

GPRS & HSRS Smart Controllers

Mini-Guide

Kenneth Delahoussaye Consulting

web: www.kadtronix.com

email: kadtronix@att.net

Introduction:

This guide contains introductory setup and configuration information. It contains limited detail and is intended for use only by qualified technicians who possess prior knowledge of GPRS and HSRS setup and operation. **If you are unfamiliar with these devices, you are strongly advised to consult the full user manual for complete details.** You may view and/or print the manual via the following website link:

http://www.kadtronix.com/downloads/gprs_user_man.pdf

Information in this guide is applicable to the Kadtronix family of smart relay controllers. Applicable devices include the following models:

- General Purpose Relay Switch (GPRS)
- HVAC Smart Relay Switch (HSRS)

These controllers provide sensor-activated remote control capability for devices and equipment. Onboard relay with SPDT contacts provides switching for loads up to 10A @250VAC. Wired and/or wireless sensors may be employed.

WARNING: Only a qualified technician should attempt to perform the setup and installation instructions contained in this guide. Your warranty may be voided if damage occurs due to improper installation.

Configuration Settings:

There are two sets of configuration DIP switches (labelled DSW1 & DSW2) which must be properly configured before use. Recommended switch settings will vary depending on the application as there are literally thousands of possible settings combinations. Two common default settings are listed below. The first allows for both wired and wireless sensor operation. The second supports only wireless sensors, disabling wired sensor operation. (Both settings define immediate trigger activation and de-activation time periods.)

| | DSW1 : | | | | | | | | DSW2 : | | | | | | | | |
|-----------|--------|---|---|---|---|---|---|---|--------|---|---|---|---|---|---|---|--------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| Both: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | [All switches OFF] |
| Wireless: | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Note: An indicated '0' digit means the specified DIP switch is "off". A '1' digit means the switch is "on".

Delay Timing:

The system can be configured to invoke a delay so that relay trigger activation (i.e., equipment shutoff) will not occur until the specified time period has elapsed. DSW1 switches 1 through 4 establish the desired delay. The listing below provides definitions for several available delay settings. (Consult the full user manual for detailed settings and options.)

| | DSW1 : | | | |
|---------|--------|---|---|---|
| | ----- | | | |
| | 1 | 2 | 3 | 4 |
| | ----- | | | |
| 1 min: | 1 | 0 | 1 | 0 |
| 2 min: | 0 | 1 | 1 | 0 |
| 5 min: | 1 | 1 | 1 | 0 |
| 10 min: | 0 | 0 | 0 | 1 |

Notes:

- 1) A '0' digit means the specified DIP switch is "off". '1' means the switch is "on".
- 2) You may also optionally configure a post-shutoff reactivation delay using switches 1, 2, 3, 4 at DSW2. Desired delay values follow the same convention as described for DSW1.

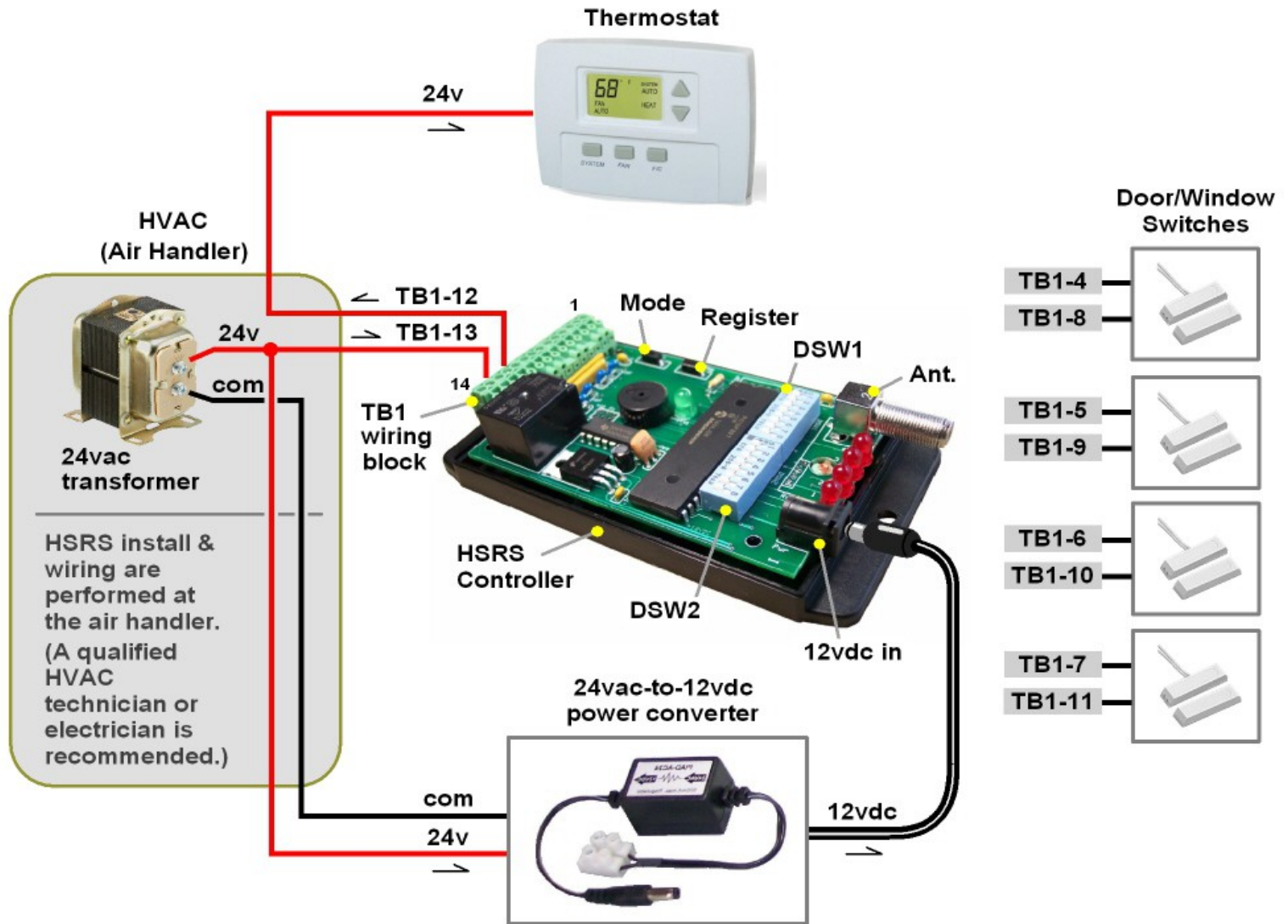
Terminal Block Wiring Connections:

