



Model: FMD2 Fixture Module - Dimmer

Installation Guide and Owner's Manual



FUNCTION

The FMD2 Fixture Module - Dimmer is a high quality wire-in home automation load controller that is capable of controlling two channels of 120VAC incandescent lights based on digital commands received over the power wiring from a remote UPB (Universal Powerline Bus) controller. The module will turn lamps ON and OFF, and will also act as a light dimmer. UPB controllers and modules can be freely located anywhere throughout the home. No additional wiring is required and no radio frequency signals are used for communication.

IMPORTANT SAFETY INSTRUCTIONS

When using electrical products, basic safety precautions should always be followed, including the following:

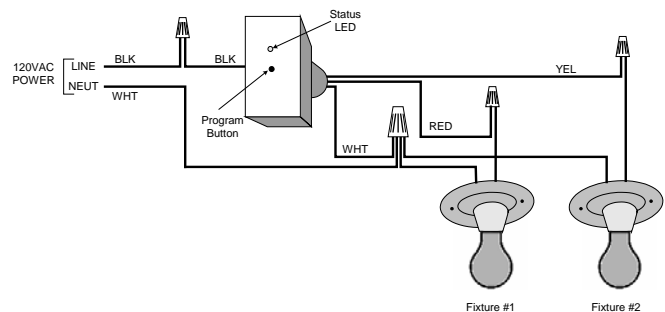
1. READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
2. Keep away from water. If the product comes in contact with water or other liquid, turn off the circuit breaker and unplug the product immediately.
3. Never use products that have been dropped or damaged.
4. Do not use this product outdoors.
5. Do not use this product for other than its intended purpose.
6. Do not connect multiple lamps that, when combined, exceed the maximum load ratings of the product.
7. To avoid any risk of fire, burns, personal injury or electric shock, install this product out of the reach of small children.
8. Do not cover this product with any material when in use.
9. This product uses grounded plugs and sockets to reduce the risk of electric shock. These plugs and sockets fit only one way. If they do not fit, consult an electrician.
10. SAVE THESE INSTRUCTIONS.

INSTALLATION

The Fixture Module is designed for indoor use with incandescent lamps that are permanently wired into the home electrical system. DO NOT use this module with fluorescent

lamps, unless configured for ON/OFF functionality ONLY (no DIMMING) using UPStart or other UPB Configuration utility, prior to connecting the fluorescent lamp. To install the FMD2 module:

1. Locate the lighting fixture to be controlled. Note that the lamp rating (or the combined rating of multiple connected lamps) must not exceed 400 watts
2. Disconnect power at the circuit breaker.
3. Remove any existing lighting fixture hardware. Disconnect the black wire that supplies power to the lamp.
4. Using a wire nut, connect the **black** (Line) wire of the fixture module to the **black** (Line) power wire.
5. Using a wire nut, connect the **red** (load output) wire of the fixture module to the **black** wire from the first lighting fixture.
6. (Optional) Using a wire nut, connect the **yellow** (load output) wire of the fixture module to the **black** wire from the second lighting fixture.
7. Using a large wire nut, connect the **white** (Neutral) wire of the fixture module to the **white** (Neutral) power wire and the **white** wire from the lighting fixture.
8. Refer to instructions on CONFIGURATION and OPERATION prior to placing the fixture module in its final location, as it may be necessary to have access to the Program Button in order to add the module to the UPB network and test its operation. Temporarily restore power in order to perform these functions. Disconnect power again when finished.
9. Once proper operation is established, fit the module into the outlet box or otherwise secure it using wire ties or fitting the nipple into a ½" knockout. Reinstall fixture hardware as needed.



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CONFIGURATION

Once your FMD2 is installed it can be configured either manually or with the UPStart Setup Software.

Manual configuration can be used to add your FMD2 device into a UPB network, link it to controller buttons and change preset light levels. Refer to the Keypad Controller's Manual Configuration Guide available on the PulseWorx page (www.pcslighting.com) for more details.

Although the factory default operation of the FMD2 is useful in many situations, it is highly recommended that your device be configured with the UPStart Setup Software so that you can take advantage of its many configurable features.

PCS has developed a Powerline Interface Module (PIM) and free software (UPStart) to help you configure all of your PulseWorx Lighting System devices. User's Guides are available on the PulseWorx page: www.pcslighting.com to explain how to configure your system.

Note: The FMD2 can be configured to disable the dimmer so it can turn ON and OFF non-dimmable loads such as fluorescent lamps.

SETUP Mode

When configuring a UPB system, it will be necessary to place the FMD2 in SETUP mode. To do this, press the Program Button (see illustration) **five** times rapidly. The Status LED will continuously blink Blue when the device is in SETUP mode. To exit SETUP mode, press the Program Button **twice** or wait five minutes for it to time out.

OPERATION

The Fixture Module operates according to commands sent by UPB controllers.

The FMD2 can accept powerline commands from any UPB-compatible transmitter such as PulseWorx Keypad Controllers, Timed Event Controllers, Wall Switches, Interface Modules, Approved Third-Party Controllers and touch screens. Each channel of the FMD2 can be a member of up to 16 scenes with the capability to store a pre-set light level (0% - 100%, or blink) and fade/blink rate for each scene.

TEST Mode

A manual test feature allows the lamp to be turned ON and OFF locally. To enable the TEST mode **press and hold the Program Button** on the FMD2 **for at least three seconds**. The Status LED will blink Magenta to indicate TEST mode. Lamp #1 can now be turned ON and OFF by **single-tapping** the Program Button. Lamp #2 can be turned ON and OFF by **double-tapping** the Program Button. Press and hold the Program Button again for at least three seconds to exit from TEST mode.

Factory Default Settings

To restore the following default settings put the FMD2 into SETUP mode and then press the Program Button **ten** times rapidly. The Status LED will blink red to indicate that factory defaults have been restored. Press the Program Button **twice** more to stop the blinking.

Network ID:	255
Unit ID:	60
Network Password:	1234
Receive Components: (Channel #1)	Link #1 = 100% @ 1.6 secs Link #2 = 0% @ 1.6 secs Link #3 = 80% @ 1.6 secs Link #4 = 60% @ 1.6 secs Link #5 = 40% @ 1.6 secs Link #6 = 20% @ 1.6 secs Link #8 = Blink @ 0.5 secs
Receive Components: (Channel #2)	Link #1 = 100% @ 1.6 secs Link #2 = 0% @ 1.6 secs Link #3 = 80% @ 1.6 secs Link #4 = 60% @ 1.6 secs Link #5 = 40% @ 1.6 secs Link #6 = 20% @ 1.6 secs Link #8 = Blink @ 0.5 secs

TYPICAL USES

The FMD2 is perfect for controlling 120VAC dimming loads such as:

- Incandescent bulbs,
- Some dimmable compact fluorescent bulbs,
- 120VAC magnetic transformers,
- Fluorescent lights (when dimming is disabled).

LIMITED WARRANTY

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in materials and workmanship for a period of five years from the date of purchase. Refer to the warranty information on the PulseWorx page (www.pcslighting.com) for exact details.



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