

Savant

Savant® Power Director (HST-DIRECTOR-01) Quick Reference Guide

Box Contents

- (1) Savant Power Director (HST-DIRECTOR-01)
- (1) AC power cord (064-0914)
- (1) 6-pin screw down connector (028-9352)
- (3) #6 x ¾ SS pan head screws (039-0329)
- (1) Product Regulatory Statement (009-1950)

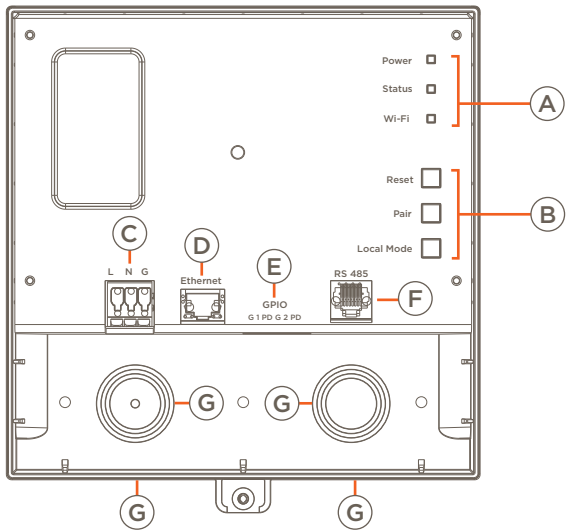
Specifications

Environmental				
Temperature	-22° to 122° F (-30° to 50° C)			
Humidity	Up to 100% Humidity (condensing)			
Location	Indoor and Outdoor. (Designed to meet NEMA 3R)			
Dimensions and Weights				
	Height	Width	Depth	Weight
HST-Director	7.48 inch (190 mm)	7.08 inch (180 mm)	2.52 inch (64 mm)	1.5 lbs (.68 kg)
Shipping	9.0 inch (229 mm)	9.0 inch (229 mm)	3.0 inch (76.2 mm)	3.1 lbs (1.41 kg)
Power				
Power Supply	120V AC			
Maximum Power	15 Watts			
Standards				
Bluetooth	Bluetooth Low Energy 5.1 (BLE)			
Wi-Fi	2.4/5.0 GHz IEEE 802.11 a/b/g/n/ac			
Ethernet	IEEE 802.3af			
Regulatory				
Safety and Emissions	FCC Part 15		IC	
	FC		IC	
RoHs	Compliant			
FCC ID:	ASU-B3X2L9TQ7WA			
IC:	10052A-B3X2L9TQ7WA			
Contains FCC ID:	VPYLB1ZM			
Contains IC:	772C-LB1ZM			
Minimum Supported Release				
Software Release	SavantOS 11.1			

Additional Information

- The Director can communicate with up to 20 power and lighting modules.
- During installation, limit the distance between the Director and the power/lighting modules to 6 ½ feet (2 meters) or less.
- Wi-Fi is available when a wired Ethernet connection is not accessible.

Front Panel



A Status LEDs - See [Status LEDs and Buttons](#) for descriptions.

B Buttons - See [Status LEDs and Buttons](#) for descriptions.

C L/N/G Terminal

Ethernet Port

- 8-Pin RJ-45 Port
- 10/100/1000 Base-T auto negotiating port with link/activity LEDs

GPIO Input - When configured as an input port, the processor looks for one of the following:

Low state = <0.8V DC.

E High state = >2.4V DC.

Minimum = 0V DC / Maximum = 12V DC

GPIO Output - When configured as an output, the port will provide a binary output of either 0 or 12V DC (150mA max)

F RS-485 - Used to control devices with RS-485 input ports.

G Knockout Locations



IMPORTANT! In the descriptions below, **Home Network** refers to the local Wi-Fi or wired network.