The controller provides screw terminal connections for wiring purposes:

- 1) +12VDC power in/out
- 2) Ground
- 3) Reserved
- 4) Wired Sensor #1
- 5) Wired Sensor #2
- 6) Wired Sensor #3
- 7) Wired Sensor #4
- 8) Wired Sensor return
- 9) Wired Sensor return
- 10) Wired Sensor return
- 11) Wired Sensor return
- 12) Relay - COM
- 13) Relay - N/C
- 14) Relay - N/O

- Notes:
- 1) For wired-sensor applications, any unused sensor inputs should be disabled with a short jumper wire to the appropriate return.
 - 2) Please consult the user manual for complete wiring explanations. (See website link above.)
 - 3) **WARNING:** For wireless applications, avoid contacting the antenna and/or mounting bracket with any grounded object such as the HVAC chassis, water heater, laundry equipment, or metal wall studs.
 - 4) For proper signal reception, antenna must **NOT** be located near metal equipment or appliances. Do **NOT** install within a metal chassis or enclosure.
 - 5) If you encounter any issues during or after the install, please contact Kadtronix technical support (321-757-9280) for on-site 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.

Sample Wiring - HVAC Shutoff (with wired door/window switches)



Initialize Wireless Door/Window Sensors:

Wireless sensors must be initialized before use. (This sequence must be subsequently performed whenever batteries are replaced.) The initialization procedure is outlined below:

- Remove the X10 sensor's plastic cover
- Insert two AAA alkaline batteries
- Press & hold the white pushbutton for 5 seconds (LED flashes once)
- Release the button (LED flashes twice)
- Re-attach the plastic cover

Notes:

- Following initialization, wireless sensors must be registered (paired / enrolled) at the controller. (Refer to the next section for details.)
- When removing batteries, replace them within 20 seconds to avoid re-initialization & re-registering.
- To initialize a wireless motion detector, refer to the full user manual.

Register / Pair Wireless RF Sensors:

Wireless door/window sensors & motion detectors must be properly registered (paired) at the controller.

IMPORTANT: Sensors must be properly initialized following battery insertion or replacement. (Refer to the previous section for details.)

*For proper signal reception at the HSRS controller, the receiving antenna must **NOT** be located near metal equipment or appliances. (A minimum separation of 3 feet is recommended.) Do **NOT** install within a metal chassis or enclosure.*

- Detach HSRS controller lid by removing the 4 retaining screws.
- Locate the “Register” button.
- Press/hold the button until the unit beeps, then release.
- Activate a sensor. (For a door/window sensor, bring the magnet in close proximity to the transmitter and then separate them. For a motion detector, walk in front of the sensor.)
- Confirm that a red LED illuminates at the controller with an accompanied audible beep.
- Repeat the previous two steps for each additional wireless sensor device (up to 8 max).
- To exit wireless registration, press/release the register button. (There is no need to hold the button at this step.)

Warranty:

This product is warranted for a period of 1 year from the date of purchase and is guaranteed to be free from defects. The warranty covers the entire unit, except if any part or component has been modified or otherwise converted from its original form. The warranty does not cover damage or failure due to neglect, improper setup/use, or unshielded exposure to moisture, power surges, hazardous environments, and the like.

Note: The customer is responsible to provide protection against over-voltage situations including power surges, spikes, and lightning strikes. The use of adequate surge protection is recommended.

Disclaimer:

The customer is responsible to obtain qualified assistance for proper installation of the product. We bear no responsibility for unintended errors, omissions, or ambiguities in product literature. Further, we accept no liability for unforeseen expenses, damages, personal injury, accident, or death due to use or misuse of the product. Purchase and use of this product indicates that you understand and accept these terms.

Notes:
