

# EVORA Series Lighting Control

## Overview

The EVORA family of switches offers an elegantly designed, easy to use, feature-rich user interface and control system providing a state-of-the-art guestroom automation experience. EVORA allows guest control of multiple lighting loads, temperature, drapes, and guest annunciation from multiple switch locations in the guestroom. EVORA offers three different user interface modules and multiple different Load Assemblies (WBI Actuators) that include wired and wireless communications, dimmers, and programmable controls designed to operate within INNCOM's Integrated Room Automation System (IRAS). The EVORA can also be equipped with the Low Voltage Adapter (LVA). This allows the EVORA to act as a remote +12VDC powered device only. The EVORA system brings all guestroom control features into a sleekly designed traditional keypad user interface.



Figure 1 EVORA Lighting Control

This controller must be installed in accordance with local and national electrical codes. When installing this product, read the instructions carefully. Failure to follow them could damage the product or cause hazardous conditions. Check the ratings given in the product guide to make sure the product is suitable for your application.

The Installer must be a trained, experienced service technician.

**⚠ CAUTION**

- For supply connections, use wires rated 18AWG, for at least 75°C.
- For control of permanently installed lamp fixtures only.
- To reduce the risk of overheating and possible damage to other equipment, do not install the MOSFET Dimmer EVORA in a receptacle, a motor-operated appliance, or a transformer-supplied appliance.

## Environment

Ambient operating temperature for the EVORA is 0-40°C (32-104°F), 0-90% humidity, non-condensing. This equipment is intended for indoor use only. The TRIAC and MOSFET dimmers will feel warm to the touch under normal operating conditions.

## Load Specifications

The following table provides the load ratings at absolute maximum based on the load type in a single gang wall box.

Actuator	Ratings			
	Voltage	Frequency	Power/Amperes	Load Type
SMPS	120-240 Vac	50/60 Hz	200mA	+12Vdc Output Only
	120-240 Vac	50/60 Hz	4.1 A	Resistive
Relay Actuator	120-240 Vac	50/60 Hz	4.1 A	General Purpose
	120-240 Vac	50/60 Hz	500 W	Incandescent / Halogen
	120-240 Vac	50/60 Hz	250 VA	ELV / MLV
	120-240 Vac	50/60 Hz	250 W	CFL / LED
	120-240 Vac	50/60 Hz	1/10 HP	Motor
	120-240 Vac	50/60 Hz	1/10 HP	Motor
TRIAC Actuator	120 Vac	60 Hz	2.9 A	Resistive
	120 Vac	60 Hz	650 W*	Incandescent / Halogen
	120 Vac	60 Hz	250 VA	MLV
	120-240 Vac	60 Hz	1/10 HP	Motor
MOSFET Actuator	120 Vac	60 Hz	2.9 A	Resistive
	120 Vac	60 Hz	350 W**	Incandescent / Halogen
	120 Vac	60 Hz	250 VA	ELV / Electronic Ballast
	120 Vac	60 Hz	250 W	CFL / LED
Master Contactor	120 Vac	60 Hz	30 A	Resistive
	120 Vac	60 Hz	30 A	General Purpose
	120 Vac	60 Hz	960 W	Incandescent / Halogen
	120 Vac	60 Hz	600 VA	ELV / MLV / Electronic Ballast
	120 Vac	60 Hz	600 W	CFL / LED

ELV: Electronic Low Voltage Transformer

MLV: Magnetic Low Voltage Transformer

Minimum Load for TRIAC Actuator: 10W

Important Note: Many Electronic / Magnetic Low Voltage Transformers require a minimum load. Please consult manufacturers' requirements before using with WBI\_Actuator.

\*TRIAC dimmer can be used in multi-gang applications at 650W if ganged with a Relay actuator. If used in a multi-gang installation with another TRIAC or MOSFET dimmer, the maximum output is 400W.

\*\*The MOSFET dimmer can be used in multi-gang applications at 350W if ganged with a Relay actuator. If used in a multi-gang installation with another MOSFET or a TRIAC dimmer, the maximum output is 250W.

## Overload Condition

If a MOSFET or TRIAC Dimmer is continuously overloaded, a thermal shut down will occur to protect the solid state circuitry.

The MOSFET Dimmer is equipped with an additional overload detection circuit that detects a catastrophic overload / short and shuts down the dimmer to protect the solid state circuitry.

## Air Gap Switch

The TRIAC and MOSFET Load Assemblies are equipped with an air gap switch (relay) to ensure that the load is safely turned off and that there is no leakage current to the fixture during routine lamp maintenance. The air gap switch engages each time the load is dimmed completely off under normal operation.

## Class-2 Output

The EVORA has been designed to provide +12VDC power to devices connected to the S5bus. The Load Assemblies can operate in parallel to supply a higher total load capacity than that achievable by a single EVORA. However, the total output is derated as per the table below for accommodating the stability of the power supply circuitry. The total available output power must be shared with the EVORA User Interface. Refer to the following table for Class-2 Output ratings.

