

HSRS Wiring Install

The HSRS is ideally suited for use with split (central, ducted) systems. (Other HVAC types may also be possible.) We recommend installing the HSRS controller near the air handler and routing a length of thermostat wire into the unit for direct access to the HVAC unit's 24vac power. The diagram below demonstrates a typical wiring installation.



Caution: Only a qualified HVAC contractor or technician should attempt the procedure. Wiring diagrams and instruction are provided for the purpose of demonstrating a typical installation. We accept no liability or responsibility for possible errors, omissions, or ambiguities. The installer assumes full responsibility for a proper install and to verify all wiring connections.

The HSRS system accepts wired switches and/or wireless sensors, depending on the model variation. The controller provides four (4) individual inputs for interfacing wired door switches. Each input is comprised of dual wiring <u>terminal connections</u>: switch and return. In addition, there are two possible methods (or configurations) for wiring your individual door switches:

- One-to-one
- Zone

A one-to-one configuration dedicates one (and only one) switch to a single controller input. Therefore, a maximum of four (4) door switches may be assigned. (Any unused inputs must be disabled with a custom wire jumper – see <u>notes</u>.)

A zone configuration employs a virtually unlimited number of wired switches, applying multiple switches to a single controller input. Zone wiring is accomplished through serial daisy-chaining, whereby two or more switches are connected in series, forming a "loop". The two unconnected ends are assigned to one of the four controller inputs. (Any unused inputs must be disabled with a custom wire jumper – see <u>notes</u>.)



Magnetic reed switch

In applications where only wireless sensors will be used, you may globally disable wired inputs (via DIP switch option). When globally disabled, individual wire jumpers are not needed (see <u>notes</u>).

One notable feature of the wireless sensor is its ability to accept an optional external wired switch. This "hybrid sensor" approach is useful in situations where it may be necessary to monitor two openings with a single wireless sensor. To effect the hybrid sensor, first remove preinstalled jumper from the wiring screw terminals (see image below). Then, using an appropriate length of cabling, apply your wired door switch.



Wireless door sensor

Terminal Block Wiring Connections:

The controller provides screw terminal connections for wiring purposes:

```
+12VDC power in/out
Ground
Reserved
Wired switch #1
Wired switch #2
Wired switch #3
Wired switch #4
Wired sw. return #1
Wired sw. return #2
Wired sw. return #3
Wired sw. return #4
Relay - COM
Relay - N/C
Relay - N/O
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Notes:

- For wired door/window switches, choose alarm wire or similar, typically 22 ga. (Larger wire sizes also acceptable.) Cable runs should be limited to 100 ft. max. at each controller input. (For best results, consider twisted-pair, shielded cables.) Any unused switch inputs must be disabled with a short wire-jumper to the appropriate return. Suitable switches include traditional types such as magnetic reed devices. Designated wired switches must be compatible for use with normally-closed circuits.
- **WARNING**: For wireless applications, avoid contacting the receiving antenna and/or mounting bracket with any grounded object. Inadvertent contact may result in electrical failure including damage to the power converter and/or blown fuses.
- For best wireless reception, ensure the antenna is adequately distanced from metal objects and obstructions such as the HVAC chassis, ducting, plumbing, conduits, water heater, laundry equipment, metal wall studs, shelving, etc.
- Should you encounter any issues during or after the install, please contact Kadtronix technical support (321-757-9280) for assistance. Please do not return the product without authorization - proper troubleshooting and/or problem resolution may be impossible once the unit has been removed from service.

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