SAVANT

SmartControl 25 Controller
Quick Reference Guide

For Product Info

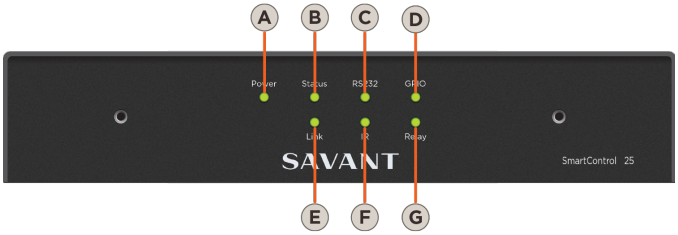
Box Contents

(1) SmartControl 25 (SSC-P025-11)
(1) Installation Kit: (075-0141-xx)
  (2) 9-pin Screw Down Plug-in Connectors (028-9353-xx)
  (2) 6-pin Screw Down Plug-in Connectors (028-9352-xx)
  (1) 12V DC 1.25A Power Supply (025-0078-xx)
  (1) 6 ft Power Cord (014-0035-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)
Cooling	3 cubic feet per minute (CFM) recommended
Maximum BTU	51 BTU/hour
Dimensions and Weight	
Height	1.52 in (3.86 cm)
Width	7.99 in (20.29 cm)
Depth	7.60 in (19.30 cm)
Weight	6 lb (2.72 kg)
Rack Space	1U
Power	
Power over Ethernet (PoE)	IEEE 802.3af
Power Supply (When not using PoE)	12V DC 1.25A 120-240V AC 50/60 Hz
Maximum Power	15 Watts
Compliance	
Safety and Emissions	FCC Part 15 | CE Mark | C -Tick
RoHS	Compliant
Minimum Supported Release	
Savant OS	da Vinci 4.3.3

Front Panel



A Power LED	**Green:** SSC-P025 has adequate power and is operating normally. **Off:** SSC-P025 is not receiving power.
B Status LED	**Green:** Controller is operating normally. **Green Flashing:** Controller has a DHCP or static IP Address. Connecting to host. **Off:** Unit is rebooting **Red:** Firmware update has failed and unit will be rebooted. **Red Flashing:** No IP Address/Connecting to Network. **Amber:** Firmware update in process. **Amber Flashing:** Controller has a link-local IP Address and is connecting to the host. This applies to controllers that are not connected to an active router and may be connected directly to a host. **Hardware Failure** **Status** LED indication will be interrupted every 3 seconds with a solid **Red** indication. For example, if the LED is flashing **Green** when a hardware failure occurs, the LED will flash **Green**, solid **Red**, etc., in 3 second intervals.
C RS-232 LED	**Green:** RS-232/422/485 serial port activity. **Off:** No RS-232/422/485 serial port activity.
D GPIO LED	**Green:** GPIO port activity. **Off:** No GPIO port activity.
E Link LED	**Green:** Ethernet port activity. **Off:** No Ethernet port activity.
F IR LED	**Green:** IR port signal activity. **Off:** No IR port activity.
G Relay LED	**Green:** Relay port activity. **Off:** No Relay port activity.

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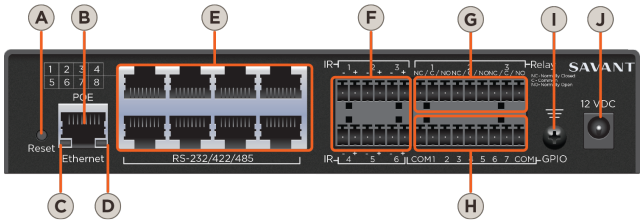
Rear Panel

