

## HVAC Smart Relay System (HSRS)

In an era of exorbitant fuel costs, the HVAC Smart Relay Switch (HSRS) lowers energy bills by eliminating wasted power consumption. The HSRS automatically interrupts the HVAC system in the event of a violation such as a door or window that has remained open for a period of time or a room that has remained vacant. The HSRS is a fully configurable device that provides energy efficient control for heating and cooling systems. In addition, the HSRS can be used as a general purpose controller for devices including dampers, fans, etc.



The controller accepts wired and/or wireless switch sensor inputs. For wired sensors, most any switch device having normally open or normally closed contacts is acceptable. Mechanical sensors including reed, push-button, and toggle switches are also allowable. For applications where wire runs are not desired or simply inconvenient, wireless sensors may be used (requires RF receiver add-on). You may even deploy a mix of both wired switches and wireless sensors.

## Wireless Door/Window Sensor

The door/window sensor is compact and simple to install. Using a single 3V lithium coin cell (included), the device delivers 3 to 5 years of operation. It is a two-part solution that consists of electronic transmitter and a magnet. The sensor/transmitter is typically applied to the door- or window-frame while the magnet is installed on the door or window itself.



### Specifications:

- RF frequency: 345 MHz
- Magnet gap (max): 1"
- Battery: 3VDC, 225mAh, lithium coin cell, Panasonic CR2032
- Battery life expectancy: 3 to 5 years
- Operating conditions: 32°F (0°C) to 120°F (50°C), 95% relative humidity
- Dimensions:
  - Transmitter: 2.2" x 1" x 0.25"
  - Magnet: 1" x 0.25" x 0.25"

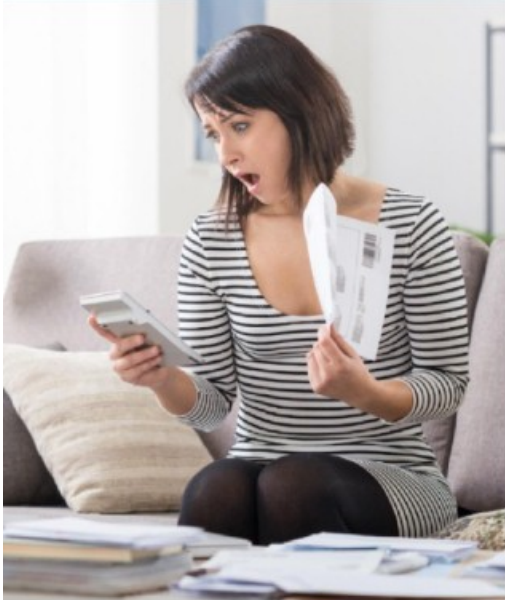
Note: This device is fully compatible with Honeywell 5800 alarm panels and may be concurrently employed for both HVAC shutoff and commercial/residential security, eliminating the need to apply duplicate sensors for each door/window opening.

### Notes:

- *Batteries included with all models.*
- *Sensors may also be compatible for use with Honeywell wireless alarm systems.*

The HSRS controller provides 16 user-selectable DIP switch settings for configuration purposes. Thus, the system can be set up to automatically switch off the HVAC system based on parameters you specify.

