

## Sequence of Operation

When the occupancy sensor in the space senses movement, receptacles and lighting will automatically turn on. The switch on the wall can be used to turn the lights on and off. A quick press up or down of the switch will turn the lights on or off. A press and hold up or down will dim the lights up or down. The daylight sensor in the room will determine the level of artificial and natural light in the space and dim the lights in the daylight zones to maintain a set point. The lowest dimming value between the daylight sensor and wall switch will be the dim level used. When the room becomes vacant, the lights and receptacles will turn off after a predetermined amount of time (default 15 minutes). When a Demand Response event is triggered the lights will dim down to a predetermined level.

### SPECIFICATION:

1. LIGHTING CONTROL SYSTEM TO BE MANUFACTURED BY ECHOFLEX SOLUTIONS INC.

2. ECHOFLEX LIGHTING CONTROL SYSTEM SHALL HAVE THE ABILITY TO BE FACTORY PRE-LINKED AND PRE-CONFIGURED OR PROGRAMMED ON SITE USING SIMPLE TAP, SMART CLICK OR GARIBALDI SOFTWARE.

3. CONTROLLERS SHALL BE ABLE TO FUNCTION AS A STAND ALONE SYSTEM ALONG WITH THEIR OPTIONAL PERIPHERAL WIRELESS DEVICES INCLUDING A WALL SWITCH, SPLIT CONTROLLED RECEPTACLE, AND OCCUPANCY SENSOR.

4. CONTROLLERS SHALL BE ABLE TO BE NETWORKED TOGETHER TO FORM AN INTEGRATED BUILDING SOLUTION.

5. ECHOFLEX ELED1: 0-10V DIMMING CONTROLLER SHALL BE ETL RECOGNIZED AND UL LISTED, CONFORMING TO UL60730, AND CERTIFIED TO CAN/CSA STANDARD E60730 AND UL924. ALL SYSTEM CONTROL ELECTRONICS SHALL STORE PROGRAMMING IN NON-VOLATILE MEMORY. THE CONTROLLER SHALL BE CAPABLE OF REPEATING SIGNALS AND TRANSMITTING STATUS.

6. WALL SWITCH OCCUPANCY SENSOR (OWS): THE WALL SWITCH OCCUPANCY SENSOR SHALL UTILIZE 120 OR 277VAC POWER. SENSOR SHALL BE COMPATIBLE WITH OCCUPANCY AND VACANCY MODES WHEN USED IN CONJUNCTION WITH THE DIMMING ROOM CONTROLLER. SENSOR SHALL PROVIDE LED INDICATION FOR RF RANGE CONFIRMATION. SENSOR SHALL WIRELESSLY COMMUNICATE WITH THE SPLIT CONTROLLED RECEPTACLE. THE WALL SWITCH SENSOR SHALL BE ABLE TO MANUALLY TURN AND DIM LOADS ON/OFF AND UP/DOWN WHEN USED WITH COMPATIBLE WIRELESS CONTROLLERS.

7. RF SYSTEM SHALL NETWORK WIRELESSLY. INTEGRATION WITH BMS/DEMAND RESPONSE VIA THE USE OF GATEWAYS AND WIRELESS/WIRED I/O INTERFACES. VERIFY AND INSTALL ONLY THOSE INTERFACES INDICATED ON THE PLANS.

8. EC SHALL INSTALL ECHOFLEX SYSTEM AS INDICATED PER MANUFACTURER'S FINAL DRAWINGS AND INSTALLATION DOCUMENTS IN ACCORDANCE TO ALL LOCAL AND NATIONAL CODES. FACTORY ONSITE START UP AND TRAINING IS OPTIONAL. ECHOFLEX REQUIRES 3 WEEKS ADVANCED NOTICE TO SCHEDULE ONSITE START UP IF REQUESTED. ECHOFLEX WILL PROVIDE SYSTEM VERIFICATION AND ADJUST PROGRAMMING IF REQUIRED TO CUSTOMER REQUIREMENTS.

9. THIS DRAWING REPRESENTS DESIGN CONCEPT AND INTENT ONLY. WE DO NOT GUARANTEE THE INFORMATION IN THIS DOCUMENT IS SUITABLE FOR YOUR PARTICULAR APPLICATION, NOR DO WE ASSUME ANY RESPONSIBILITY FOR YOUR SYSTEM DESIGN, INSTALLATION OR OPERATION. WE RESERVE THE RIGHT TO MAKE CHANGES TO THE PRODUCTS DESCRIBED OR INFORMATION HEREIN AT ANY TIME WITHOUT NOTICE AND WITHOUT ANY OBLIGATION.

10. SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

11. TELEPHONE FACTORY SUPPORT IS AVAILABLE AT NO ADDITIONAL COST TO THE EC OR OWNER.

12. CONTACT ECHOFLEX SOLUTIONS

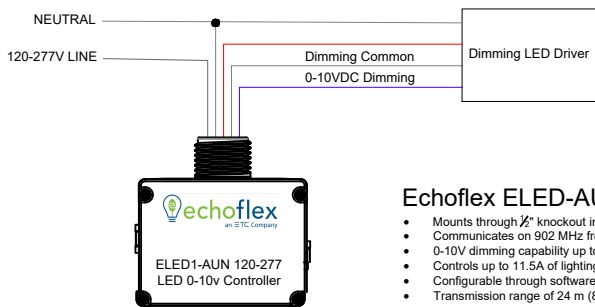
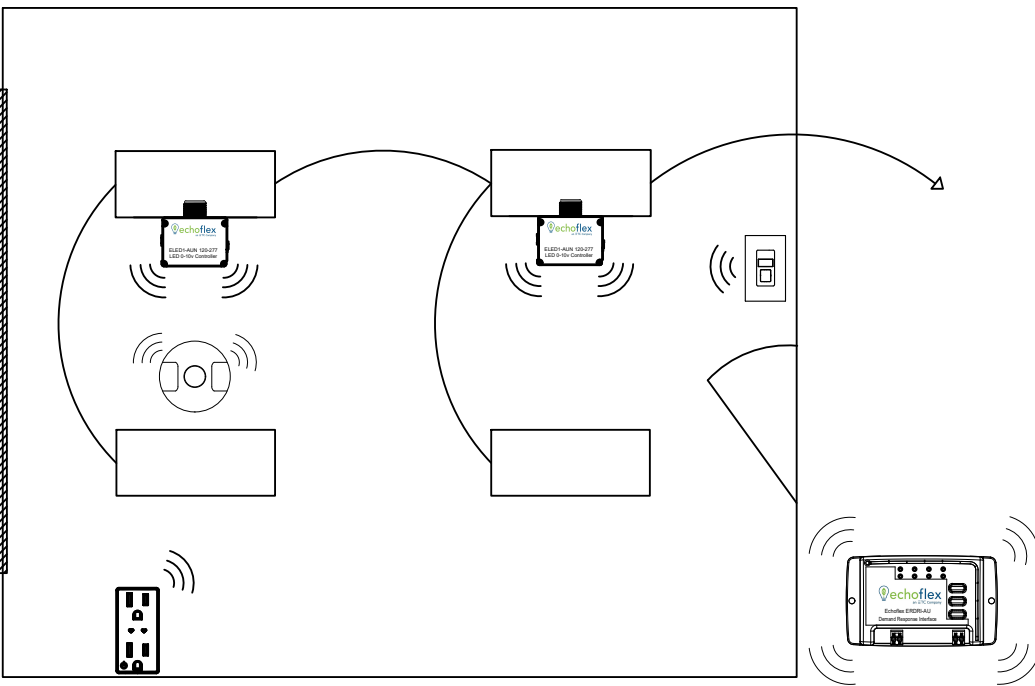
HEAD OFFICE - 1.778.733.0111  
TOLL FREE - 1.888.324.6359  
QUOTES@ECHOFLEXSOLUTIONS.COM  
ECHOFLEXSOLUTIONS.COM

**Echoflex Solutions, Inc.**  
38924 Queens Way Unit #1  
Squamish, British Columbia  
Canada V8B 0K8  
Phone: 1 (778) 733-0111  
Toll Free: 1 (888) 324-6359  
Fax: 1 (604) 815-0078  
echoflexsolutions.com



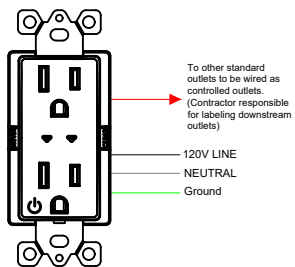
an ETC Company

UNLESS OTHERWISE SPECIFIED - ALL DIMENSIONS IN MILLIMETERS - #8DC-9870



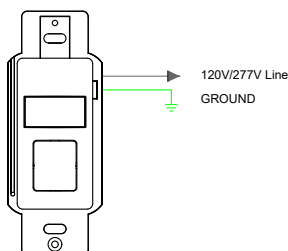
### Echoflex ELED-AUN 120-277

- Mounts through 1/2" knockout into J Box or fixture
- Communicates on 902 MHz frequency
- 0-10V dimming capability up to 100mA of sinking current
- Controls up to 11.5A of lighting load
- Configurable through software or other mechanical means
- Transmission range of 24 m (80 ft) up to 100 m (330 ft) line of sight



### Echoflex ERNR-AIU

- Mounts in a standard single gang box
- Communicates on 902 MHz frequency
- Top half uncontrolled, bottom half controlled
- Arrows light up indicating controlled half
- Unit controls up to 15A of plug load
- Configurable through software or other mechanical means
- Transmission range of 24m (80ft) up to 100m (330ft) line of sight







### Echoflex OWS-DT-120/277

- Communicates on 902 MHz frequency
- Dual Technology, Passive Infrared & Acoustic Interface
- On/Off Switching & Up/Down Dimming
- Mounts in a Standard Single Gang Ring or Box
- Configurable through software or other mechanical means
- Transmission range of 24m (80ft) up to 100m (330ft) line of sight

## Typical Material List

Qty	Part #	Description
2	ELED1-AUN	LED Fixture Controller 120-277V
1	OWS-DT-120/277	Occupancy/Vacancy Sensor On/Off & Up/Down Dimming
1	TAP-31U	Interior Photo Sensor
1	ERNR-AU	Split Controlled Receptacle
1	ERDRI-AU	Demand Response Interface

## Title 24 Compliance

Section	Requirement	Device	Part #
130.1a/b/c	Local Switching Multi-Level Dimming & Fully Automatic Light shut Off		OWS-DT-120/277
130.5d	Plug-Load Control		ERNR-AIU
130.1d	Multilevel Daylight Control		TAP-31U
130.1e	Demand Response Ready		ERDRI-AU

# Typical Office With Daylight Harvesting