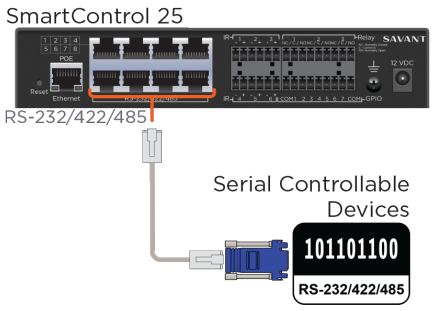


A	Reset Button	Press and hold for 5 seconds while powered On to clear network settings. **Status** LED will blink rapidly when reset is complete.
B	PoE/Ethernet	8-pin RJ-45 female. 10/100 Base-T auto-negotiating port with Link/Activity LEDs: See items C and D for LED functionality. Supports Power over Ethernet using PoE IEEE 802.3af
C	Link LED	**Off:** Ethernet link is not established. **Green:** Ethernet link is established. **Green Blinking:** Ethernet activity is occurring.
D	Data Rate LED	**Off:** 10 Mbps data rate **Green:** 100 Mbps data rate
E	RS-232/ RS-422/ RS-485	8-pin RJ-45 female. Used to transmit and receive serial binary data to and from serial controllable devices. Ports 1-4 RS-232 /RS-422 CTS/RTS handshaking. Ports 5-8 RS-232/RS-422/RS-485 CTS/RTS handshaking. CTS/RTS Handshaking availability based on component profile. See RS-232/422/485 Wiring for pinouts.
F	IR	6-pin Screw Down Plug-in Connector. Used to send IR signals to control devices with an IR input or IR receiver via an IR flasher (5V tolerant only). See IR Wiring for important precautions regarding IR functionality before making any connections.
G	Relay	9-pin Screw Down Plug-in Connector. See Relay Wiring for pinouts. Normally Open (NO) Normally Closed (NC) to control devices requiring basic on/off operation. DC Voltage Max: 30V DC 1A.
H	GPIO	9-pin Screw Down Plug-in Connector. See GPIO Wiring for pinouts. **GPIO Input:** When configured as an input, the processor will look for a low (<0.8V DC) or a high (>2.4V DC) state. Minimum 0V DC / Maximum 12V DC **GPIO Output:** When configured as an output, the port provides a binary output of 0-12V DC 150mA max.
I	⏚	Ground Connector - used to connect to a suitable ground reference when using Power over Ethernet (PoE).
J	Power Input	12V DC 1.25A - Connect to power supply when not using PoE.

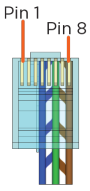
Wiring and Connections

RS-232/422/485 Wiring

When making connections, label the cables with the source and destination. This will make modifications and troubleshooting easier.



RS-232 Pinouts



RJ-45 Connector (Gold Pins Facing Up)

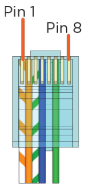
Pin 1:	-------	**Pin 5:**	**RXD (RS-232)**
Pin 2:	-------	**Pin 6:**	**TXD (RS-232)**
Pin 3:	-------	**Pin 7:**	**CTS (RS-232)**
Pin 4:	**GND (RS-232)**	**Pin 8:**	**RTS (RS-232)**

- Pins 7 & 8 are only required for CTS/RTS handshaking.
- Wire coloring is included to identify the pins used for this connection. Colors shown do not represent any wiring standard.

⚠ **IMPORTANT!** When wiring to this port, DO NOT connect any wires within the cable that are not required for communication.

Note:
CTS/RTS Handshaking availability based on component profile.

RS-422/RS-485 Pinouts



RJ-45 Connector (Gold Pins Facing Up)

Pin 1:	**RS+ (RS-422/485)**	Pin 5:	-------
Pin 2:	**RS- (RS-422/485)**	**Pin 6:**	**TX- (RS-422/485)**
Pin 3:	**TX+ (RS-422/485)**	Pin 7:	-------
Pin 4:	**GND (RS-422/485)**	Pin 8:	-------

- Wire coloring is included to identify the pins used for this connection. Colors shown do not represent any wiring standard.

⚠ **IMPORTANT!** When wiring to this port, DO NOT connect any wires within the cable that are not required for communication.

RJ-45 to DB9 Adapters

Savant offers RJ-45 to DB9 adapters in a variety of configurations that can be used for RS-232/422/485 control.

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

⚠ **IMPORTANT!**

If you are using RJ-45 to DB9 adapters not supplied by Savant:

- Ensure that any wires required for communication/control are terminated within the adapter.
- Ensure that all wires NOT required for communication/control are NOT terminated in the connector.
- Ensure that the unused wires in the connector are cut to prevent them shorting out, as they are still terminated in the RJ-45 connector on the controller side.

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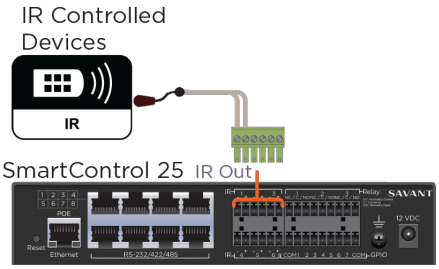
IR Wiring

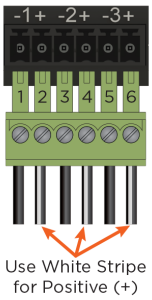
IR connections are made using 6-pin Screw Down Plug-in Connectors supplied with controller. The wire slips into the hole and locks with the screw located at the top of the connector.



