# SAVANT

# Metropolitan Wireless Keypad - WIK-xxx104 Quick Reference Guide

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The WIK-SWS104 (snow white) and WIK-LAS104 (light almond) wireless keypads are specifically designed to function within the Savant Pro System to control most lighting loads. The keypads incorporate a push button rotary dial as well as four additional buttons to allow a user more flexibility to control other functions such as audio, video, and shades.

The Savant wireless keypads replace any standard 120V AC light switch or dimmer and can be wired into either a standard or no neutral configuration. With the addition of the Savant Auxiliary Control, these keypads can accommodate most 3-way wiring designs for multi-location control.

Finally, the WIK-xxx104 utilizes the local 802.11 b/g/n wireless network to allow it to be added to the Savant Pro System for complete control of lighting as well as other switching and dimming functions.

IMPORTANT! Using this product in a manner that is not consistent with this document will void your warranty.

#### **Box Contents**

- Metropolitan Style Keypad without faceplate
- (2) Mounting Screws ( $6-32 \times 3/4$  inch)
- (5) Wire Nuts
- Quick Reference Guide (this document)

#### **Optional Accessories**

- 1- to 4-Gang Faceplates
- Black Conversion Kits

#### **Specifications**

Environmental			
Temperature	32° to 104° F (0° to 40° C)		
Humidity	10% to 90% Relative Humidity (non-condensing)		
Location	Indoor Use Only		
Dimensions			
Height	4.13 in (10.49 cm) / Shipping 7.0 in (17.78 cm)		
Width	2.38 in (6.05 cm) / Shipping 4.5 in (11.43 cm)		
Depth	2.08 in (5.28 cm) / Shipping 3.0 in (7.62 cm)		
Weight	0.60 lb (0.272 kg)		
Recommended Back Box Dep	oth Dimensions		
All Metropolitan Style Keypads re – Recommended – 3.50 in (8.89 – Minimum – 2.25 in (5.72 cm) d			
Power			
Input	120V AC at 60 Hz		
Power: Load (Max)	600W 5A @ 120V AC (See Derating Table)		
Supported Load Types			
Standard Configuration	Incandescent, Electronic and Magnetic Low Voltage, Dimmable CFL, Dimmable LED		
No Neutral Configuration	Incandescent Only (minimum load = 25 Watts)		
	WARNING! Using a keypad in a No Neutral configuration with loads other than incandescent can overheat the device and cause damage.		
Standards			
Wireless	802.11 b/g/n		
Security	WPA™, WPA2™, WPA1™ + WPA2™, WEP		
Regulatory			
Safety and Emissions	FCC Part 15   UL For more details, refer to the <mark>Regulatory</mark> section.		
Contains FCC ID:	TLZ-CU277		
Contains IC:	6100A-CU277		
RoHs	Compliant		
Minimum Supported Release			



Ambient Light Sensor - Detects the level of ambient light in the room and adjusts the LED brightness on the front panel. The ambient light sensor operation is modified using RacePoint Blueprint<sup>®</sup>

**RESET Button** - The reset button has two functions:

- Press and Hold (hold for 5 seconds) Resets keypad to AP Mode After five seconds, all LEDs on the front panel illuminate, remain on for two seconds, and then flash twice. button LEDs blink in an alternating pattern. The keypad is now ready to be provisioned. Refer to the Metropolitan Style Wireless Lighting - Provisioning guide on how to provision the keypad.
- Press and Release Calibrates keypad.
  - After releasing, all LEDs illuminate for about six seconds and then flash twice.
  - The load characteristics are checked to determine the best phase for the attached load.
  - The control parameters for the no neutral operation, if applicable, are determined.

## HELPFUL INFORMATION!! (For Press and Release)

After the calibration is complete, the keypad resets and the button LEDs will blink a specific pattern. The pattern indicates if the keypad was previously connected to a wireless network. Refer to the table in the Electrician Removal/Installation section below for the states the keypad could be in after a reset.