Status LEDs and Buttons

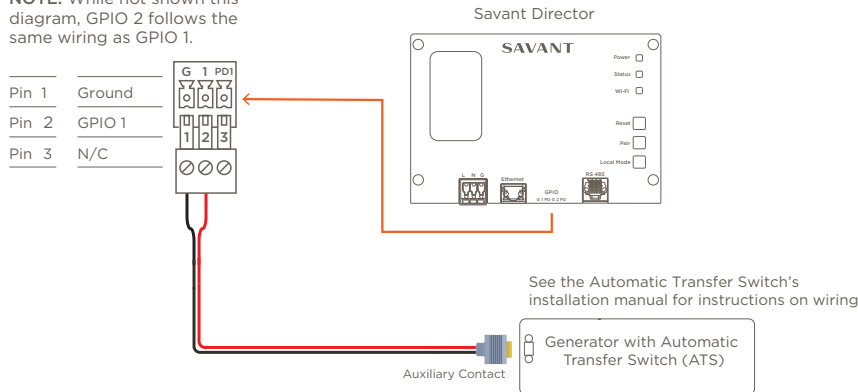
Power (LED)	Solid Green - Power is applied.
	Off - No power. Verify the power source is supplying the proper voltage.
Status (LED)	Amber - The Director is booting/rebooting.
	Amber Blinking - The Director is installing Firmware Updates, Host Software is downloading/installing, or other controllers are updating.
	Blue - The Director completed startup but doesn't have an IP Address.
	Blue Blinking - The Director is in pairing mode and scanning for Power Modules.
	Green - Normal operation mode.
	Red Blinking - The Director is unable to communicate with paired Power Modules or Controllers.
	Red Blinking (fast blink) - The Director is unable to communicate with paired Power Modules or Controllers.
Wi-Fi Status (LED)	Red Blinking (three fast blinks) - The Pair button was pressed, but the system is already configured. See the description in the Pair (Button) fields below.
	Blue - Access Point (Local) Mode is enabled.
	Green - The Director is provisioned, and communicating with Wi-Fi. NOTE: The Savant Power & Light App configures the wireless interface.
	Red - The Director is provisioned to Wi-Fi but unable to communicate with that network.
	Red Blinking (fast blink) - The Reset button was pressed and held for 10 seconds. See the description in the Reset (Button) fields below.
Reset (Button)	Red Blinking (three fast blinks) - The Local Mode button was pressed, but the Director is already connected to a Wi-Fi network.
	Off - The Director is not provisioned to Wi-Fi and Access Point (Local) Mode is Off.
	Press and Release - Reboots the Director, and all settings are left intact.
	Press and hold (5 secs) - Press and hold for 5 seconds until the Status LED blinks red, then release. The Director reboots, all the network settings are cleared, and the Director returns to provisioning mode. Network and password settings are preserved.
Pair (Button)	Press and hold (10 secs) - Factory Reset. Press and hold for 10 seconds until the Status and Wi-Fi LEDs blink red, then release. After the reboot, the network settings, configuration, logs, and passwords are cleared.
	NOTE: The Director will continue to be associated with a Home in the Savant Cloud. A call to Savant Support may be necessary to redeploy to a different Home.
	Press and Release - Launches On-Device Pairing. In this mode, the Director locates any power or lighting modules that are also in pairing mode, and connects with them.
Local Mode (Button)	Press and Hold - Press and hold for 5 seconds, then release to clear the configuration running on the Director and then initiate a reboot. Network and password settings are preserved.
	NOTE: A gear icon displayed on a power or lighting module's LCD screen indicates the module is in pairing mode.
	Press and Release - Press and release to put the Director into Access Point (Local) Mode. Press and release again to take it out of this mode. Local Mode times out after 30 minutes of no activity.
	- In Local Mode the Director functions as an Access Point and can communicate directly with the Savant Power & Light App over Wi-Fi. - Local Mode is disabled when the Director is provisioned to Wi-Fi.

GPIO Wiring

Automatic Transfer Switch (ATS)

General Purpose Inputs/Outputs (GPIO) are binary I/O ports used on the Savant Director and monitors the state of whether a home is using On-Grid or Generator power. A signal of less than 0.8V DC indicates a low state and a signal of greater than 2.4V DC indicates a high state. When configuring a generator power source in the Savant Power & Light App there is a setting, **ATS is Low On-Grid**, which can be either enabled or disabled. When enabled, a signal of less than 0.8 volts indicates the ATS is in a state where On-Grid power is feeding the electrical panel and a signal of greater than 2.4V DC indicates the ATS is in a state where Generator power is feeding the electrical panel. A wiring diagram is shown below. Refer to the installation manual for wiring diagrams on how to connect to the ATS.