IMPORTANT! IR Wiring Precautions

- Ensure that all IR emitters are within 15 feet (4.6 meters) from the controllers location.
- Use of 3rd 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 Pinout



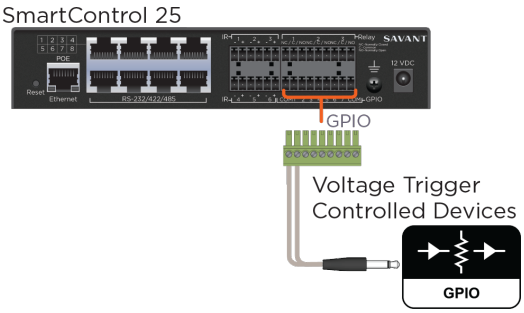
1: IR 1 -	
2: IR 1 +	
3: IR 2 -	
4: IR 2 +	
5: IR 3 -	
6: IR 3 +	

Note:

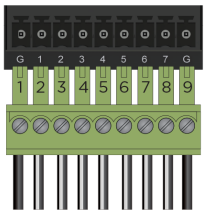
While not shown in the diagram above, IR connections 4 to 6 follow the same wiring as 1 to 3.

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 2-8 are used for input or output depending on configuration.



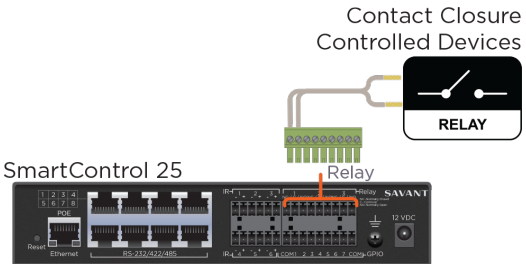
GPIO Pinout



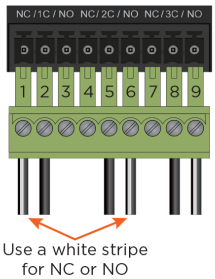
1: GND	6: GPIO 5
2: GPIO 1	7: GPIO 6
3: GPIO 2	8: GPIO 7
4: GPIO 3	9: GND
5: GPIO 4	

Relay Wiring

Relay ports are used when a device is controlled via a normally open (NO) or normally closed (NC) relay.



Relay Pinout



1: NC 1	6: NO 2
2: C 1	7: NC 3
3: NO 1	8: C 3
4: NC 2	9: NO 3
5: C 2	

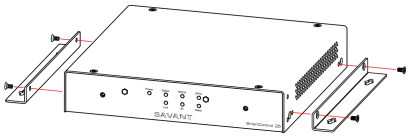
NC = Normally Closed
C = Common
NO = Normally open

Installation

The SSC-P025 can be placed on a 1U rack shelf, wall mounted using the side-mounting brackets SMB-1000-xx or rack mounted using the rack mount brackets RMB-0025-xx.

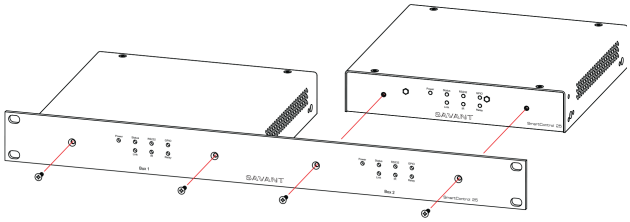
Wall Mounting (SMB-1000-xx)

Use the supplied screws to install the brackets to the SSC-P025 as shown.



Rack Mounting Bracket (RMB-0025-xx)

Use the supplied screws to install the faceplate to the SSC-P025 as shown.



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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.

Device Network Connections

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.

Managing IP Addresses

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 a Static IP Address

Refer to the **Retrieving and Setting IP Addresses for Savant Devices - Application Note** located on the **Savant Community.**

Setting DHCP Reservation

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**
  1. Disconnect the controller from the DC power source
  2. Wait 15 seconds and then reconnect.
- **Hot Plug the Ethernet (LAN) Connection**
  1. Disconnect the Ethernet (LAN) connection from the controller.
  2. Wait 15 seconds and then reconnect.

Additional Information

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

- SmartControl 25 (SSC-0025/SSC-P025) Deployment Guide

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