



# DECORA<sup>®</sup> ELECTRONIC CONTROLS

## INCANDESCENT DIMMING MODULE

---

### Instruction Sheet

See Wiring Diagram

Cat. No. 6376

---

#### Rating:

300W 125V 60Hz AC Incandescent Only

Minimum voltage: 112V

Maximum voltage: 138V

Maximum number of modules on one circuit: 10

#### Engineering Data:

Input Signal: 121 kHz carrier signal superimposed on AC powerline

Minimum Signal Strength: 100 mV

Ambient Operating Temperature:

Min. 0°F (– 18°C)

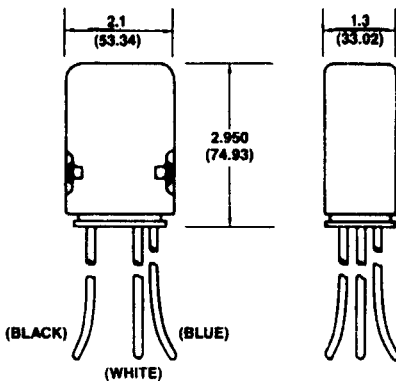
Max. 104°F (40°C)

Ambient Humidity: 0 to 90% RH, non-condensing

**Description:** This relay is designed for use with Leviton's Decora Electronic Controls. It functions as a remote electrical load switching device which responds to coded commands from one or more DEC controllers remotely located from the module. The module may be set to any of 256 address codes, selected at the time of installation. It is mounted at the incandescent fixture it is to control.

The module is equipped with leads for easy installation and attaches firmly to the fixture by

2



means of an adhesive strip. In addition to switching, it provides full range dimming and responds to ALL LIGHTS ON commands. It can be used with mercury vapor lamps, but not with low-voltage incandescent lighting, transformers, motors or other inductive loads.

#### SAVE THIS INSTRUCTION SHEET.

IT CONTAINS IMPORTANT TECHNICAL DATA AND TESTING AND TROUBLESHOOTING INFORMATION THAT MAY BE USEFUL AFTER INSTALLATION IS COMPLETE.

3

---

### IMPORTANT NOTICE

The Leviton powerline carrier signal is designed to provide the greatest signal integrity and noise immunity. However, electrical "noise" can cause interference with the signal. Leviton has developed techniques and hardware for overcoming this interference. It is the responsibility of the specifier/installer to test for signal strength and the presence of "noise" using the Leviton Cat. No. 6385 Signal Strength Transmitter and the Cat. No. 6386 Signal Strength Indicator test set and to properly apply signal coupling and noise-filtering equipment according to the guidelines provided in the DEC Technical Manual.

Leviton specifically denies any warranty of performance, stated or implied, where electrical "noise" interference exists at the time of installation, or subsequent to installation by the addition of "noise"-producing devices or equipment, or where these components have been installed for non-residential applications.

4

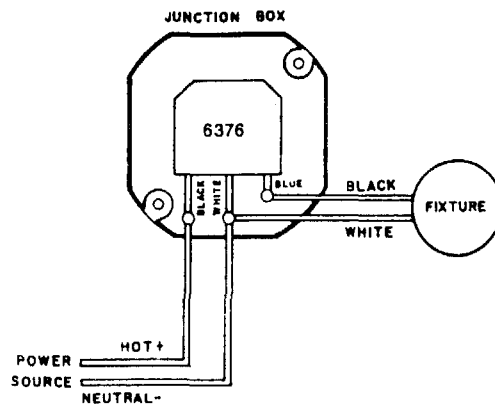
## NOTE:

1. If this device will be installed in a stand-alone junction box, the box must measure at least 4 in. by 4 in. by 1.5 in.
2. For retrofit installation, it is recommended that the existing switch remain in the circuit for additional positive shut-off means.
3. This device may be installed in the junction box supplied with some "high-hat" fixtures, provided that the box is the proper size. Supply conductors must be rated for 60°C (140°F) or more. The maximum ambient operating temperature at the box should not exceed 60°C (140°F) for this device.
4. Only use for fixtures where 60°C fixture wiring is permitted.