NOTE: While not shown this diagram, GPIO 2 follows the same wiring as GPIO 1.

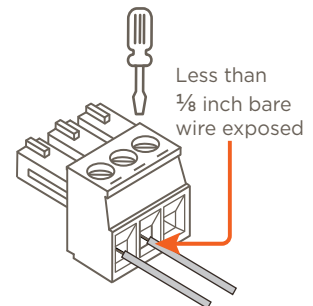


Microgrid Interconnect Device (MID)

In addition to monitoring an ATS switch, the GPIO can monitor and inform the Director the state of an inverter's Microgrid Interconnect Device (MID). As described in the previous section, a signal of less than 0.8V DC is considered a low state and a signal of greater than 2.4V DC is considered a high state. Refer to the installation manual of the inverter when making connections.

Making Connections

1. Remove power if power is applied
2. Pull to remove the terminal block from the Director's side panel.
3. With a small flat-bladed screwdriver, turn the screws on the top of the connector counterclockwise until the silver crimps on the front open enough to slide a wire into the square slot.
4. Strip back $\frac{1}{4}$ inch of insulation from each wire. Insert the stripped wire into the proper port. Do not allow more than $\frac{1}{8}$ inch of the bare wire exposed. See image.
5. Turn the screws clockwise until the silver crimps tighten around the wire. Tug on the wire a bit to verify the wire is securely installed.
6. Continue until all wires are connected.
7. Plug the terminal block into the appropriate port.
8. Repeat steps 2-7 for any additional GPIO ports.
9. Reapply power.



Installation

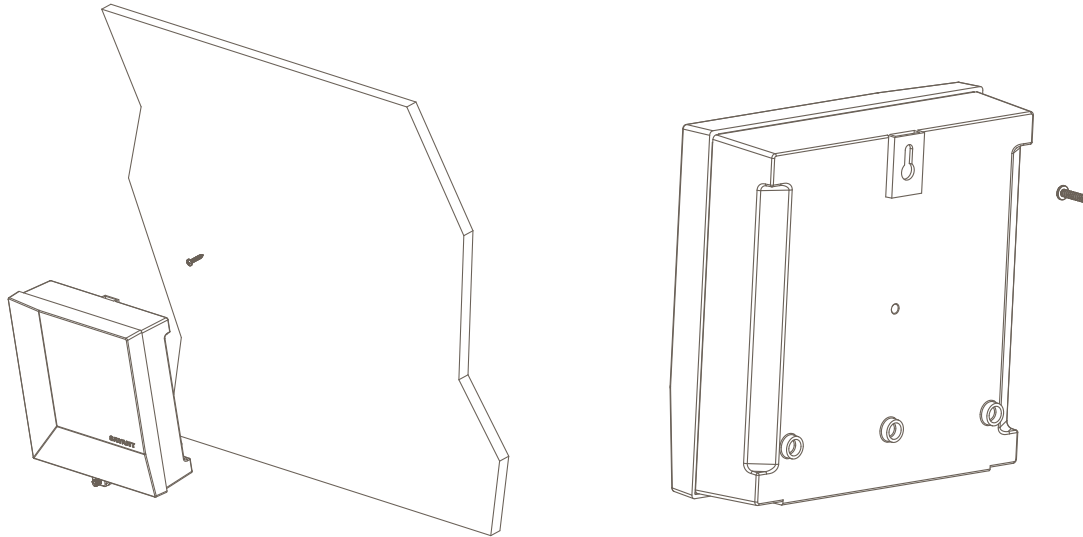
The Director can be placed on a solid flat surface such as a table, cabinet, rack, or shelf or mounted onto a wall or similar structure. When installing, place the Director within 6 $\frac{1}{2}$ feet and in direct line of sight of the power and lighting modules.

NOTE: Recommended maximum height is 6 $\frac{1}{2}$ feet no minimum height, but should follow NEC guidelines or local electrical code.

