SIGNAL RELAY - F SERIES
FOR RECEPTACLES AND WALL BOXES

ERM-FS-24

Overview

The Signal Relay controller is a versatile device that can be used in a large number of applications including process control, HVAC and hospitality applications.

The signal relay controller activates the output with received input from a linked sensor or switch transmitting:

- ambient light levels monitored by an wireless photo sensor
- occupancy state monitored by a wireless occupancy sensor
- switch action from a wireless single or dual paddle wall switch
- switch action from a wireless key card switch
- switch action from a wireless door/window (reed) switch
- gateway control implementing schedules or other events

The signal relay can be used in distributed process applications to eliminate troublesome wiring runs using linked wireless electrical switches. A low voltage or line voltage event can be transmitted to the signal controller triggering the dry-contact relay connected to any PLC or controller input.

The controller fits equally as well into hospitality applications. Responding to linked key card switches that monitor suite occupancy/vacancy, the controller can also be used to enable and disable air-conditioning equipment based on the occupancy state and/or patio door position.

Other features include telegram repeating and BEMS system integration allowing the controller to be used both in distributed control applications or as a component of a centralized system.

The controller supports radio range confirmation, a feature that allows installers to test signal strength for optimal sensor placement and system integrity. This feature is supported with the Echoflex Resonate and 21-series of sensors.

Echoflex offers three methods of configuring the controller:

1. Use the linked sensors and Simple Tap to make quick changes to individual controllers.
2. Use Smart Click to access more configuration parameters using a linked switch.
3. To access the full menu of configuration parameters, Echoflex's Garibaldi software is a PC based tool that includes hands-free commissioning.
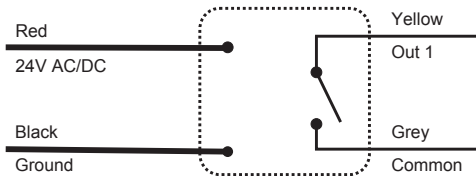
Features

- Use for controlling HVAC circuits or any miscellaneous electrical load
- Occupancy based applications with auto- ON/OFF or manual ON, auto-OFF using wireless occupancy sensors
- Monitors linked battery-free wall, key card and proximity (reed) switches, photo sensors and occupancy sensors
- Range Confirmation (patent pending) allows optimal placement of linked sensors - (Resonate and 21 series sensors only)
- Central Command support for BEMS gateway control
- Supports commissioning via Smart Click, Simple Tap or Garibaldi (remote management) software
- Assign up to 20 battery-free wireless wall switches or sensors to one controller
- Reliable radio reception range of 24 m (80 ft) in most common indoor applications
- Low-cost alternative to running wires and conduit - ideal for retrofit projects
- Doubles as a telegram repeater
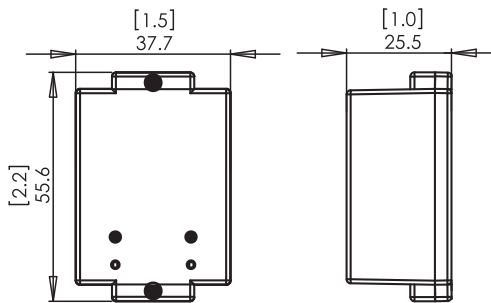- Available in 868 and 902 MHz frequencies

Ordering Information

Model	Description	Part # - 902 MHz	Part # - 868 MHz
ERM-FS*-24	Signal Relay - 24VAC/DC	001-7668 * = U	001-5668 * = Y

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ERM-FS

Wiring Diagram

Red
24V AC/DC

Black
Ground

Yellow
Out 1

Grey
Common

Dimensional Diagram

[1.5]
37.7

[1.0]
25.5

[2.2]
55.6

Block Diagram

COMMON | 24 V | LEARN | CLEAR

Power Supply | Radio

Relay | Processor

A
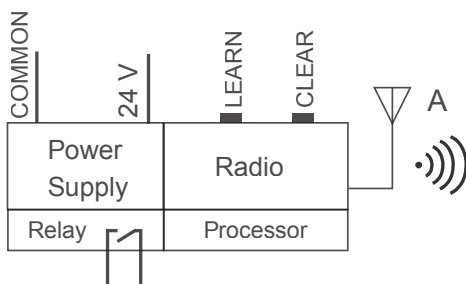
Equipment Profiles - remote devices supported

EEP: F6-02-02	Light and Blinds Control
EEP: A5-06-02	Light Sensor [range 0 - 1024 lux]
EEP: A5-07-01	Occupancy Sensor
EEP: F6-04-01	Key Card Activated Switch
EEP: A5-30-02	Single Input Contact (doors and windows)
EEP: A5-38-08	Central Command, switching (0x01), setpoint (0x03)
EEP: A5-10-0A/0B	Room Operating Panel
EEP: D5-00-01	1BS Contact and Switches

Hardware Specifications

Power Supply	24 VAC/DC
Power Consumption	900 mW full load
Outputs	3 A @ 30VDC isolated output
	2 x LEDs, Learn (green) and Power(red)
Communications	
Radio Frequency	902 MHz and 868 MHz
Antenna	Integrated whip
Transmission Range	24 m (80 ft) commercial office space (typical)
Inputs	LEARN and CLEAR buttons for sensor assignment

Mechanical Specifications

Operating Temperature (120-270V)	-10 °C to 45 °C (14 °F to 113 °F) ambient
Operating Temperature(24VAC/DC)	-10 °C to 45 °C (14 °F to 113 °F) ambient
Relative Humidity	5% to 95% RH (non-condensing)
Weight	60 g (2.2 oz)
Dimensions	56 x 38 x 26 mm (2.2 x 1.5 x 1.0")

Agency Listing & Compliance

Safety (90-240 and 120-277V)
    ETL Recognized Component
    Conforms to UL Standard 508
    Certified to CAN/CSA Std. C22.2 No.14
Radio Frequency (902 MHz only)
    FCC Part 15.231 - Remote Control Transmitter
    IC   RSS-210

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