## INSTALLATION INSTRUCTIONS

**WARNING:** Do not connect this device to aluminum wire. For use with copper or copper clad wire only.

1. **WARNING: TURN OFF POWER AT FUSE OR CIRCUIT BREAKER.**



2. Set the Letter and Number Code dials to the desired system address for the fixture to be controlled.
3. Prepare each circuit conductor for connection by stripping insulation from each end to expose 3/4 in. bare copper.
4. In accordance with the WIRING DIAGRAM and the steps below, connect each circuit conductor to each module lead by twisting bare copper ends tightly together and screwing a

shown in the wiring diagram.

2. Confirm that the fixture being controlled is in proper working order (check for burned-out bulbs, etc.)
3. Confirm that the load being controlled does not exceed the 300 Watt module rating, including at start-up.
4. Confirm that the module's Letter and Number Code are correctly set.
5. Confirm that the module is being used with an INCANDESCENT LOAD ONLY.

**IMPORTANT:** If the module still does not operate properly after checking items 1-5, the fault does not lie with the module. Proceed with steps 6 through 8.

6. Confirm that the Controller(s) is powered and set to transmit to the same Letter and Number Code set on the module.
7. Set the Controller to transmit to address P1. Using a Signal Strength Indicator, Cat. No. 6386, plugged in at the Controller location, confirm that the Controller is transmitting a minimum of 2 volts of command signal at the

wire connector over each connection until wire ends are completely covered. Make all connections inside box.

5. Place module in junction box (if applicable) with code wheels facing out.
6. Connect black lead from fixture to blue lead on module.
7. Connect white lead from fixture together with white lead on module and neutral (white) circuit conductor.
8. Connect hot (black) circuit conductor to black lead on module.
9. Restore power at fuse or circuit breaker.

### CAUTION:

This device SHOULD NOT be installed in the lamp chamber of ANY incandescent fixture. Also, it should not be installed on top of, or directly over, the lamp chamber.

**NOTE:** Turn power off at fuse box or circuit breaker when servicing controlled devices.

### TESTING (following installation)

1. With the Cat. No. 6376 properly wired and powered, use a Cat. No. 6320 Table Top

Controller, or any other controller, to check for proper module operation as follows:

2. Transmit an ON command to the module. It should respond by turning the fixture on.
3. Transmit an OFF command to the module. It should respond by turning the fixture off.
4. Transmit an ALL LIGHTS ON command. The module should respond by turning the fixture on.
5. Transmit an ALL OFF command. The module should respond by turning the fixture off.
6. Transmit ON followed by DIM. Once the fixture is dimmed, restore it to full brightness by transmitting BRIGHT. Next, transmit an OFF signal, followed by ALL LIGHTS ON. The fixture should attain full brightness.
7. When the Cat. No. 6376 is observed to switch its assigned load properly in response to command signals, it is cleared for normal use.

## TROUBLESHOOTING

If the Cat. No. 6376 stops functioning properly, or begins to operate erratically, proceed through the following checklist:

1. Confirm that the module is wired **exactly** as

Hi-Range setting. If the signal strength is less, have the Controller checked.

8. Check for adequate command signal strength at the Cat. No. 6376 location as follows:
  - a) Plug the Cat. No. 6385 Signal Strength Transmitter into a receptacle on the same circuit as the Controller.
  - b) Using the Cat. No. 6386 Signal Strength Indicator at the Cat. No. 6375 location, check the command signal amplitude. Signal strength must be 100 mV minimum. If there is less than 100 mV of signal present, it may be necessary to couple both legs of the 120/240 volt power service at the entrance panel using the Cat. No. 6299 Signal Bridge.
  - c) If the yellow ERROR CONDITION indicator is lit, there is electrical "noise" present on the AC line which is interfering with proper module operation. The source of the noise must be identified and either filtered out or eliminated (see Technical Manual).

Decora Electronic Controls PLC Components are for RESIDENTIAL USE ONLY. Installation for any other application voids any warranty, stated or implied.