result in a system failure. Verify that all 115V/230V power selector switches are properly set.

COMMUNICATION WIRING:

Inspect terminal block connections to verify that all connections are properly tightened and wired: "+" to "+" and "-" to "-". IMPORTANT: Confirm that a good earth ground (water pipe or ground rod) is provided to each module and control center.

MODULE ADDRESSING:

Ensure that the 6 position configuration switch is correctly set for each Ventium module.

SENSOR WIRING:

Inspect sensor cable connections, confirming that the shields are connected to the ground terminals. All terminal block connections must be properly tightened. Loose connections can cause erratic readings. AIR FLOW SENSORS SHOULD BE LOCATED AWAY FROM HEAT SOURCES, AIR INLETS, INCANDESCENT LIGHTS, DIRECT SUNLIGHT AND MISTERS.

SENSOR LAYOUT:

Record on paper the air sensor positions, wire length and gauge, and calibration value. It is recommended that you record this information along with the sensor number and module/channel on a barn layout diagram as this information will be used for sensor calibration.

EQUIPMENT OPERATIONAL TESTING

ENVIRONMENTAL EQUIPMENT

All equipment that is to be controlled by the Ventium system should be independently checked for proper operation before putting the system into service. Run temporary power to each device and allow the equipment to run long enough to confirm that it is fully functional and properly adjusted where applicable. Typical equipment to be tested includes, but is not limited to, curtains, chimneys, fans, heaters, misters, feed lines and scrapers.

BACKUP SYSTEM & ALARM

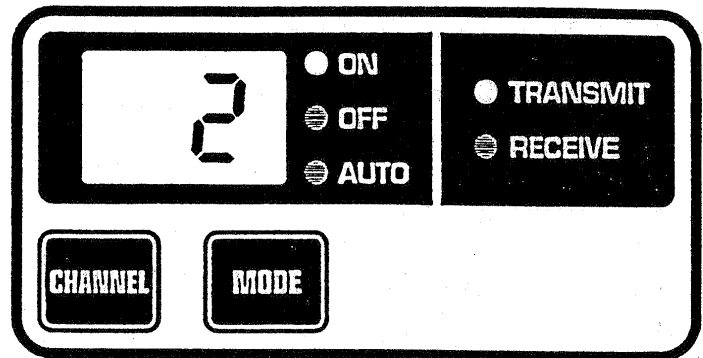
Override thermostats for proper operation of heaters and curtains.

Check operation of alarm system.

VENTIUM OPERATIONAL TESTING

MODULE USER PANEL

All Ventium modules that have output channels also have a user panel on the front. During testing, this panel is used to override the control center and check that relays and variable speed outputs are functioning properly. The user panel makes it possible to manually operate each piece of equipment.



NOTES:

- 1) The Ventium control center and input module do not have to be operational for this test.
- 2) The status of the transmit and receive lights can be ignored, provided that both are not on at the same time.
- 3) If a device such as a curtain or chimney is already fully opened, the channel controlling the closing operation should be checked first.

WARNING:

Shut off both the open and close channels for a curtain or chimney before attempting manual operation. Never try to turn on the open and close channels (relays) for a curtain or chimney at the same time since equipment damage or a blown fuse may result.

TEST PROCEDURE

When the Ventium control center is turned on, or when the module is reset,* a diagnostic self-test is performed and a "0" will be displayed in the user panel if the test is successful. The CHANNEL key and the MODE key are then used to individually test each output channel and the device connected to it.

1. Confirm that the LED channel readout is displaying a "0."
2. Press the "CHANNEL" key until the desired output channel number is displayed.
3. Press the "MODE" key until the "ON" indicator is lit.
4. Leave the channel on long enough to confirm proper operation of the controlled device.
5. Press the "MODE" key until the "OFF" indicator is lit.
6. Repeat steps 2 – 5 for all channels to be checked.

* Modules can be reset with the reset switch located inside the Ventium control center or by pressing the hidden reset key that is located under the red "DOT" in the RayDot logo that appears on the front of the output, vari-speed and multi-module enclosures.