## Automatically shut off the HVAC when doors or windows are left open!



### HVAC Smart Relay Switch

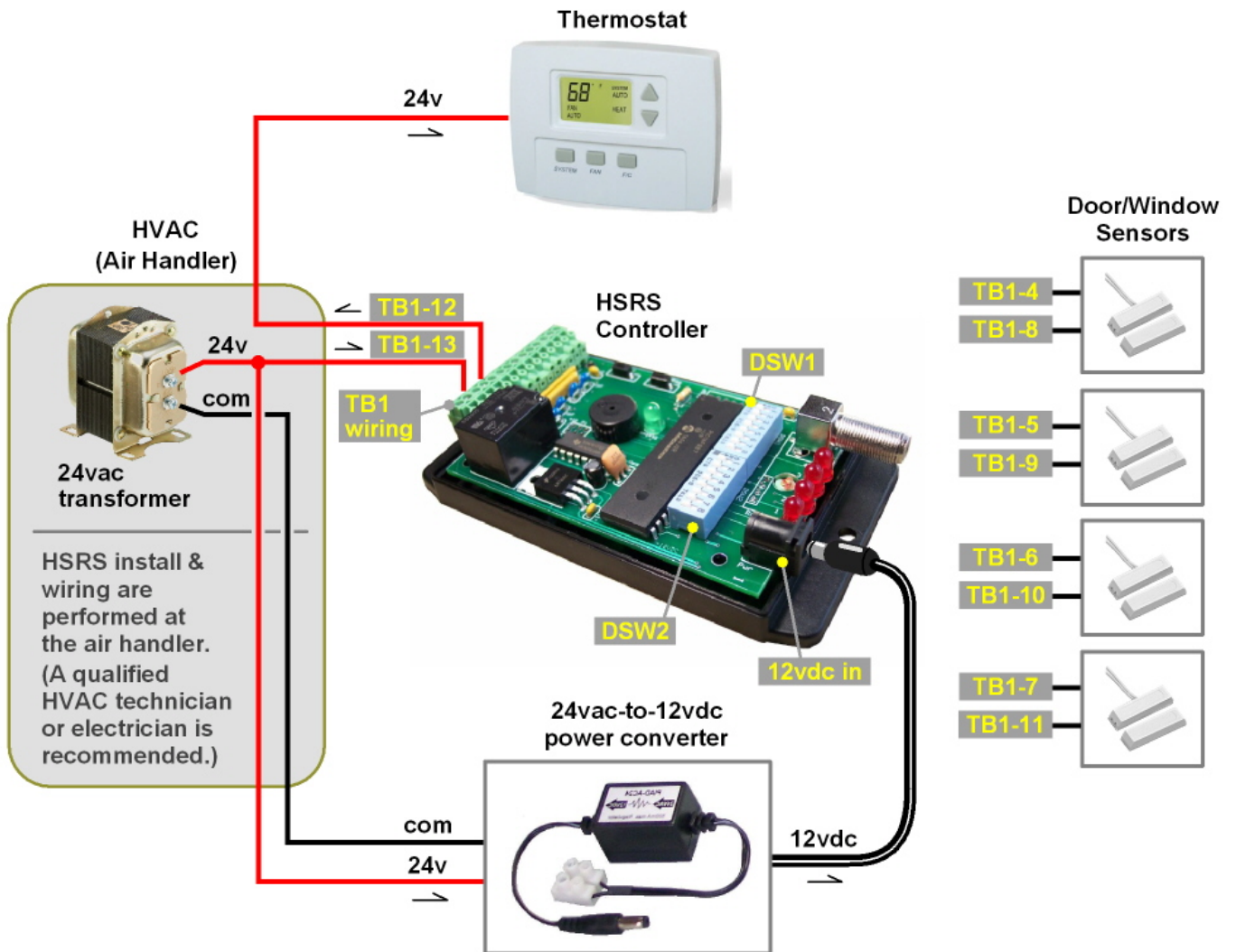
- Conserves energy, reduces utility bills
- Monitors open doors and windows
- Compatible with split (ducted) systems
- Selectable pre-shutoff delay period
- Optional reactivation delay for compressor protection
- Available in wired and wireless variations (shown below):



*"As property manager of ocean-front vacation condominiums, we have had ongoing problems with guests who leave patio doors open. This has resulted in enormous electric bills, especially in summer months. We purchased & installed the HSRS and were pleased to discover immediate savings in our electric bills."*

*- Sam M., Hatteras, North Carolina -*

Installation is straightforward, requiring 1 to 2 hours of labor by any qualified HVAC technician. The HSRS controller is typically mounted near the indoor air handler with appropriate low-voltage wiring routed from the HVAC unit for direct access to the system's 24vac power supply. The schematic below illustrates the simplicity of a typical HSRS installation:

