SAVANT

Echo / Metropolitan Wireless Configurable Keypad for Basic DMX Control
Quick Reference Guide

Box Contents (WPX-xxLV06, WIX-xxLV06)

(1) Keypad (faceplate not included)

(1) 4-pin Cable Control Station Pigtail (064-0417)

(2) Double Height Keypad Buttons (074-0927) - WPX Only

(2) Double Height Keypad Buttons (074-0808) - WIX Only

(1) Product Regulatory Statement (009-1950)

Optional Accessories

– One to Four Gang Wall Plates (FIx-0S0xxP)

Specifications

Environmental	
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 90% Relative Humidity (non-condensing)
Location	Indoor Use Only

Dimensions and Weights				
	Length	Width	Depth	Weight
WPX-xxLV06 WIX-xxLV06	4.13 inch (10.50 cm)	1.72 inch (4.37 cm)	.97 inch (2.46 cm)	.30 lb. (0.13 kg)
Shipping	7.0 inch (17.78 cm)	4.5 in. (11.43 cm)	3.0 in. (7.62 cm)	.60 lb. (0.27 kg)

Installation Recommendations

Savant recommends as a minimum:

– An open-backed low voltage bracket installed on the interior walls and a closed-back electrical box on exterior walls.

– An installation depth of at least 1 ¼ inches (3.2 cm).

Power	
Input	24V DC
Average Power Consumption	5W
Maximum Power Consumption	12W

Maximum Wiring (DMX keypad to DMX Driver)	
#20 AWG	328 feet (100 meters)
#18 AWG	492 feet (150 meters)
#16 AWG	618 feet (188 meters)
#14 AWG	984 feet (300 meters)

Regulatory			
Safety and Emissions	FCC Part 15 Class B FC	CE Mark CE	UKCA UKCA
RoHS	Compliant		

Minimum Supported Release	
da Vinci 10.0	

Products

Configurable Keypad - Echo Style (WPX-xxLV06)

Configurable Keypad - Metropolitan Style (WIX-xxLV06)

