

# VendingMiser®

## VM180 / VM181 EZ Installation Instructions

VendingMiser® is designed to operate as an intelligent power controller for cold product vending machines. Note that VendingMiser may not be used on any vending machine which contains perishable products.

### General Theory of Operation

Using a Passive Infrared (PIR) occupancy sensor, VendingMiser will automatically shut down the controlled vending machine when the area around it has been vacant for 15 minutes. However, VendingMiser will periodically re-power the machine automatically to ensure that the vended product stays cold. In addition, VendingMiser contains a current sensor which determines if the vending machine's compressor is operating and will delay power-down of the vending machine until the compressor has completed its cooling cycle.

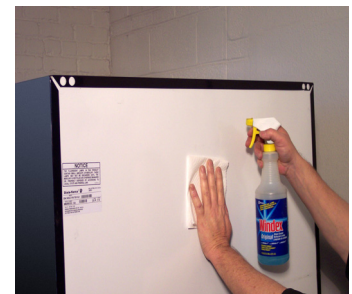
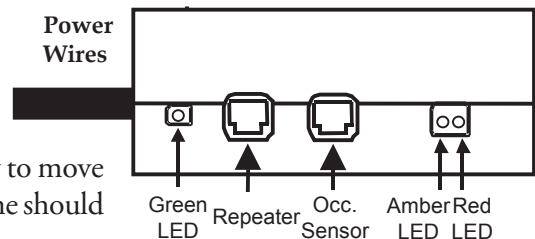
To install the VendingMiser, follow these simple steps:

### Prepare For Installation

1. Unplug the vending machine from the wall outlet. If it is necessary to move the machine, be careful as it can be heavy. Note-Each vending machine should remain on the same outlet/circuit breaker at the end of installation.
2. Remove ALL items from top of the vending machine. Using a clean cloth, carefully wipe the area as shown where the VendingMiser will be attached. Ensure the area is dry when cleaning is complete. The surface temperature of the back of the vending machine should be above 65F to ensure the Velcro adhesive adheres properly to the machine.

### Install The VendingMiser

3. The VendingMiser will be placed on top of rear of the vending machine as shown below for each model. Carefully remove the white plastic material covering the adhesive backing on the Velcro. Be very careful not to contact the exposed Velcro adhesive prematurely to the machine back, as it is very difficult to remove. First place the VendingMiser on top of the vending machine without the Velcro adhesive touching the machine back, then slide the VendingMiser forward so that the adhesive touches the rear of the machine in your intended placement location. Ensure that the phone cord to the sensor is not caught under the Velcro, but remains free behind the VendingMiser mounting plate. Press firmly to ensure good contact.



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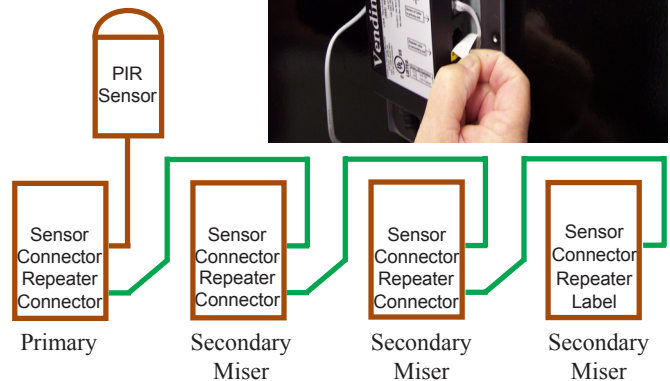
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## VM180 / VM181 EZ Installation Instructions (cont'd.)

- If a Secondary VendingMiser is being installed, the weatherproof cover on the Primary and any Secondary unit upstream will need to be removed, then use the supplied 3 Meter (10 feet) phone style cable to connect the OCCUPANCY SENSOR connector on this VendingMiser to the REPEATER connector on the Primary VendingMiser. Only remove the yellow label coving the REPEATER connector on the previous unit in the chain. Additional Secondary VendingMisers can be daisy-chained using the same techniques shown in the diagram to the right. A maximum of four Misers can be daisy-chained in this fashion. It is acceptable to mix VendingMisers with SnackMisers, PlugMisers, and/or CoolerMisers provided the sensor coverage is acceptable for all devices sharing the sensor.

### Validate The Installation

- Plug the vending machine's power cord into the VendingMiser outlet cable. Then, plug each VendingMiser's power cord into the wall outlet. The following should occur:
  - The vending machine should power up immediately.
  - The Green LED should flash twice to indicate that the temperature sensor is functional.
  - The Amber LED should then come on as the VendingMiser attempts to synchronize with the compressor's operation. This typically will require that the compressor cycle on and off.
  - The Red LED should come on, indicating occupancy detection.



The PIR sensor must be allowed to stabilize for several minutes before its placement can be verified. Once the sensor is warmed up, it will flash at the slightest movement within its field of view. Validate that the sensor can "See" an occupant at, or approaching, all machines controlled by this sensor. Note that the sensor angle is fixed and cannot be adjusted in the field, it is factory pre-set for maximum operation. If necessary, relocate the Primary unit and repeat the coverage test. The Red LED on the VendingMiser will mirror the state of the PIR sensor, with an additional 3 second delay. This verifies that VendingMiser is communicating with the PIR sensor.

- As a final functional test, the VendingMiser will power-down the first time only after installation approximately two minute after the area around the machine is vacant and the compressor is determined to be not running. Covering the occupancy sensor will allow validation of the power-down operation if so desired. Following this initial power-down, the VendingMiser will operate with its standard 15 minute time-out.
- Complete the VM180 or VM181 installation by re-installing the weatherproof cover using the supplied screws. Ensure that all cables exit the cover only through the notch located at the cover bottom. Ensure all screws are tightened securely.

**NOTE:** The VendingMiser will flash all three LEDs simultaneously and light a RED LED in the Occupancy sensor if the vending machine has failed and will not shut down its compressor after several hours of use. Since this prohibits the VendingMiser from shutting down the machine, please call the machine owner service line for machine service.

