



### Box Contents

- (1) SmartControl 12 (SSC-0012-00)
- (1) Installation Kit SmartControl 12 (075-0180-xx)
  - (1) Mounting Plate (074-0577-xx)
  - (4) 6-pin Screw Down Plug-in Connector (028-9352-xx)
  - (1) 12V DC 1.6A Power Supply (025-0166-xx)
  - (1) Cable Tie (014-0071-xx)
- (1) Quick Reference Guide (this document)

### Specifications

Environmental	
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 80% RH (non-condensing)
Dimensions and Weight	
Height	1.40 in (3.5 cm)
Width	6.00 in (15.2 cm)
Depth	3.20 in (8.1 cm)
Weight	Net: 0.50 lb (0.22 kg) Shipping: 1.50 lb (0.68 kg)
Power	
Input Power (Max)	12V DC 1.6A
Max Power	18 watts
Compliance	
Safety and Emissions	FCC Part 15   CE Mark   C-Tick
RoHS	Compliant
Minimum Supported Release	
Savant OS	da Vinci 7.0

### Network Requirements

Savant requires the use of business class/commercial grade network equipment throughout the network to ensure the reliability of communication between devices. These higher quality components also allow for more accurate troubleshooting when needed.

Connect all Savant devices to the same local area network (LAN) or subnet as the host. Savant recommends not implementing any type of traffic or packet shaping in your network topology for the Savant devices as this may interfere with performance.

### Network Configuration

To ensure that the IP Address will not change due to a power outage, a static IP Address or DHCP reservation should be configured. Savant recommends using DHCP reservation within the router. By using this method, static IP Addresses for all devices can be managed from a single UI avoiding the need to access devices individually.

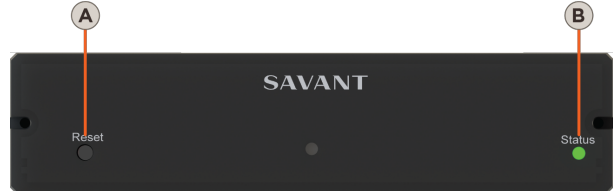
Setting DHCP reservation varies from router to router. Refer to the documentation for the router to configure DHCP reservation.

### Network Changes

Savant recommends performing one of the following steps to refresh the IP connection after connecting to a new network, changing routers, or if the IP Address range is changed in the current router. This will reset any IP connection and ensure that the host is communicating with the network correctly.

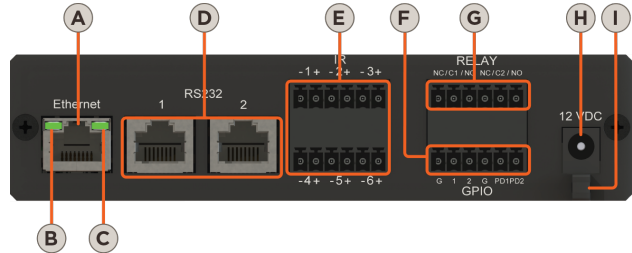
- **Cycle Power**  
Disconnect the controller from the AC power source for 15 seconds and then reconnect.
- **Hot Plug the Ethernet (LAN) Connection**  
Disconnect the Ethernet (LAN) connection from the controller for 15 seconds and then reconnect.

### Front Panel



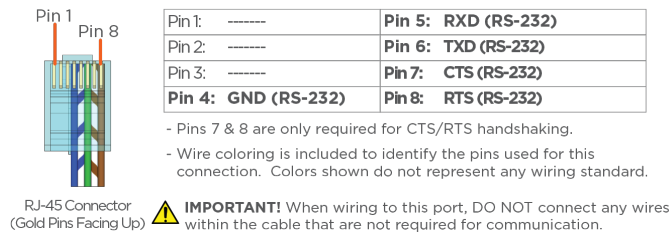
- |   |   |
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| <p><b>A</b> Reset Button</p> <p><b>B</b> Status LED</p> | <p>Press and hold for 5 seconds while powered On to clear network settings. <b>Status</b> LED will blink rapidly when reset is complete.</p> <p><b>Blinks Once:</b> No IP Address<br/> <b>Blinks Twice:</b> Waiting for Host Connection<br/> <b>Blinks Three Times:</b> Host Connection Lost<br/> <b>Solid:</b> Connected to Host</p> |
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### Rear Panel