Front Panel
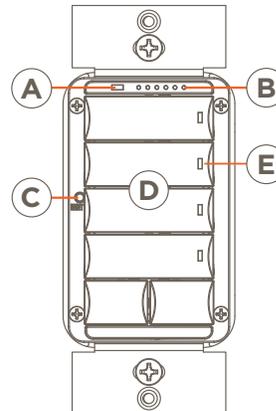
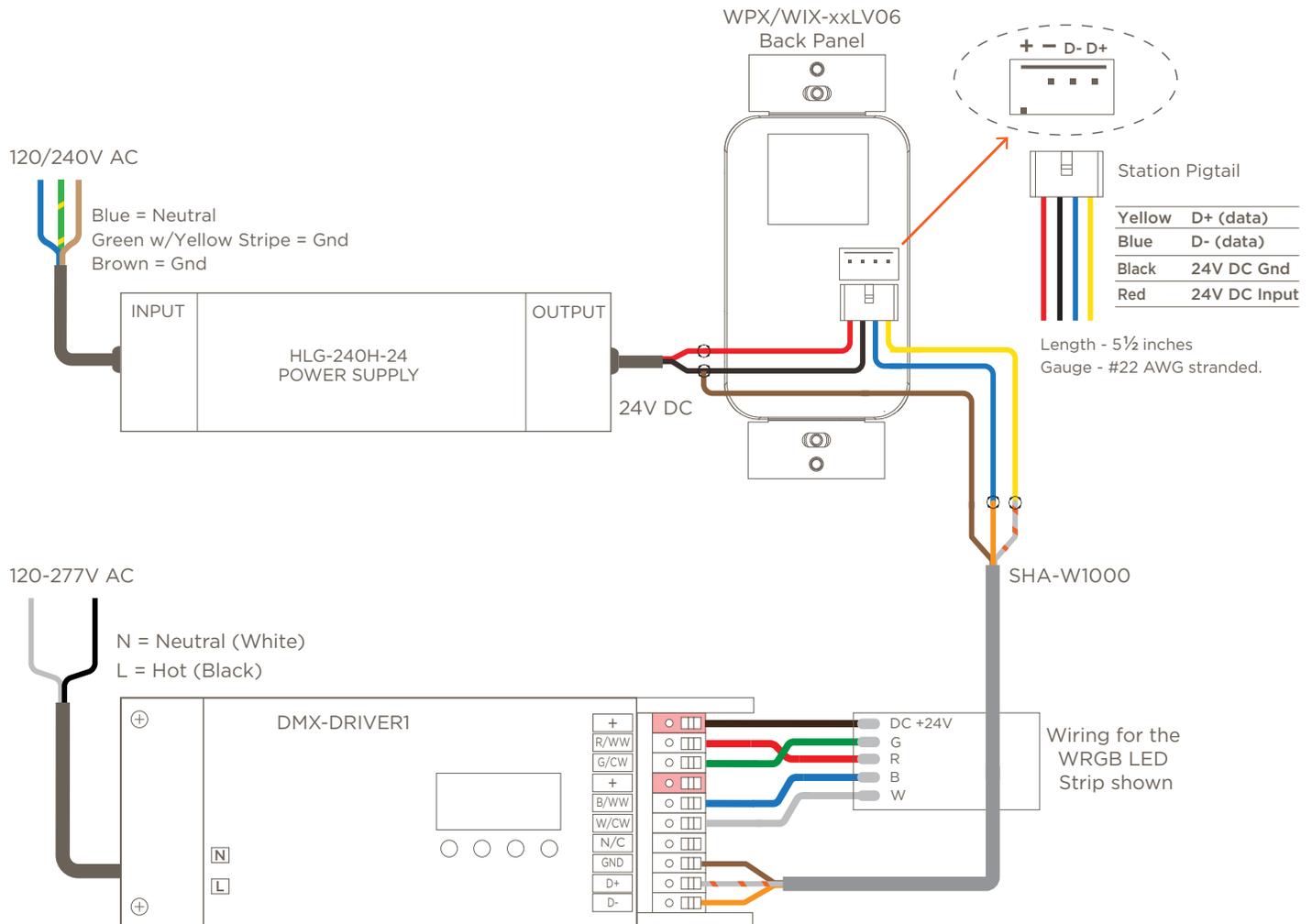|	
A	**Ambient Light Sensor** - Detects the level of ambient light in the room and adjusts the brightness of the button and dimming LEDs. The ambient light sensor is enabled and disabled in Blueprint's Lighting and Shade manager.
B	**Dimming Level Indicators** - These LEDs can indicate any of the following: – The power being applied to the load. The LEDs turn on from left to right as power is increased and switch off from right to left as power is decreased. – The power being applied to the load from any scenes created in Blueprint or the Pro App. – The status of the keypad during the setup and provisioning process. See the LED States section.
C	**Reset Button** **Press and release** - Reboots the keypad. **Press and hold** - Press and hold for 10 seconds, then release to perform a factory reset. A factory reset erases the keypad's stored address and removes any assigned IP Addresses.
D	**Buttons** - Programmable buttons. See the **Low Voltage Deployment Guide** for instructions on how to program. This guide and other lighting information are available on the **Keypad Lighting Documentation Portal** in the Savant Customer Community.
E	**Button LEDs** - When configured and bound to a Savant system, the LED's state is defined by the selection made in the **LED Behavior** and **LED Color** fields in the Lighting and Shades Device Manager.