C	<ul> <li>Keypad Dial and Buttons - Includes four buttons and one rotar otary dial are six dimming LEDs that are used to track the brit the dimming LEDs track the brightness of the scene created.</li> <li>Each button includes a dual purpose LED. When configured in configured they are used as indicators when provisioning the Electrician Removal/Installation section below for the states t</li> <li>HELPFUL INFORMATION! The rotary dial does not suppor signaling for volume control. To control volume using the volume control over either RS-232 or IP.</li> </ul>		
D	Service Switch – Used to power cycle the device, disconnect keypad whenever the load is changed. MIMPORTANT! When replacing a load (bulb), the power to load.		
E	Green	Ground - Wire to Gnd.	
F	White	Neutral - Return path for voltage.	
G	Yellow	Traveler - Wire to one or more Auxiliary Con	
H	Red	Load - Wire to the load.	

Black	Line - Wire to hot from AC power source.

For Product Info





The keypad reboots and reverts to Access Point Provisioning Mode (AP Mode). In this mode, the two top

tary dial for the control of several devices. Above the rightness of the load. Once configured in Blueprint

n Blueprint, the LEDs track the scene state. When not keypad to a network. Refer to the table in the the keypad could be in after a reset.

ort controlling the volume on devices that require IR the rotary dial, the controlled device must support

power from the load (red wire), or calibrate the

the load should be toggled Off before removing the

ntrols for multi-location control.

#### Multi-Gang Installations/Derating

When combining multiple dimmers and/or keypads into a multi-ganged box, derating is required. Derating requires removing the outside tabs from either one or both sides of each device so the heat generated is dissipated. The keypad (WIK) generates heat and needs to be derated. The image below displays examples of 4, 3, and 2-gang scenarios.





- Inside Gang - Tabs are removed from both sides.

- Outside Gang - Tabs are NOT removed from outside edges.

Note: When combining more than one Savant lighting device into a multi-ganged box and derating is not an issue, the tabs from either one or both sides of the device may need to be removed to fit all devices into the electrical box. Refer to the images above

#### **Derating Table**

Device	Type of Load	1-Gang	2-Gang	3-Gang	4-Gang
Keypad	Incandescent	600W	550W	500W	500W
Keypad	CFL/LED	150W	150W	150W	150W
Keypad	Magnetic Low Voltage	600VA (450W)	550VA (400W)	500VA (375W)	500VA (375W)
Keypad	Electronic Low Voltage	450W	400W	375W	375W

#### **Electrician Removal/Installation**

🗥 ELECTRIC SHOCK! The 120V AC, 60 Hz source power poses an electrical shock hazard that has the potential to cause serious injury to installers and end users.

### IMPORTANT NOTES!

- A licensed electrician is required to install any of the Metropolitan style lighting devices. Isolate and turn off power at the main breaker panel prior to installing any electrical devices.
- For supply, neutral, and ground connections use only #14 AWG or larger solid copper wires (80°C) with insulation stripped to 5/8 in (16 mm).
- From the main electrical panel, switch off the breaker supplying power to the circuit.
- Unscrew and remove the wall plate (if applicable). 2
- 3. Verify power is removed using a 120V AC tester.
- 4. Unscrew the two 6-32 flat head screws and remove the existing toggle/rocker switch or analog dimmer (if applicable).
- 5. Disconnect wires and remove the device. It is good practice to label each wire as it is removed. If not already identified, mark each wire to ensure proper rewiring, especially if the circuit employs a 3-way configuration.
- 6. Connect the in-wall wires to the leads coming from the Metropolitan style device using the supplied wire nuts or an approved alternative. Refer to the Wiring Diagrams section for different diagram setups.
- 7. Insert the new device (dimmer, switch, keypad, etc.) into the electrical switch box and secure using the 6-32 flat head screws provided. DO NOT use a powered screw driver. A powered screwdriver can over tighten the screws.
- 8. Install the front faceplate wall plate adapter. Toggle the Service Switch to the Off position.

