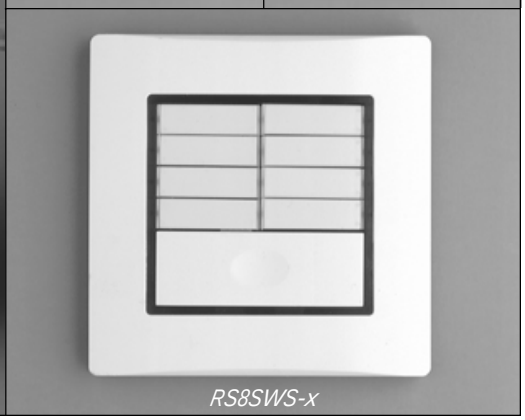
Total Lighting Control

Softwired Switches, 1-, 2-, 4- and 8-button


RS4SWS-x


RS1SWS-x


RS2SWS-x


RS8SWS-x

DESCRIPTION

The Softwired Switching (SWS) System is a small network of relay panels and occupant control switches linked by a 4-wire dataline. Together, these devices form a reconfigurable switching platform — one that uses "softwiring" instead of hardwiring to link occupant switches to relays.

There are four basic configurations of Softwired Switches (or dataline switches): the single-gang, 1-, 2- and 4-button RS1SWS-x, RS2SWS-x and RS4SWS-x, respectively, and the two-gang, 8-button RS8SWS-x.

Any button on a Softwired Switch may be softwired to:

- *any group of relays within a single relay panel*
- *a channel within a single relay panel*
- *the same channel among multiple panels (requires an RCLK8SWS Softwired Clock, which also operates as a handheld programmer)*

This instruction sheet will show you how to:

1. Install and Test a Local Dataline
2. Install and Test Softwired Switches

These instructions cover basic wiring and testing of Softwired Switches. Comprehensive instructions are in the Softwired Switching System Installation and Operation Manual.

Each switch includes a bi-color LED status light for each control button and a locator light. In addition, the 2-, 4- and 8-button units have directories which accept standard ⅜" wide (9mm) labels. The x suffix in the catalog number refers to button and switchplate color: 2 = ivory, 4 = almond, 7 = white and 9 = grey.

*Before proceeding, read the enclosed installation instructions. For GE TLC Service call: 1-8**77-584-2685** (USA) or 1-800-661-6619 (Canada)*

INSTALL LOCAL DATALINE

The dataline connects the relay panels, switches and optional control modules. Within the 4-wire dataline are two twisted pairs: the red and black wires, carrying data; and the blue and white wires, providing power to the dataline switches.

For simplicity, we refer to a 4-wire dataline running between a relay panel and the softwired switches as a "Local Dataline". The relay panel provides the low-voltage power to all of the dataline switches on its local dataline.

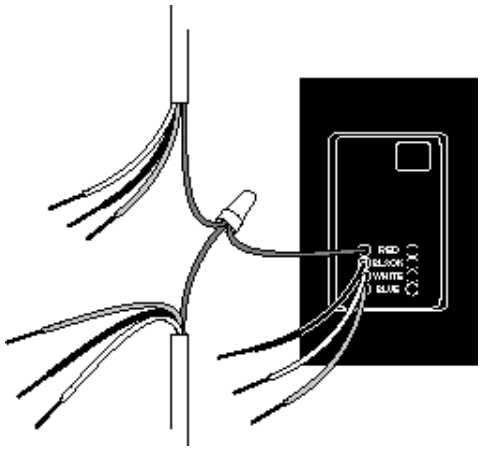
NOTE: To ensure good communications between panels, the installer must comply with the dataline specification. GE will not warrant a system using a dataline that does not meet our spec. To avoid potential problems, use GE RLONWIRE-4P (plenum rated). Do not run the dataline in conduit or wiring trays with power wires. Do not connect the local datalines from two different panels.

INSTALL AND TEST SWITCHES

The 1-, 2- and 4-button dataline switches mount in standard single-gang switch boxes. The 8-button unit mounts in a standard 2-gang box. The dataline is typically connected in a "daisy-chain" from switch to switch, eliminating expensive home runs.

For ease of wiring, we recommend connecting the dataline red/black/white/blue to the corresponding pigtails provided on the switch as illustrated. The dataline may also be connected directly to the terminals on the switch. If connected this way, the security of each wire termination should be carefully tested to assure the dataline integrity.

Dataline Connection to Switch Pigtails



For proper operation, there must be a good dataline which:

1. *Provides 24 VAC power to each switch*
2. *Has a low resistance connection of the red and black wires between all switches and the relay panel*
3. *Has no short of the red and/or black to ground*

24 VAC Power

The power supply in the relay panel must be on. To test for 24 VAC power at each switch, simply toggle each button on the switch ON/OFF after you have connected the dataline but before mounting the switch in the electrical box. The red LED for each button should go on and off.

Low-Resistance Red/Black Data Path

After wiring the last switch on the local dataline, disconnect the red and black wires from the dataline terminals in the relay panel and wire nut them together. Then measure the resistance between the red and black terminals on the last switch. It should be less than 3 ohms. If it is higher, work backwards toward the relay panel, checking the resistance at each switch to find the bad connection. When finished, reconnect the dataline at the panel.

Shorted Dataline

After the dataline resistance test checks out, you can easily test for a shorted dataline by measuring the resistance from red to white, then black to white anywhere on the dataline. You should see an open circuit. If there is a short, start at the last switch and work backwards as above to locate it.