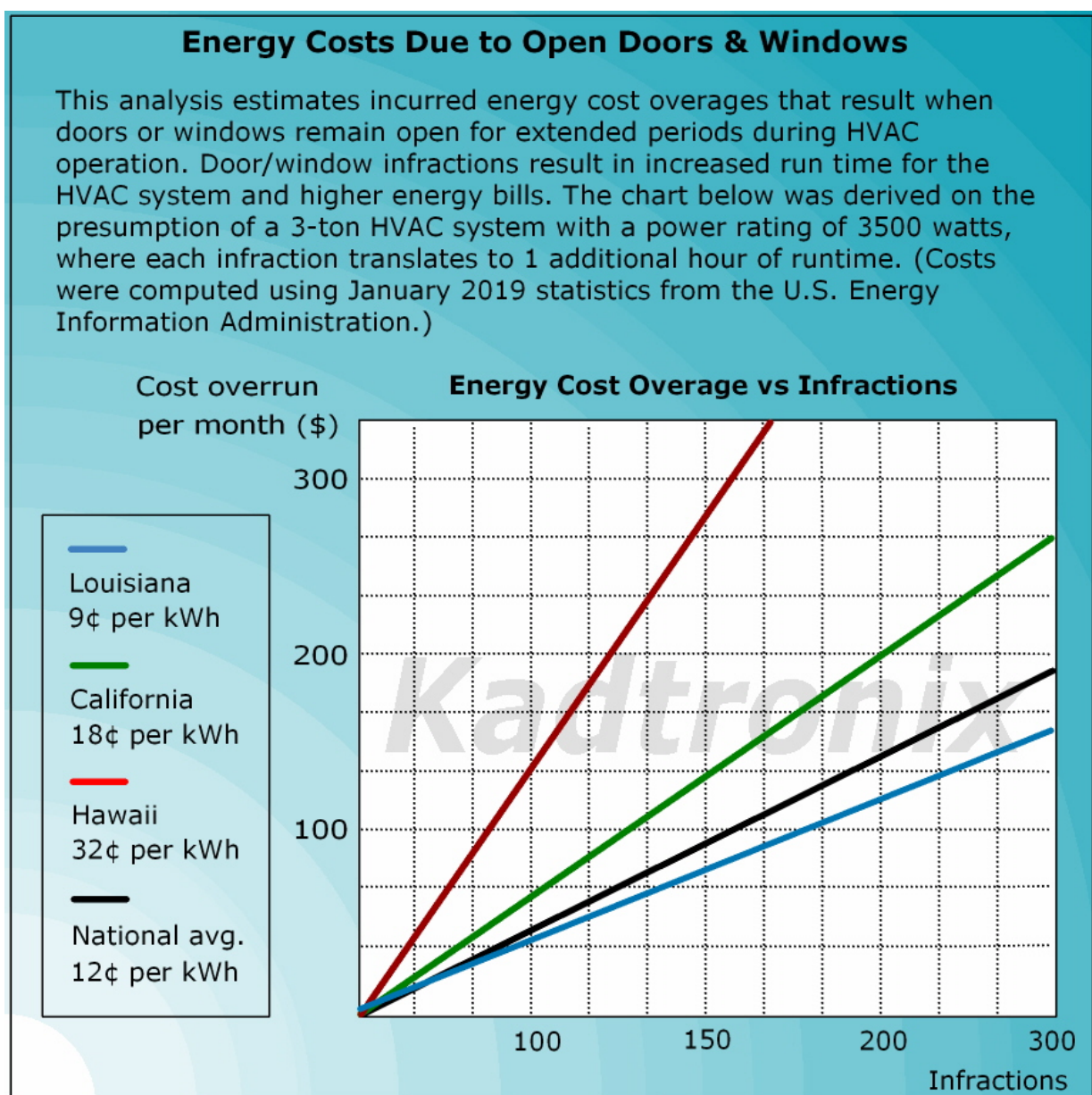




How much will you save on your electric bills? Savings will vary for each installation and depends on a number of factors including the following:

- Energy costs in your area (\$ per kWh)
- Frequency of door/window infractions
- Power rating and efficiency of your HVAC system

Generally speaking, applications which incur "worst-case" infractions are likely to see significant savings. For instance, many vacation rental owners report that guests frequently leave patio doors open continuously while the air conditioning is running - a scenario that is certain to result in extreme energy bills. The analysis below highlights the severity of these expenditures and the potential savings from a solution such as the HSRS which can eliminate cost overruns.



# HSRS Wireless System

The wireless system is ideal for situations where wired cable runs may be inconvenient. The package includes controller (with integrated RF receiver), wireless door sensors, and whip antenna.



## Part Numbers

Part no.	Description
KD-HSRS-WIRED-X	HSRS Wired System: includes smart relay controller, wired door/window switches (magnetic reed type - see note), and power converter.
KD-HSRS-RF3-MINI-X	HSRS Wireless System (3 <sup>rd</sup> generation): includes smart relay controller with integrated RF receiver, wireless door/window sensors (mini type - see note), whip antenna, and power converter.
KD-HSRS-RF3-WMWH-X	HSRS Wireless System (3 <sup>rd</sup> generation): includes smart relay controller with integrated RF receiver, wireless door/window sensors (basic type - see note), whip antenna, and power converter.
KD-HSRS-RF2-CLASSIC-X	HSRS Wireless System (2 <sup>nd</sup> generation): includes smart relay controller with integrated RF receiver, wireless door/window sensors (classic type - see note), whip antenna, and power converter.

*Notes:*

- *"-X" suffix designates the number of door/window sensors: 2 or 4*
- *Power converter is 24vac-to-12vdc. (120vac-to-12vdc available on request.)*

## Peripherals and Accessories

Part no.	Description
KD-HSRS10-W	HSRS wired - controller only
KD-HSRS10-RF3	HSRS wireless (GEN3) - controller only
KD-HSRS10-RF2	HSRS wireless (GEN2) - controller only
KD-DW10	Wired door/window switch, magnetic reed
KD-DS-5800-MINI	Wireless door/window sensor (GEN3) - mini type
KD-DS-5816-WMWH	Wireless door/window sensor (GEN3) - basic type
KD-DS12A	Wireless door/window sensor (GEN2) - classic type
KD-HSRS-DECAL	Door/window decal, adhesive-backed
KD-HSRS-PWRCON	Power converter, 24vac-to-12vdc
KD-HSRS-PWRCON2	Power converter, 120vac-to-12vdc
KD-HSRS-RF-ANT	Whip antenna - for HSRS wireless
KD-HSRS-RF-ANT-KIT	Remote antenna kit with whip antenna, 12-ft. coax cable, and mounting bracket - for HSRS wireless

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