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Wiring Diagrams

The keypad's rear panel includes a 4-pin connection that accepts the supplied keypad station pigtail cable. The connector is keyed to avoid plugging the connector backward. Use wire-nuts or an approved alternative when making the connections. Wiring for both the DMX-DRIVER1 (5 meter LED strips) and DMX DRIVER3 (10 meter LED strips) are shown in the diagrams below.
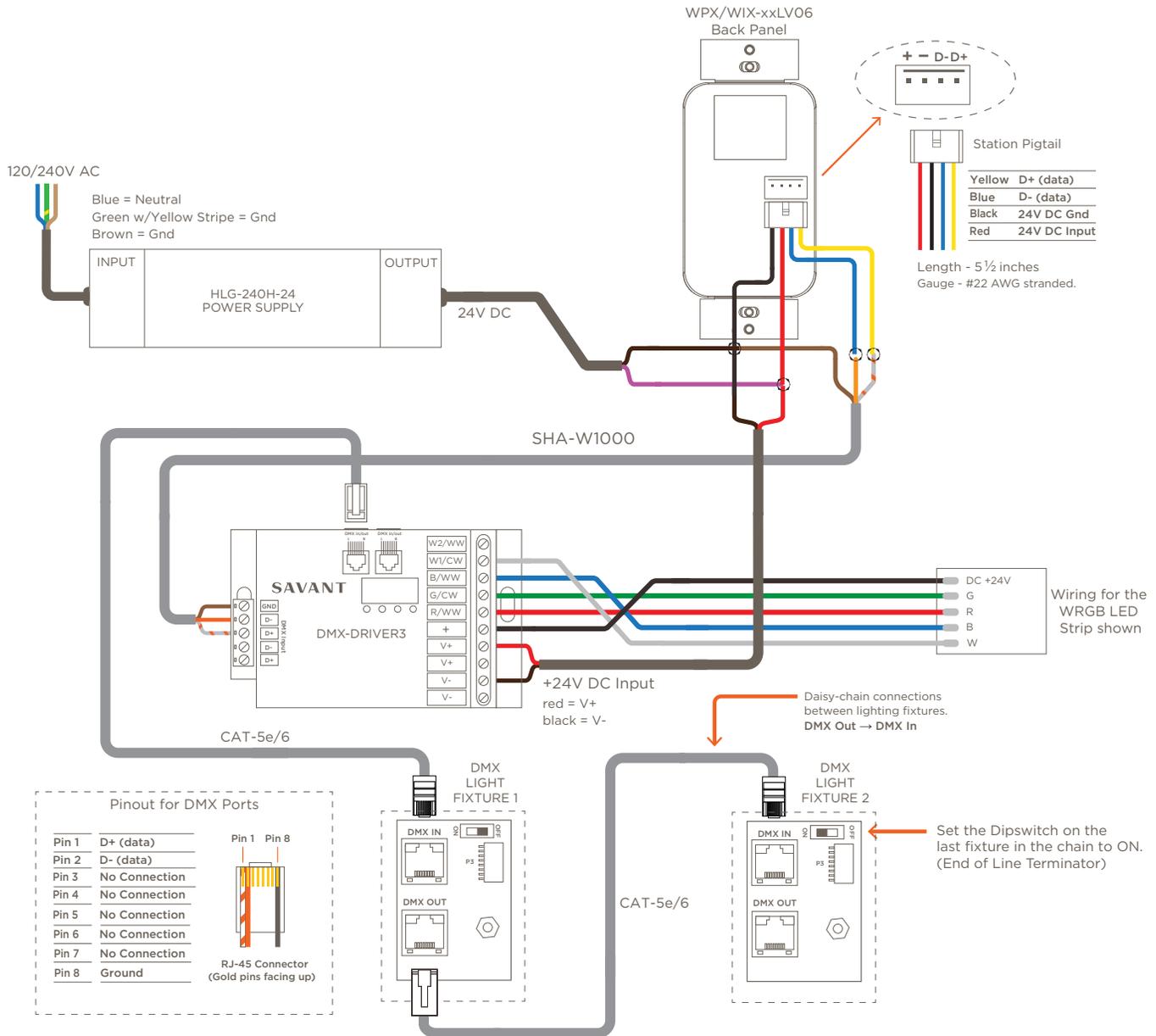
DMX-DRIVER1

WPX/WIX-xxLV06
Back Panel

+ − D- D+

120/240V AC

Blue = Neutral
Green w/Yellow Stripe = Gnd
Brown = Gnd

INPUT

HLG-240H-24
POWER SUPPLY

OUTPUT

24V DC

Station Pigtail

Yellow	D+ (data)
Blue	D- (data)
Black	24V DC Gnd
Red	24V DC Input

Length - 5½ inches
Gauge - #22 AWG stranded.

SHA-W1000

120-277V AC

N = Neutral (White)
L = Hot (Black)

DMX-DRIVER1

+
R/WW
G/CW
+
B/WW
W/CW
N/C
GND
D+
D-

N
L

DC +24V
G
R
B
W

Wiring for the
WRGB LED
Strip shown

Additional Information

– Savant recommends using the SHA-W1000 cable when making connections between the DMX-DRIVER1 and DMX keypad. Shown in the diagram above is the SHA-W1000 cable with the recommended wire colors and connections.

