20A 1-10V Area Controller
5A 1-10V Fixture Controller

Installation Guide

Control any 0-10V compatible load including LED drivers, fluorescent ballasts, motor controllers, actuators, etc using wireless signals from Self-powered wireless switches, wireless sensors and/or central controllers, etc. The wireless controller reduces time, expense, frustration and mess of installation. Sensors and switches may be installed in optimal locations without requirements for maintenance or batteries. The controller is compatible with all 120VAC, 240VAC, or 277VAC circuits.

SPECIFICATIONS

Electrical
- Power Input: 100-277 VAC 50 or 60 Hz
- Standby power: <0.5W @ 120VAC
- Max Power consumption @ 120VAC:
  - <0.5W w/ no Aux power
  - 1.0W w/ 25mA Aux power load (20A model only)

Outputs 5A model only
- 1 - Latching Form A Relay, Selectable N.O. or N.C.
- 1 - 0-10V output, 100mA sink / 1mA source

Outputs 20A only
- 1 - 20A Latching Form A Relay w/ Arc Suppression Selectable N.O. or N.C.
- 1 - 0-10V output, 100mA sink / 1mA source (for 25mA source, connect to Aux Power output)
- 1 - Aux power, 10mA@12VDC, 25mA@10VDC

Inputs
- 1 - EnOcean Wireless antenna
- 1 - 0-10V input 0.1mA source (20A model only)

Maximum Load	**20A**	**5A**
General Duty:	20A	5A
Tungsten (Incand.): 20A	5A	
Fluorescent Ballast: 20A	5A	
Motor Load:	1HP	¼ HP

Wireless
- Range: 50-150 feet (typical)
- Frequency: 902 MHz

Mechanical
- Dimensions 2.11 x 1.73 x 1.09 inches (54 x 44 x 28 mm)

Operating Specifications
- Operating Temp: 32° to +122°F (0° to +50°C)
- Storage Temp: -4° to +176°F (-20° to +80°C)
- Humidity: 10-90% non-condensing
- Power up state: Auto, Open or Closed
- Memory Storage: 25 links
- User settable “Prefered Level”

Certifications
- ETL: UL 60730 (U.S.)
- ETL: CSAc22.2#14-05 (Canada)
- CE: IEC 60730
- ETL: UL 2043 (Plenum)
- IEC61000-4-5 (Surge)
- FCC: SZV-STM300U (United States)
- IC: 5713A-STM300U (Canada)

Compatible Wireless Devices

- Wireless Light Switch
- Key Card Switch
- Control Transmitter
- Wireless Occupancy Sensor
- Door/Window Sensors
- Light Sensor
- Central Command

EnOcean Equipment Profiles

- F6-02-01, F6-02-02, F6-03-01, F6-03-02
- F6-04-01, F6-02-01, F6-02-02
- F6-02-01, F6-02-02, Proprietary
- A5-07-01, A5-07-02, A5-07-03
- D5-00-01, A5-30-01
- A5-06-02, A5-06-03
- A5-38-08 - untimed commands only

Transmitted EnOcean Equipment Profile

Central Command - Transmit link packet w/ MENU button EEP: A5-38-08

Package Contents

(1) 0-10V Controller
(1) Instruction Sheet

Equipment Needed for Installation

• Wire Nuts/connectors
• Electrical Tape

CAUTION:

- This product is intended only for use indoors and in dry locations.
- It may be more convenient to link the wireless controls to the Controller prior to final installation.
- To be installed and used in accordance with these instructions, electrical codes and regulations.
- If unsure about any part of these instructions, consult an electrician.

CHOOSE THE OPTIMAL MOUNTING LOCATION

The long term reliability and wireless performance of the Controller is strongly influenced by the mounting location. Choose a mounting location carefully. For best radio performance:

- Straighten antenna out and away from metal.
- Create separation distance away from interfering electronics such as fluorescent tube ends, electronic transformers/power supplies, motors, etc.
- Avoid mounting inside metal enclosures.
- Obstructions of metal, concrete and dense building materials will reduce the range. Mount higher and away from obstructions to maximize the range.
- Confirm operating environment does not exceed temp. or humidity specs.
- Site survey tools are available to help fine-tune wireless communications.

INSTALLATION

1. **PLAN** - Identify best mounting locations for receiver and transmitter. Perform range test to confirm operation prior to installation. Switch OFF breaker before making connections.
2. **CONNECT** the Controller to circuit following wiring diagram and local electrical codes. Restore power.
3. **TEST** - Press and release SELECT button to toggle relay. Hold SELECT button to test dimming.
4. **LINK** Transmitters and Receivers following Linking Instructions below.

LINKING INSTRUCTIONS

Note: The controller must be powered on while linking. After linking, the controller retains all settings in the event of power loss. Link up to 25 Transmitters to one controller.

SIMPLE LINKING

Use Simple Link Mode for common applications:

1. **HOLD** the MENU button until the relay clicks (about 5 seconds), then release. The receiver will toggle a steady pattern indicating Simple Link Mode is active: — — — —
2. **TRANSMIT** the Link Signal by rapidly triple pressing the top button on switches or single pressing the Link (or teach) button on sensors. Relay pauses in ON position for 3 seconds when the link is created, then toggling resumes. Link additional transmitters (up to 25) as needed. (Relay pauses in OFF position for 3 seconds when the link is deleted)
3. **WAIT** 30 seconds for Link mode to exit automatically (toggling stops).

