# Part 1. Wireless In-Fixture Dimming Controller

* 1. WIRELESS CONTROLLER
     1. In-Fixture Dimming Controller
        1. The “Slim-Line” In-Fixture Lighting Controller shall be the Echoflex ER1S-xxU Series Dimming Controller by Echoflex Solutions Inc., or approved equal
        2. Mechanical
           1. The Controller shall mount inside the ballast or LED driver cavity of a linear fixture
           2. The Controller shall have LEARN and CLEAR buttons for manual linking of switches and sensors

The buttons shall be accessible when the Controller is mounted, prior to installing cavity cover

* + - * 1. The Controller shall have two LED indicators to display power/operational mode and linked device information
      1. Electrical
         1. Controller supply voltage shall be 120-277 VAC, 60Hz. The Controller shall provide a single, non-isolated, normally open relay contact, fully rated for 8 amps
         2. The Controller shall support low voltage dimming (0-10 VDC @ 25mA (sinking or sourcing current) for dimming ballasts and LED drivers
         3. The Controller shall use a 902 MHz EnOcean radio. Systems that use other radio frequencies shall not be acceptable

The internal radio shall have a range of at least 80 feet through walls (laterally), up to 300 feet in open space

* + - * 1. The Controller shall be ETL listed, conform to UL 508, and certified to CAN/CSA Standard C22.2 No.14
        2. The Controller shall comply with FCC Part 15.231 and IC RSS-210
      1. Functional
         1. The Controller shall provide switching and/or low voltage dimming control for an individual light fixture or lighting zone

##### The Controller shall support wireless Echoflex switches and sensors for relay control

###### The Controller shall support linking of at least 20 wireless devices in any combination of Echoflex stations and sensors. Systems that do not support at least 20 stations or sensors shall not be acceptable

##### The Controller shall provide the option of single or dual-hop wireless signal repeating to other controllers. Systems that do not provide signal repeating shall not be acceptable

##### The Controller shall support Central Command functions for use with integrated control systems

##### The Controller shall support commissioning and linking through software and/or mechanical means. Controllers that do not support both shall not be acceptable

##### The Controller shall provide configuration variables that allow customization of the controllers operation with linked sensors and switches

##### The Controller shall provide the option of reporting relay status wirelessly

##### The Controller shall save all configuration settings and linked device details in non-volatile memory

###### The Controller shall provide the option of saving user-defined configuration settings as recoverable default settings

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