– Savant recommends the HLG-240H-24 power supply shown in the diagram. This transformer can supply the 24V DC needed to power the DMX keypad. However, other power supplies such as the SHA-POWSINGLE transformer or the +/- ports on the SKL-3040/1010 keypad power and control module can be used.

– See the Maximum Wiring section in the table above when making connections between the DMX Keypad and DMX Driver.

– Up to 32 DMX devices are supported on each DMX keypad. This includes the combination of drivers, lighting fixtures, and LED strips. Do not exceed 32 RDM devices as listed in the RDM tab of the OLA server.

– Do not run DMX signaling in the same conduit as the high voltage AC lines.

– Fixtures/loads will not illuminate when there is no DMX signal present

– See the DMX Keypad Deployment Guide on the Savant Customer Community for additional wiring diagrams.

DMX-DRIVER3

The image below shows the DMX-DRIVER3 providing control to both an LED strip and a USAI DMX lighting fixture. Use the diagram below for reference when connecting the various type loads.

Station Pigtail

Yellow	D+ (data)
Blue	D- (data)
Black	24V DC Gnd
Red	24V DC Input

Length - 5 ½ inches
Gauge - #22 AWG stranded.

WPX/WIX-xxLV06 Back Panel

120/240V AC
Blue = Neutral
Green w/Yellow Stripe = Gnd
Brown = Gnd

HLG-240H-24 POWER SUPPLY
INPUT / OUTPUT
24V DC

SHA-W1000

Wiring for the WRGB LED Strip shown

DMX-DRIVER3
CAT-5e/6

+24V DC Input
red = V+
black = V-

Daisy-chain connections between lighting fixtures.
DMX Out → DMX In

Pinout for DMX Ports

Pin 1	D+ (data)
Pin 2	D- (data)
Pin 3	No Connection
Pin 4	No Connection
Pin 5	No Connection
Pin 6	No Connection
Pin 7	No Connection
Pin 8	Ground

RJ-45 Connector
(Gold pins facing up)

DMX LIGHT FIXTURE 1

DMX LIGHT FIXTURE 2

CAT-5e/6

Set the Dipswitch on the last fixture in the chain to ON. (End of Line Terminator)

Additional Information

- Savant recommends using the SHA-W1000 cable when making connections between the DMX-DRIVER3 and DMX keypad. Shown in the diagram above is the SHA-W1000 cable with the recommended wire colors and connections.
- Savant recommends the HLG-240H-24 power supply shown in the diagram. This transformer can supply the 24V DC needed to power the DMX keypad and LED driver. However, other power supplies such as the SHA-POWSINGLE transformer or the +/- ports on the SKL-3040/1010 keypad power and control module can be used.
- See the Maximum Wiring section in the table above when making connections between the DMX Keypad and DMX Driver.
- Up to 32 DMX devices are supported on each DMX keypad. This includes the combination of drivers, lighting fixtures, and LED strips. Do not exceed 32 RDM devices as listed in the RDM tab of the OLA server.
- Maximum distance of the DMX cable is 1600 feet. This is the total distance daisy-chained through all fixtures.
- Set the dipswitch on the last fixture in the chain to ON. The last fixture is regarded as an end of line terminator.
- Do not run DMX signaling in the same conduit as the high voltage AC lines.
- Fixtures/loads will not illuminate when there is no DMX signal present
- See the DMX Keypad Deployment Guide on the Savant Customer Community for additional wiring diagrams.

Removal and Installation

Whether installing a new keypad or replacing an existing one, refer to the instructions below.

⚠ IMPORTANT NOTES:

- When working with electricity, even low voltage electricity, follow all standard electrical and safety precautions to avoid leaving exposed or bare wires that can short and cause damage to the equipment or yourself.
- Savant recommends a licensed electrician be used to make the electrical connections. When working with AC voltage, a licensed electrician is required.

1. At the main breaker panel, switch off the breaker that supplies power to the keypad.

   **NOTE:** Skip steps 2-5 when this is a new installation.

2. Remove the keypad's wall plate from the wall plate adapter.

3. Unscrew the two #6-32 x ¼ inch flat head screws and remove the wall plate adapter.

4. Unscrew the two #6-32 x ¾ inch pan head screws and pull out the existing keypad.

5. Unplug the 4-pin connector from the rear of the keypad.

6. Using the wiring diagrams from the previous few pages, connect the wires from the 4-pin connector to the in-wall wires using an approved wire nut or a similar alternative. If replacing an existing keypad, ensure the connections made to the 4-pin connector are correct and secure.