IMPORTANT: Be sure to return all channels to auto when equipment testing is finished. Channels will also return to the auto mode whenever power is cycled off and on or when the reset switch is pressed.

UPGRADING MEMORY

MEMORY CARD

The control center has a memory card socket located at the upper left of the main circuit board. The memory card is a small plug-in circuit board that contains the system's operating software. It also stores operational settings and recorded historical data. Program upgrades are readily made by plugging in a new memory card.

NEW INSTALLATIONS

Ensure that power is turned off.

If the control center has never been put into service, simply unplug the standard memory card and plug in the new upgrade as shown. Match the key on the card base to the slot on the shroud that surrounds the circuit board connector. Touch something grounded before making contact with the circuit board.

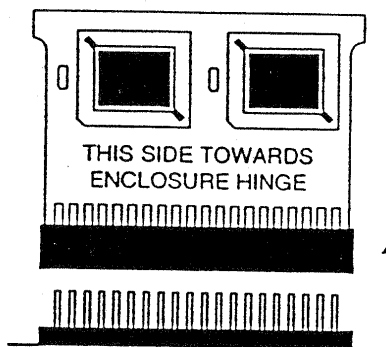
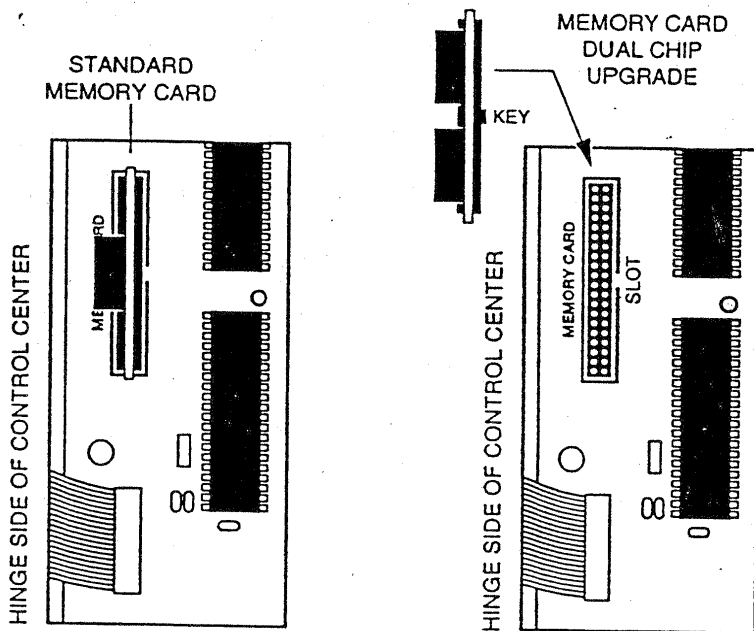
EXISTING INSTALLATIONS

Before installing the memory card upgrade, crucial information that is stored in the existing memory chip must be transferred to the control center's volatile (power dependent) memory. This is done with the following procedure:

1. Press the "Cancel" button 3 times.
2. Press the down arrow "▼" once to bring up the Revision/Date/Time menu.
3. Press the "Enter" button once.
4. Turn off power to the system.
5. Remove the old card and plug in the new upgrade card. Touch something grounded before making contact with the circuit board.
6. Turn the power source back on for a minimum of 60 seconds. The information from the old memory chip will automatically be loaded into the chips on the new memory card.
7. Verify that operating parameters and device setup information properly transferred.

IMPORTANT: Once power is turned off in Step 4, you have 15 minutes to complete Steps 5 and 6. If power is not restored within this time, the operational and historic information will not be transferred to the new memory card.

CLOSE UP SECTION OF BOTTOM CIRCUIT BOARD – TOP VIEW



SIDE VIEW OF MEMORY CARD UPGRADE AND CIRCUIT BOARD CONNECTOR

To remove or install memory card – pull straight up, push straight down

NOTES

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.



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Mankato, Minnesota