SIMPLE LINK MODE FUNCTIONALITY

- Wireless Switch
  - Quick Press: top button is ON to prefered level, then to full brightness, bottom is OFF
  - Hold top or bottom buttons to adjust prefered level
  - Double Press: top for full brightness, bottom for OFF
- Occupancy Sensor - ON to prefered level, Auto OFF
- Vacancy Sensor - Link Switch for Manual On, Occ Sensor for Auto Off
- Control Transmitter - ON to prefered level and OFF
- Window/door Sensor – Closed-ON to prefered level, Open-OFF

WIRED 0-10V INPUT / MASTER CONTROL (20A model only)

The 0-10V input may be connected to a wall mounted 0-10V control station, a wired Light Sensor with 0-10V output, or any other 0-10V control device. The output will respond directly to this input. If wireless switches and sensors are also linked, the Controller will respond to the most recent command from any of the linked/connected devices.

In addition, one Controller can be linked as a Master Controller to other compatible receivers for wireless bridging of 0-10V control signals and/or synchronizing output levels across multiple controllers.

To link a Slave Controller to a Master 0-10V controller:

1. Confirm that the Slave Controller is compatible with the Central Command profile (EEP: A5-38-08)
2. Activate Link Mode on the Slave Controller following the controller instructions.
3. Press the MENU button on the Master 0-10V Controller to send the link message.
4. Exit Link Mode on Slave Controller following instructions.

When the Master Controller output level is changed (either with a wireless device or wired input), the output of any linked Controller will follow the Master Controller. In addition, the Master Controller will send an update message every 2 minutes to keep Slave Controllers in sync if they miss a message.

ADDITIONAL FUNCTIONS

TEST FUNCTIONS:

Cycle - Press and release the *SELECT* button to cycle between 0%, Prefered Level and 100%. Long presses on the *SELECT* button adjust the 0-10V output level up or down.

SENSOR LINK TEST MODE

After Linking, press the Link button on a sensor 5 times to activate the Link Test Mode. Subsequent presses from any linked sensor will cause the relay to toggle confirming the sensor is linked and testing the reliability of wireless communications. Link Test Mode will timeout after 60 seconds of no activity.

CLEAR ALL LINKS

Activate Simple Link mode by holding the MENU button until the Controller starts toggling, then press and hold the *SELECT* button for 10 seconds to Clear All Links from the Controller.

SELECTIVE LINK DELETION

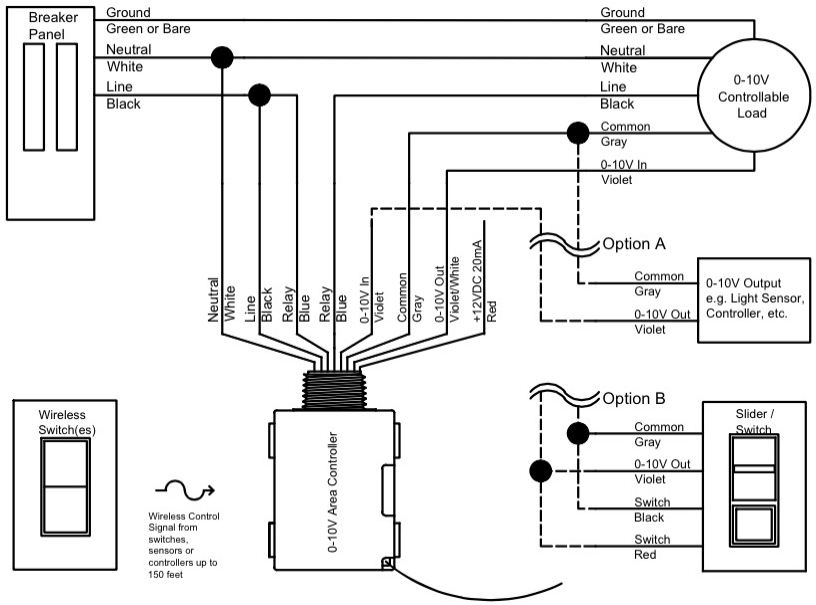
To remove one Link from Relay and leave others unaffected:

1. **HOLD** the MENU button to activate Link Mode. The relay toggling confirms Link Mode is active.
2. **TRANSMIT** the Link Signal by rapidly triple pressing the top button on switches or single pressing the Link (or teach) button on sensors. Relay pauses in OFF position for 3 seconds when the link is deleted, then toggling resumes.
3. **WAIT** 30 seconds for Link mode to exit automatically (toggling stops).

REPEATER MODE

Repeater function is ENABLED by default. Repeater mode may be changed by connecting power while holding the MENU button for 5+ seconds, new mode is indicated while button is held: 1 relay toggle = repeater DISABLED, 2 toggles = repeater ENABLED.

20A Area Controller Wiring Diagram - 20A model only



5A Fixture Controller Wiring Diagram - 5A model only