7. Plug the pigtail wire into the rear of the keypad. The connector is keyed and can only be plugged one way.

8. Insert the keypad into the electrical switch box and secure using the #6-32 x ¾ inch flat head screws provided. DO NOT use a powered screwdriver. A powered screwdriver can over-tighten the screws.

9. Install the wall plate adapter using the #6-32 x 1/4 inch screws supplied with the adapter.

10. Switch on the breaker to apply power to the keypad. The keypad will go through an initial boot sequence and when the sequence completes, the six LEDs on the dimming array will begin blinking white in an alternating pattern. This pattern indicates the keypad is not currently communicating on the local Wi-Fi network. See the LED States section on the next page for more LED sequence information.

11. The next step is to provision the keypad to the local Wi-Fi network. Information on provisioning is available in the **Wireless Keypad Provisioning Guide**. This guide and others can be located from within the **Lighting Documentation Portal** on the Savant Community

Wall Plate Adapter   Wall Plate

Electrical Switch Box

Mounting Screws

Wall Plate and Adapter Sold Separately

12. With the keypad is provisioned, snap the wall plate into the wall plate adapter. The keypad is now ready to be added to a Savant system. Blueprint programming information is available in the **DMX Low Voltage Deployment Guide**. This guide is also available from within the **Lighting Documentation Portal** on the Savant Community.
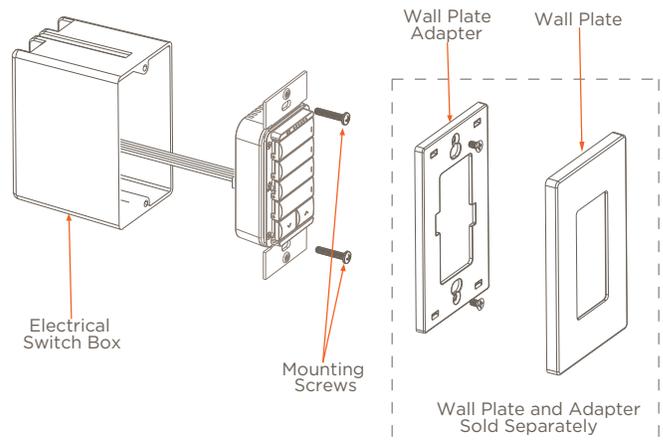
LED States

ℹ️ **HELPFUL INFORMATION!** During the setup process, or if the keypad is not functioning in a Savant system, the dimming LEDs are programmed to blink a specific sequence to indicate the keypad's state. To find the keypad's state, press any button on the keypad, and the dimming LEDs will begin blinking. These LEDs will blink this specific sequence for about 30 seconds and then stop. After the blinking stops, press any button on the keypad and the LED's will begin blinking. Once the keypad is connected to the Wi-Fi network and communicates with the Host (functions normal in a Savant system), the dimming LEDs track against the device the keypad is controlling.
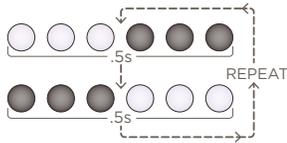

Three dimming LEDs alternate left to right.

The keypad can't communicate with the local wireless network. In this state, no IP Address is assigned. Use the Savant SmartConnect App to communicate with the keypad over Bluetooth and provision the keypad to the network.
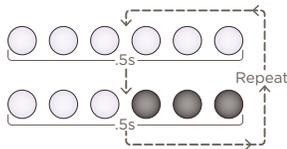
Three dimming LEDs on left are solid and three dimming LEDs on the right blink.

The keypad is connected to the local network (IP Address is assigned) but not communicating with the system Host. Possible reasons why the keypad is not communicating with the Host are:

- No Blueprint configuration was uploaded to the Host.

- The ethernet cable on Host is unplugged or bad.
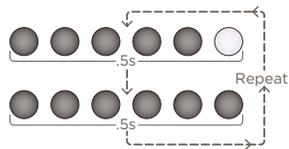
Rightmost dimming LED either blinks or remains solid.

The keypad has entered the bootloader mode. The bootloader state typically indicates a firmware update is in progress.