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|--|---|
| <p><b>A</b> Ethernet</p> <p><b>B</b> Link LED</p> <p><b>C</b> Data Rate LED</p> <p><b>D</b> RS-232</p> <p><b>E</b> IR</p> <p><b>F</b> GPIO Input</p> <p><b>G</b> Relay</p> <p><b>H</b> Input Power</p> <p><b>I</b> Cable Lance</p> | <p>10/100 Base-T auto-negotiating port with Link/Activity.<br/>LEDs: 8-pin RJ-45 female.<br/>See items B and C for LED functionality.</p> <p><b>Off:</b> Ethernet link is not established.<br/> <b>Green Solid:</b> Ethernet link is established.<br/> <b>Green Blinking:</b> Ethernet activity is occurring.</p> <p><b>Off:</b> 10 Mbps data rate<br/> <b>Green:</b> 100 Mbps data rate</p> <p>8-pin RJ-45 female. Used to transmit and receive serial binary data to and from serial controllable devices. Ports 1-2 RS-232 - CTS/RTS Handshaking. CTS/RTS Handshaking availability based on component profile. See <a href="#">RS-232 Wiring and Connections</a>.</p> <p>Used to send IR signals to control devices with an IR input or IR receiver via an IR flasher (5V tolerant only). 6-pin Screw Down Plug-in Connector. See <a href="#">IR Wiring</a> for important precautions regarding IR functionality before making any connections.</p> <p>GPIO (General Purpose Input and Output Ports) 6-pin Screw Down Plug-in Connector. See <a href="#">GPIO Wiring</a> for pinouts.</p> <p>When configured as an input, the processor will look for a low (&lt;0.8V DC) or high (&gt;2.4V DC) state.<br/>Minimum 0V DC / Maximum 12V DC</p> <p>When configured as an output, the port provides a binary output of 0-12V DC 150mA max.</p> <p>Normally Open / Normally Closed - Relays<br/>6-pin Screw Down Plug-in Connector</p> <p>Dry contacts (open/closed) to control devices requiring basic on/off operation. DC Voltage Max: 30V DC 1A.<br/>6-pin Screw Down Plug-in Connector</p> <p>12V DC 1.6A - Connect to included power supply.</p> <p>Use with included cable tie to secure power supply connection.</p> |
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## RS-232 Wiring and Connections



### Notes:

- CTS/RTS handshaking is supported for flow control based on the profile used in the configuration.
- The SSC-0012 does not support RS-422/485.

## RJ-45 to DB9 Adapters

Refer to the RS-232 Conversion to DB9 and RS-422/485 Pinout Application Note located on the **Savant Customer Community** for more information on the RJ-45 to DB9 adapters offered by Savant.

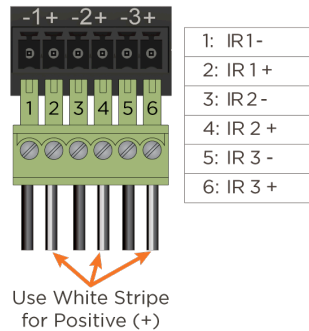
## IR Wiring

IR connections are made using 6-pin Screw Down Plug-in Connectors supplied with controller. The wire slips into the hole and locks with the screw located at the top of the connector.

### **IMPORTANT!** IR Wiring Precautions

- Ensure that all IR emitters are within 15 feet (4.6 meters) from the controllers location.
- Use of 3<sup>rd</sup> party flashing IR emitters with Talk Back is not recommended. These types of emitters can draw voltage away from the IR signal that can degrade IR performance.

### IR Port Connector Pinout



### Note:

While not shown in a diagram above, connections IR4 to IR6 follow the same wiring as IR1 to IR3.

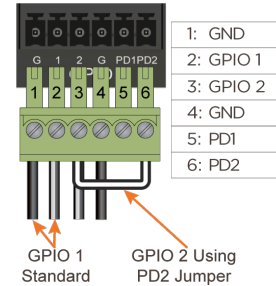
## GPIO Wiring

General Purpose Input/Outputs (GPIO) are binary I/O ports used on Savant controllers to trigger an action within the system. Events can control a device, such as turning on an amplifier (output) or detecting a state change for a device (input) to perform a workflow. Pins 1-4 are used for input or output depending on configuration.

## GPIO Pull Down Resistor (PD) Usage

The GPIO pins are by default configured as inputs and pulled high to 12V while the host is booting up. To pull the GPIO signal low during a host reboot and/or power cycle, a jumper wire can be connected between a GPIO pin and its corresponding PD1 and PD2 pin. Doing this adds a 1k ohm resistor between the GPIO pin and ground which keeps the GPIO output below 0.8V while the host is rebooting.

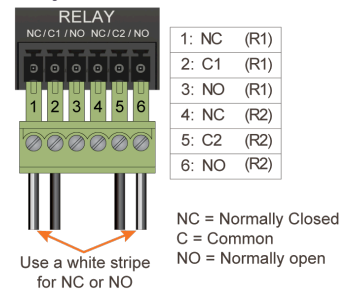
### GPIO Connector Pinout



## Relay Wiring

Relays are used when a contact closure (normally open or normally closed) is needed to activate a device such as raising or lowering shades, opening or closing a gate, etc.

### Relay Connector Pinout



## Making Connections

1. Remove Power if power is applied.
2. Pull to remove the terminal block from the rear of the controller.
3. With a small flat bladed screwdriver, turn the screws on the top of connector counterclockwise until the silver crimps in the front of the connector opens enough to slide the wires into the square slots.
4. Insert one of the stripped wires from the device being controlled into its respective slot in the connector. Refer to the diagrams.
5. Turn the screw clockwise until the screw tightens around the wire. Tug on the wire a bit to verify it is installed securely. Do not allow more than 1/2 inch of stripped wire exit from the rear of the connector.
6. Repeat for each wire till all wires are installed in that connector.
7. Repeat steps above for all connectors as required.
8. Plug terminal blocks back into rear of the controller.
9. Reapply power

## Additional Documentation

Refer to the following documents located on the **Savant Customer Community** for additional information.

- SmartControl 12 SSC-0012 Deployment Guide (009-1268-xx)
- Relay and General Purpose Input/Output Profiles: Application Note
- RS-232 Conversion to DB-9 and RS-422/485 Pinout: Application Note
- Savant Controllers Family video in the Savant University pages