

2206



# DECORA ELECTRONIC CONTROLS RESIDENTIAL POWERLINE CARRIER COMPONENTS

## SINGLE POLE SWITCH MODULE

### INSTALLATION INSTRUCTIONS

#### & Wiring Diagram

Cat. No. 6291



TO BE INSTALLED AND/OR USED IN ACCORDANCE WITH  
APPROPRIATE ELECTRICAL CODES AND REGULATIONS.

**RATING:** 20A-120V/ 60Hz AC ONLY  
Minimum Voltage: 112V  
Maximum Voltage: 138V  
Maximum number of Modules per circuit: 10

#### ENGINEERING DATA:

Input Signal 121 kHz carrier signal superimposed on a 120V AC power line.  
Minimum Signal Strength: 100mV.  
Ambient Operating Temperature: Minimum 0° F (-18°C) to Maximum 104°F (40°C).  
Ambient Humidity: 0 to 90% RH, non-condensing.

#### DESCRIPTION:

This Wall Switch Module is designed for use with Leviton Decora Electronic Control (DEC) Powerline Carrier Components. It functions as a remote control switching device which responds to ON/OFF and ALL LIGHTS ON/OFF commands, from one or more DEC controllers remotely located from the module. The switch module can also be operated manually as a standard type wall switch.

The module may be set to any of the 256 address codes, selected at the time of installation. The desired address is set by removing the touchplate and selecting letter and number codes with a small blade screwdriver. The module is equipped with back wire terminals and installs easily in a standard wall box. It is suitable for incandescent and fluorescent lighting, as well as switch controlled appliance when Dimming is not desired.

The Cat. No. 6291 is assembled as white and an ivory color conversion kit is provided. This product fits any color Decora Wallplate (sold separately). Additional color conversion kits are available.

**SAVE THIS INSTRUCTION SHEET!  
IT CONTAINS IMPORTANT TECHNICAL DATA,  
TESTING, AND TROUBLE SHOOTING INFORMATION WHICH WILL BE USEFUL AFTER INSTALLATION IS COMPLETE.**

**IMPORTANT:** Unlike standard single pole wall switches the Cat. No. 6291 also requires a neutral (white) wire for operation.

## APPLICATIONS:

Decora Electronic Controls will not control lighting that is used with low voltage or high frequency transformers, nor high pressure discharge lamps (HID lighting). This includes mercury vapor, sodium vapor, and metal halide lamps.

### DEC components can control:

- Low pressure discharge lamps (fluorescent) (ON/OFF only) - use Cat. Nos. 6291 and 6293
- 120 Volt quartz lamps can be dimmed or brightened - use Cat. Nos. 6381 and 6383
- Low **voltage** lighting can be controlled provided the lighting system operates with a 80 Hz transformer - (ON/OFF only) use Cat. Nos. 8291, 6293, 6227 and 6280 (DIMMING) use Cat. Nos. 6381-U and 6290

If a power interruption should occur while the 6291 is ON the LOAD will remain ON when power is restored.

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## IMPORTANT NOTICE

The Leviton power line carrier signal is designed to provide the greatest signal integrity and noise immunity possible. However, in some environments intense electrical noise can cause interference with the signal.

Leviton has developed hardware and techniques for overcoming this interference when properly applied. It is the responsibility of the specifier/installer to test for signal strength and the presence of noise using Leviton test equipment Cat. Nos. 6385 (Signal Test Transmitter) and 6386 (Signal Strength Indicator) and to properly apply signal coupling and noise-reduction equipment according to the guidelines provided in the DEC Technical Manual and the DEC Troubleshooting Guide.

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.

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## INSTALLATION INSTRUCTIONS

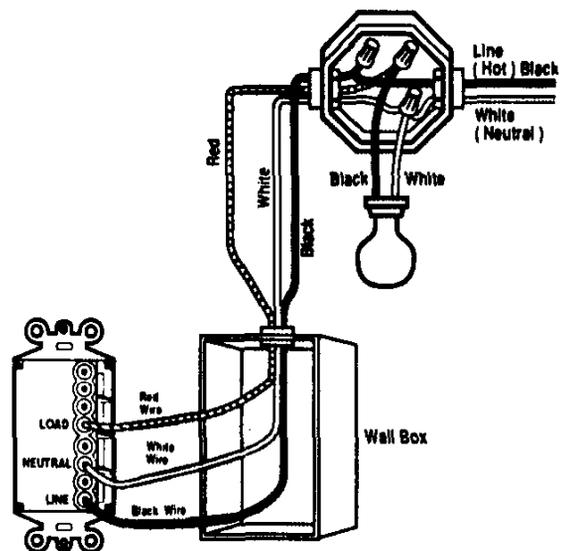
1. **WARNING: TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE. TEST THAT POWER IS OFF-BEFORE WIRING!** Use this device only with copper or copper clad wire. With aluminum wire use only devices marked CO/ALR. **REMOVE BULB(S) FROM FIXTURE.** Read all instructions **carefully. If you do not understand these instructions, consult a qualified electrician**
2. Remove and discard existing switch and wallplate, if applicable.
3. Remove 1/2" insulation from ends of branch drcoft wires **to expose bare copper.**
4. **Connect** drcoft wires to switch module per wiring diagram as follows: Insert wires into round backwfre holes. Firmly tighten all terminal screws.