Note: Install the wall adapter to cover the metal yoke prior to applying power. If replacing a Metropolitan style device, remove power before removing the wall plate adapter



- 9. Switch power at the breaker to On and toggle the Service Switch to power-on the keypad. The keypad will go through a diagnostic sequence and calibrate itself to the type of load connected. The LEDs will blink as follows
  - All LEDs illuminate bright and then blink twice.
  - The load will switch On for a few seconds and then switch Off. In some instances, the load may switch On again and gradually dim up to full brightness to further refine the calibration process.
  - Next, the top two button LEDs blink a specific pattern. The pattern indicates the state of the keypad. The patterns and state of the keypad are described in the next table.

LEDs blink in an Keypad is in AP Mode and needs to be provisioned. After a short time (up to one minute), the blinking will stop. In this state, the keypad is still in AP Mode. The blinking stopped intentionally for cases alternating pattern where the device is not provisioned onto the network and can be used as a manual control till provisioned

Left Button LE Right Button L		Keypad is connected to the local netv Host/Controller. After a short time (up blinking has stopped, the keypad rem
Both top Butto blink in sync	on LEDs	If the IP settings are incorrect, the key After a short time (up to one minute) the keypad remains in this state until the correct network settings.
All Dimming Ll	EDs blink	Indicates the type of load connected

10. Verify the keypad is calibrated and working correctly, press the rotary dial and the load connected to the red wire will switch On. Turn the dial clockwise to increase the brightness of the load and turn counterclockwise to decrease the brightness of the load. Press the dial again to switch the load Off.

#### Swapping a Load (Bulb)

If a load needs to be changed, the keypad will need to be recalibrated to the new load. To change a load, do the following:

- 1. Toggle the Service Switch Off.
- 2. Change the load (bulb).
- 3 complete, verify the keypad is calibrated and working correctly. See step 10 above.

#### Wiring Diagrams

The diagrams below display how to wire the Metropolitan style keypad. Any unused wires must have the bare wire portion (stripped end) cut off and the wire must be capped with a wire nut.

Single Keypad Installation



WARNINGS!

- Using the keypad in a No Neutral configuration with loads other than incandescent will overheat the device and cause damage.
- In a No Neutral configuration, if the keypad does not support the type of load installed, the keypad will not supply power to the load and the six dimmer LEDs on the front of the panel will blink rapidly.

When ready to connect to a local network, refer to the Metropolitan Style Wireless Lighting - Provisioning and Programming Guides found on the Savant Customer Community.

#### Regulatory

The following statements are applicable to the Metropolitan Wireless Dimmers, Switches, Keypads, and Fan Controllers.

#### FCC Regulations

15.19. These devices comply with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) These devices may not cause harmful interference, and (2) these devices must accept any interference received, including interferences that may cause undesired operation. 15.21. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 15.105. This equipment has been tested and found to comply with the limits for CLASS B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications, However there is no guarantee that interference will not occur in a particular installation, If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving circuit different from that to which receiver is connected.
 Increase the separation between the equipment and the receiver. - Consult the dealer or experienced radio/TV technician for help

#### IC Regulations:

RSS-Gen 7.1.3. These devices comply with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) These devices may not cause interference, and (2) These devices must accept any interference, including interference that may cause undesired operation of the device. RSS-21- Annexe 9: A 9.4. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

work (IP Address assigned) but not bound to the up to one minute), the blinking will stop. Although the nains in this state until the binding process is complete eypad tries to establish a connection with the local network. the blinking will stop. Although the blinking has stopped, it is reset to its default values and then provisioned with

is not supported. Try toggling service switch to recalibrate.

Toggle Service Switch back On. The keypad will go through the diagnostics and the LED sequence described earlier in step 9. Once