Wall Mount

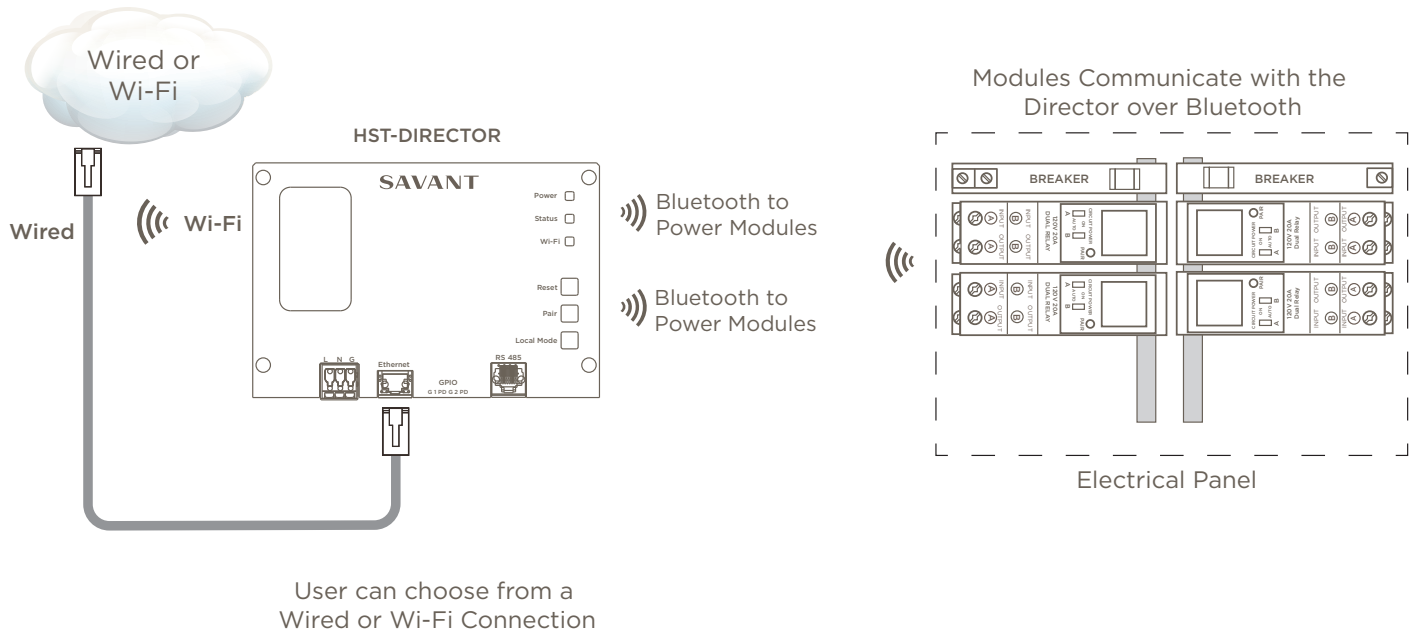
1. Remove cover by loosening the thumb screw and set aside. Determine wire entry location from bottom or rear knockout.
2. Drill the selected location to fit chosen UL knockout entry fitting (not included). If outdoors, use an UL approved cable gland fitting of desired size.
3. Install desired fitting and provided AC cord.
4. Terminate cable, black to L (Line), white to N (Neutral), green to G (Ground). Secure the three lever locks.
5. Locate the desired mounting location, install provided #6 SS pan head screw and drive in to surface leaving screw head $\frac{1}{8}$ inches protruding.

6. Hang the Director on the keyhole provided on the rear.
7. Re-install cover by hooking the top over the rear enclosure and close until tightened with the thumb screw.



System Overview

Use the diagrams below as a guide for when designing a system.



Network Requirements

⚠ IMPORTANT! Savant recommends that users open and thoroughly read the [Savant Device Networking Guidelines](#) document on the [Savant Customer Community](#) before deploying any network-connected Savant products.

Documentation

Savant Power System Deployment Guide - Savant Power & Light App - This guide includes wiring diagrams, power/lighting module configuration information, Savant Power & Light App setup, and other information regarding the installation and configuration of a Savant Power system.

All documentation is available on the [Savant Customer Community](#).