

### BENEFITS

- **Safety**—protect appliances that are susceptible to extreme temperatures
- **Convenience**—let the system determine when dangerous temperatures exist
- **Economic**—save energy based on indoor or outdoor temperature readings
- **Easily installed using:**
  - 1 or more RANCO ETC-111000 units
  - 1 or more CM-01s
  - 1 or more UPB modules to be controlled
  - Intelligent controller (optional)



### WHAT IS A KILLER APPLETS?

"Killer App" is industry jargon for an application that persuades users to buy the system it runs on.

There is no single killer app for home control, but there are many Killer Applets — UPB-based applications that can satisfy your individual needs.

Take a look at our collection of Killer Applets and we think you'll agree: home automation using UPB is the right choice to enhance the safety, security, and comfort of your home.

For UPB product information email us at:

[info@webmtn.com](mailto:info@webmtn.com).

For immediate attention call: **720-207-9174**.

### *Turn appliances on or off to mitigate undesired temperature consequences*

**SOMETIMES, YOU WOULD LIKE** to be able to control devices based upon an external or internal temperature. This can be accomplished fairly easily through the use of an electronic temperature control device and the CM-01 UPB IO module.

One such electronic temperature control device is the RANCO ETC-111000 unit. This unit features an LCD display, and through the use of buttons on the front of the device, you can determine at what temperature you want an event to be triggered. You can set the trigger temperature anywhere from –30 degrees F to +220 degrees F. You can also determine whether to change the contacts depending on whether the sensed temperature is higher or lower than the set point. The unit has an SPDT relay, with Normally Open (NO) and Normally Closed (NC) contacts. Use the NO or NC contacts to provide the trigger action you desire.

The RANCO unit has a cord coming out of it with the temperature sensor mounted in the end of it. This allows you to mount the electronic unit in a protected environment, but put the probe in the area where you are concerned about the temperature. RANCO makes units powered by 120 /240V AC (the ETC-111000) or units powered by 24 V. In most situations it's preferable to use 120V power. The unit does not have a power cord—you are expected to provide your own power. Go to the local department store and buy the cheapest 2 pin extension cord you can find, cut off the end connector,

strip the wires, paying close attention to the wire connected to the wide plug (neutral), and wire it into the screw down terminals inside the unit. Now, plug the AC plug into an existing outlet. Mount the plastic enclosure in a location protected from the elements. Then, run the wire and probe to a location where you need to measure the temperature, which in many cases may be outdoors. Next, run two wires, normally 22 gauge, from the internal relay terminals to the CM-01 IO modules, using either Input #2 or #3. Then, program the IO module to send out the appropriate link commands.

(see next page for application examples)



RANCO ETC-111000

### Applications

1. You have several water features in your yard. These water features have pumps that cause water to flow through them. Normally, the water features are turned on during the day, but turned off at night. However, the temperature tonight is going to get to freezing, so you would like the pumps to run in order to keep the pipes and valves from freezing. What is worse, if you are traveling there may be no one at home to turn on the pumps. Use the RANCO unit to detect the temperature, set it to trigger at 35 degrees, and connect the relay contacts to an IO module. When the relay changes states, indicating near-freezing temperatures, the IO module will send out an appropriate link command to turn on an appliance module, which turns on the pumps.
2. You live in a rural environment, and your water source is a well with a pump. You have a well house, where the pump connects to the piping. Again, you are worried about freezing temperatures. Use the RANCO temperature sensor to sense outdoor freezing temperatures, and use the IO module to turn on a 150W light bulb inside the well house, thereby keeping the temperature above freezing in the well house.
3. You are going to be gone for an extended period of time and you are worried about the freezer in your garage. In this freezer, you have several hundred dollars of frozen food. Run the probe wire from the RANCO temperature sensor through the seals on the freezer door. Mount the main electronic unit outside the freezer, provide power to the unit and run its contact closures to an IO module. Set the temperature to 30 degrees F, but in this case, you want to know when the temperature gets above this set point. Now, with an intelligent controller, use the IO module to send a link to the controller which triggers it to send an email to your cell phone warning you that there is a problem with your freezer.



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**Caution:** Carefully consider the logic on your controller when you implement this application. For example, if you have a controller set up to turn off the pumps at night, but the temperature gets to freezing in the afternoon causing the pumps to be turned on before dusk, the controller will automatically turn them off at dusk thereby negating the benefit you are trying to achieve by running the pumps during cold weather. If you are using the WMT TIM-01 as your controller, have the link that turns on the pumps from the temperature sensor also suspend the program that normally turns the pumps off at dusk.