Number of Load Assemblies	Nominal Voltage	Voltage at Maximum Load	Output Rating
1	+12VDC	+11.0VDC	200mA
2	+12VDC	+11.0VDC	400mA
3	+12VDC	+11.1VDC	600mA
4	+12VDC	+11.1VDC	700mA
5	+12VDC	+11.2VDC	800mA

Number of Load Assemblies	Nominal Voltage	Voltage at Maximum Load	Output Rating
6	+12VDC	+11.2VDC	900mA

If the class-2 output is overloaded and the power supplies go into fold back mode (power supplies will constantly reset), remove power from the system and then remove the load. Double check that the load does not exceed the maximum output power. If the power cannot be removed from the system first, disconnect the offending load. The Load Assemblies will take up to 30 seconds to fully recover from the overload condition and return to normal operation.

## Installation



Locate the fuse panel and remove fuses or ensure the breaker is in the OFF position before installing the EVORA.

1. Prepare the line voltage wiring by stripping back the insulation 16mm (5/8th inch). This step is not necessary if using the LVA (low voltage adapter)
2. Connect the Green (Earth) Cable attached to the EVORA Strap to Earth.
3. Wire the EVORA as described in the Wiring Diagrams. Depending on gang assembly using the appropriate 10, 12, 14, 16, or 18 AWG wire nut.
4. Push all wires back into the wall box and fasten the control to the wall box using supplied mounting screws. Be sure not to pinch or disconnect any of the wires.
5. Ensure the intended load(s) are connected to the circuit.
6. Using the supplied two 1 1/4" 6/32" screws, install the EVORA in the gang box.
7. Mount the cover plate. Refer to the cover plate installation instructions.
8. Replace the fuses in the fuse panel or move the breaker to ON before continuing.
9. Allow the EVORA to power up.

## Start-Up Behavior

Upon start-up the LEDs on the User Interface will cycle 5 times. During the first 20 seconds after start-up, the EVORA will be in self-test mode. Any intended input to the user interface will produce a toggle on and toggle off of all LEDs and load.

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After the EVORA completes the self test mode, it will resume its intended programmed application.

## Wiring Diagrams

### WBI Actuator

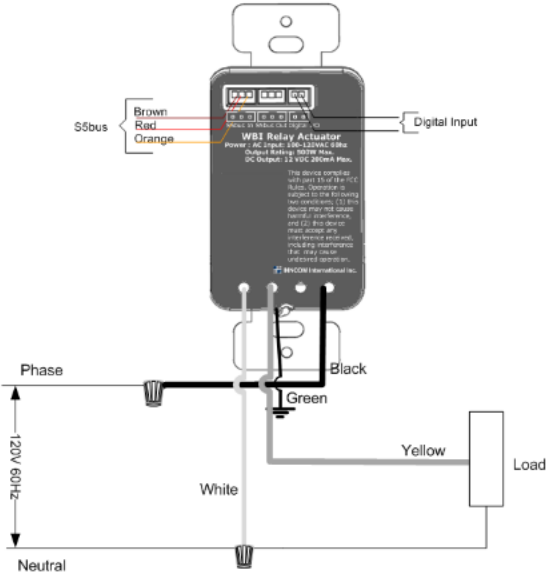


Figure 2 EVORA WBI Wiring

### Low Voltage Adapter

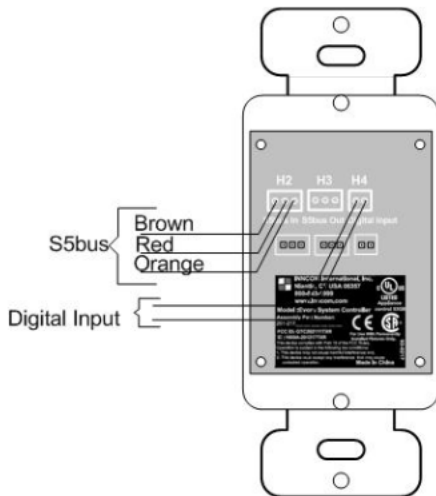


Figure 3 LVA Wiring

## Mounting

The EVORA comes factory assembled. The diagrams below show the EVORA + Low Voltage Adapter (LVA) and the EVORA + WBI assembly.

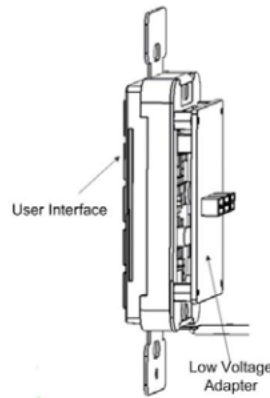


Figure 4 EVORA LVA

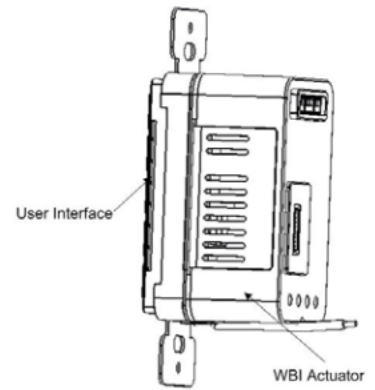


Figure 5 EVORA WBI

The EVORA and EVORA is supplied with two 1 1/4" 6/32 screws, two 3-pin S5bus harnesses and a 2-pin pig-tail harness for the digital input.

## Dimensions

EVORA LVA	EVORA WBI
3.25"L x 1.75"W x .787"D	3.25"L x 1.75"W x 1.875"D
79mm W x 44mmW x 20mmD	79mmL x 44mmW x 48mmD



This device contains FCC ID: GTC202111TXR.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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 of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IC ID: 1609A-202111TXR

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

*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.*