**NOTE: up to two (2) drcoft wires can be connected to each terminal.**

5. Mount switch module In wall box using two screws provfded
8. **Using** a small blade screwdriver, remove the **Touch** Plate (front cover) by **prying** it off at the bottom.

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WIRING DIAGRAM  
For Cal. No. 6291  
Single Pole Switch Module



7. Using the same screwdriver, set the House Code Dial (RED) to the chosen Letter and the Unit Code Dial (BLACK) to the chosen Number, thus programming the unit with the desired address code.
8. If it is desirable to change the color of the device, do so now by following the "Color Conversion Procedure". If not, remount the Touch Plate by pressing it into position. Mount Decora Wallplate (sold separately).
9. Replace bulb(s) in lighting fixture. Restore power at circuit breaker or fuse. **INSTALLATION IS COMPLETE. PROCEED TO TESTING.**

- Transmit an ALL LIGHTS ON control to the module from an appropriately coded controller. It (and all other devices on that House code) should respond by turning its assigned Load ON.
- Transmit an ALL OFF command from an appropriately coded controller. It should respond by turning its assigned Load OFF.

If a power interruption should occur while the 6291 is ON the LOAD will remain ON when power is restored.

The DEC Single Pole Module Switch should be operating properly. If not, proceed to PERFECT PERFORMANCE CHECKLIST.

## TESTING (Performed directly after installation)

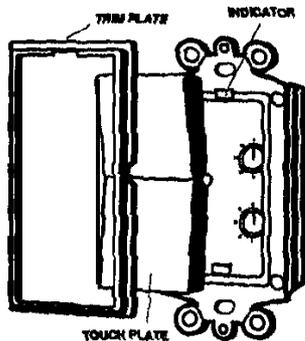
With the Cat. No. 6291 properly wired and powered, tap the switch plate several times to ensure that the module is turning its load on and off in response to manual control. Next, use the Cat. No. 6320 Table Top Controller, or other controller, to check for the proper switch module operation as follows (leaving the load ON, manually):

- Transmit an OFF command to the module. It should respond by turning its assigned Load OFF

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## COLOR CONVERSION PROCEDURE

The color of this Cat. No. 6291 can be changed to suit your Interior design requirements. Simply get a color conversion kit of the appropriate color from your Leviton distributor or use the one provided, and proceed as follows:



1. The trim frame bordering the touch plate has notches on its sides. Place the tip of a small-bladed screwdriver under a notch and gently pry off the trim frame.
2. The touch plate has a notch along its bottom edge which can be seen once the trim frame has been removed. Place the screwdriver tip in this notch and gently pry off the touch plate.

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3. Take the new touch plate and gently press it into place until it seats properly with a click.
4. Take the new trim frame and position it properly around the touch plate. Notice that the trim frame has a cut-out for the indicator light. With the trim frame properly positioned, gently press it into place until it seats properly with a click. The color conversion is complete.

## PERFECT PERFORMANCE CHECKLIST

if the 6291 seems to be functioning improperly confirm that the:

1. POWER IS OFF AT CIRCUIT BREAKER OR FUSE. Check that the Module is wired EXACTLY as shown in the Wiring Diagram. Restore power before proceeding.
2. Module is being supplied from a 120V/ 60Hz AC source ONLY.
3. Load being controlled is in proper working order. Local switch, ON. (Check for burned-out bulbs)
4. Load being controlled does not exceed the 20 Amp module limit.

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5. Module's Letter and Number codes are set correctly- that they match the codes set in the Controller.

6. Confirm that the controller is powered.

IMPORTANT: If, after checking Items 1 through 6, the module still does not operate properly, the fault may not lie with the module itself. Follow steps 7 and 8 to identify the source of the problem.

7. Set the controller to transmit address P1. Using a Signal Strength Indicator, Cat. No. 6386, plugged in at the location of the controller, Confirm that the controller is transmitting a minimum reading of 2 volts of command signal at the HI-RANGE setting. If the signal strength is less than 2 volts, have controller checked.

6. Check for adequate command signal at the module location as follows:

a) Plug the Cat. No. 6385 Signal Test Transmitter into a receptacle on the same circuit.

b) Using the Cat. No. 6386 Signal Strength Indicator at the module location, check the command signal amplitude. Signal strength must be 1 00mV minimum. If there is less than

1 00mV of signal present, it may be necessary to couple both legs of the 120/240 volt power service at the entrance panel using Cat. No. 6299 Signal Btfdge.

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. Consult the DEC Technical Manual and DEC Troubleshooting Guide.

DEC Components are for RESIDENTIAL USE ONLY.  
installation for any other application, voids any warranty,  
stated or implied.