

### Thermostat

**Input Voltage:** 24VAC or 120-277VAC (see models)  
**Temperature Setpoint Range:** 60°F to 85°F  
**HVAC System Types:** PTHP, PTAC, 2 Pipe Fan Coil without auxiliary heat, 4 Pipe Fan Coil  
**Transmission Range:** 80 ft. (25m)  
**Dimensions:** 5" H x 3.5" W x 1.38" D  
 (127mm x 89mm x 35mm)  
**Agency Listing (Low Voltage):** FCC, I.C.  
**Agency Listing (Line Voltage):** UL, FCC, I.C.

### HVAC Setback Module

**Power Supply:** 9 - 30VAC, 12 - 40VDC  
**Outputs:** One (1) isolated normally open relay contact  
**Maximum Load Rating:** 1A @ 24VAC/VDC  
**Transmission Range:** 80 ft. (25m)  
**Dimensions:** 2.57" H x 1.65" W x 1.1" D  
 (65.5mm x 42mm x 28mm)  
**Agency Listing:** FCC, I.C.

### Key Card Switch

**Power Supply:** Electrodynamical harvesting  
**Inputs/Outputs:** Slot for standard hotel key card  
**Transmission Range:** 80 ft. (25m)  
**Dimensions:** 4.52" H x 2.78" W x 1.38" D  
 (114.75mm x 70.5mm x 35mm)  
**Agency Listing:** FCC, I.C.

### Occupancy Sensor

**Power Supply:** Solar harvesting  
 (with supplemental battery option)  
**Transmission Range:** 80 ft. (25m)  
**Minimum Light Level:** 15 Lux (3fc) minimum  
**Dimensions:** 5.83" H x 2.52" W x 1.80" D  
 (148mm x 65mm x 45.7mm)  
**Agency Listing:** FCC, I.C.

### Door/Window Sensor

**Power Supply:** Solar harvesting  
 (with supplemental battery option)  
**Transmission Range:** 80 ft. (25m)  
**Minimum Light Level:** 15 Lux (3fc) minimum  
**Sensor Dimensions:** 3.15" H x .83" W x .59" D  
 (80mm x 21mm x 15mm)  
**Magnet Dimensions:** 3.15" H x .47" W x .5" D  
 (80mm x 12mm x 13mm)  
**Agency Listing:** FCC, I.C.

\* All products communicate @ 315 MHz  
 \* 5 year warranty on all products

# ENERGY SAVING HVAC CONTROL SOLUTIONS

Using occupancy based controls to set back the HVAC system whenever a space is unoccupied can help you effortlessly save significant amounts of energy and reduce your overall operating costs.

At Verve® Living Systems, our goal is to provide affordable energy saving solutions that can be easily tailored to meet the needs of any facility and budget.

Our wireless, battery-less control products can be combined to provide a variety of occupancy based control options that are completely scalable allowing you to update your entire facility or one room at a time.



## Energy Savings. Hassle Free.

- Sensors are wireless so installation can be done in minutes using in-house maintenance resources.
- Products require no batteries so replacement costs and on-going maintenance are eliminated.
- No complicated programming is required so there is no need for a third party integrator or software program which saves you both time and money.
- Automated control of the HVAC system provides added comfort and convenience.

VERVE® LIVING SYSTEMS  
 877.874.8774  
 vervelivingsystems.com

## PTAC System Applications

For a PTAC system the Verve® HVAC Setback Module provides a simple yet highly efficient means of switching units between normal operation and a pre-configured setback mode.

**Application 1:** For the most cost effective way to control HVAC energy use in facilities utilizing PTAC units, we recommend the installation of a Verve® Key Card Switch and an HVAC Setback Module. When a guest enters the room, they insert their key card into the slot, activating their HVAC to an occupied mode. When the guest leaves the room, they simply remove the keycard, automatically returns the HVAC system to energy management presets.

**Application 2:** For a more automated approach to controlling PTAC units, install a Verve occupancy sensor and door/window sensor contact in place of the key card switch. The occupancy sensor will monitor the space and automatically send a wireless signal to the setback module whenever it determines that the room is unoccupied.

While the initial investment is slightly higher for the automated solution, the potential for savings is greater because the system is not dependent upon guest interaction.

## Thermostat System Applications

The Verve® Thermostat is available in both 24VAC and 120/277VAC and can be installed in place of any existing thermostat.



**Application 1:** For the most affordable thermostat solution utilizing occupancy based control, simply link the Verve® Thermostat to the Verve® Key Card Switch. When the guest enters the room and inserts their key card into the slot, a signal is sent to the thermostat adjusting the temperature to a level that is pre-set for occupied spaces. When the guest removes the key, a signal is sent to set the temperature back to an energy saving setback mode.

**Application 2:** The most efficient means of controlling energy use is through the installation of occupancy sensors that will automatically monitor the space and send a signal to the thermostat whenever it determines that the space has not been occupied for a preset period of time.

While the initial investment is slightly higher for the automated solution, the potential for savings is greater because the system is not dependent upon guest interaction.

### Energy Saving PTAC Solutions

### Energy Saving Thermostat Solutions

Application 1: PTAC	
	HVAC Setback Module Model: VHSM-W
	Key Card Switch Model: X3109000W3VN
	
Under \$125 per room	

Application 2: PTAC	
	HVAC Setback Module Model: VHSM-W
	Door/Window Contact Sensor Model: VDWS-W
	Occupancy Sensor Model: VOSW-W
	
Under \$220 per room	

Application 1: Thermostat	
	Thermostat 24V Model: X4103100W3VN 120/277V Model: X41031L0W3VN
	Key Card Switch Model: X3109000W3VN
	
Under \$190 per room	

Application 2: Thermostat	
	Thermostat Model: X4103100W3VN (LOW3VN)
	Door/Window Contact Sensor Model: VDWS-W
	Occupancy Sensor Model: VOSW-W
	
Under \$285 per room	