

N-IN-WALL APPLIANCE MODULE LW12



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INSTALLATION INSTRUCTIONS FOR X-10 IN-WALL DIMMER MODULE LW12

Safety warnings

- This product is for professional use and should be installed by a certified installer.
- The wiring of your electrical installation is live (230 V) and extremely dangerous. Never connect the module when plugged into the mains. Always turn off the main switch before starting the installation.
- To prevent short circuits, this product should only be used inside and only in dry spaces.
- Do not expose the components to rain or moisture. Do not use the product close to a bath, swimming pool etc.
- Do not expose the components of your systems to extremely high temperatures or bright light sources.
- Do not open the product: the device contains live parts. The product should only be repaired or serviced by a qualified repairman
- In case of improper usage or if you have opened, altered and repaired the product yourself, all guarantees expire. Marmitek does not accept responsibility in the case of improper usage of the product or when the product is used for purposes other than specified. Marmitek does not accept responsibility for additional damage other than covered by the legal product responsibility.

Switch off appropriate mains fuse and master switch!

Important: 230V - 50Hz - 16A max.

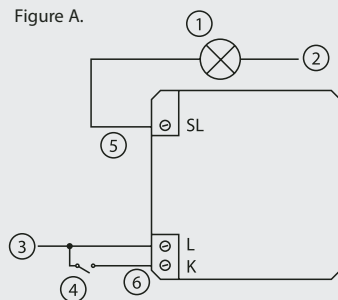
This module can be activated using a momentary switch connected to it or using X-10 PLC signals. It can be operated using the following X-10 signals: ON, Off, DIM, BRIGHT and the optional X-10 commands All Lights On/All Lights Off/All Units Off if these are programmed.

The unit will accept a momentary switch. The input for the switch is connected to the phase (brown wire, 230V), the output of the switch is connected to input "K" of the LW12 Micromodule. See figure A.

No Neutral (blue wire) has to be connected to the LW12 MicroModule, which means it can be easily used instead of a normal switch, without having to use any wires.

The module is equipped with softstart, softdim and a memory setting for the last dim level.

Figure A.



1. Lamp
2. Neutral (blue)
3. Live (brown)
4. Momentary Switch
5. Load (black)
6. Switch input (black)

Installation

- Switch off appropriate mains fuse and master switch!
- Take the wall switch out of the wall box.
- Disconnect all wires from the switch.
- Connect the live (brown) and load wire (black) to the terminals of the LW12 as described in figure A.
- Connect the wire from the In-Wall module to the switch.
- Replace your normal make/break contact switch by a momentary switch.
- Connect a load wire (brown) to the momentary switch (CAUTION: In the interest of safety and to make the device work properly, this load wire HAS TO be from the same group).
- Connect a black wire to the output of the switch. Connect the other end of this black wire to the input K of the LW12 MicroModule. See figure A.
- Place the module against the back of the wall box and replace the switch inside the box.
- Switch on mains fuse and master switch.

Programming

Programming the address and the optional functions All Lights On/All Lights Off/All Units Off: To change the address and the settings for the All Lights On/All Lights Off/All Units Off functions, the module needs to be set to the program mode.

Activating the program mode can be done in 2 ways:

1. By transmitting On / Off commands of the set address in quick succession (e.g. if the address is B2: B2 ON, B2 OFF, B2 ON, etc.) After the LW12 has changed state 5 times, with no more than 1.5 seconds between changes, the LW12 will no longer respond, which means the module is set to the program mode.
2. By quickly pressing/switching the momentary switch connected to the module. After the LW12 has changed state 5 times, with no more than 1.5 seconds between changes, the LW12 will no longer respond, which means the module is set to the program mode. Once in Program Mode the new address can be set by sending an "Address" or "Address On" (e.g. B2 ON) or "Address Off" command for the new address code twice (using any Marmitek X-10 controller). If you want to change the code again, just send the revised code twice as before.

To set the unit to respond to "All Lights On" and/or "All Lights Off" and/or "All Units Off" just send these commands twice for the new address code (using any X-10 controller). Please note: The "All Lights On/All Lights Off /All Units Off" options can be disabled by setting a new address or by returning to the Default Setting.

Resetting the LW12

When leaving the factory, the LW12 is set to the default address A1 and does not respond to the optional functions All Lights On/All Lights Off/All Units Off. If the address and settings for the options "All lights on/All lights off /All Units Off" aren't known, the default address of A1 can be set by applying power to the unit and sending the address P16 to the unit twice (using any X-10 controller - i.e.: TM13 + RF remote control).

This can either be just the address "P16" or "P16 On" or "P16 Off". The commands must be sent within 30 seconds of applying power to the unit.

Setting the default address automatically cancels the options "All Lights On", "All Lights Off" or "All Units Off".

Exiting the programming mode

Automatic: Wait for 1 minute. The device will then automatically exit the program mode.

Manually: To return to Run Mode: either send "Address On", "Address Off" or press the key quickly (no more than 1.5 seconds between key presses). After 5 key presses or "On/Off" commands, the LW12 will start to respond, indicating that the unit is back in Run Mode.

Detailed information on the type of switch

If the connected momentary switch is used, the status of the LW12 will change if the button is pressed for less than 2 seconds. If the momentary switch is pressed for a longer duration, the LW12 will dim. The module first dims all the way down and then back up.

Troubleshooting

If your LW12 doesn't work:

- Does the light work if you connect it directly to the mains?
- Is the module connected to a surge protector? A surge protector might block signals from your interface or controller.
- Is the Housecode set correctly?
- If you still cannot control any modules, plug your controller and module into the same outlet (using a non surge protected outlet strip, if necessary). See if you can control this module. If not, contact your local distributor for help.
- If the device does work correctly with the controller and the module into the same outlet, try plugging the module into the original outlet. If the module doesn't work when plugging it into other outlets in your home (try several different locations and several modules of the same type), contact your local dealer for help.

Signal Range

The X-10 System is based on power line communication. The range of the X-10 signals very much depends on the local circumstances. On average the range is a cable length of 80 meters. If you have difficulties with the range of your X-10 signals, please pay attention to the following facts:

1. When more than one phase is used for your electrical system, it is necessary to couple these phases for the X-10 signals. For coupling you can use FD10 Phase Coupler/Filter. You only need to install a Phase Coupler/Filter when your wall outlets and light switches are divided over more than one phase (more than one group is no problem). For bigger buildings or longer distances we advise you to use an active repeater instead of passive FD10's.
2. It is possible that X-10 signals suffer from interference from devices and lights which are connected to the power line. In a normal home situation this effect is

negligible (the X-10 system is using active gain control to eliminate the effects). However, it is possible that a particular device in your house is interfering with the signals so much that the range of X-10 signals is decreased significantly. When you have range problems, it is wise to try to locate the device which is interfering with the signals simply by unplugging devices from the power line, and testing the differences in range for your system. When e.g. your computer monitor is interfering with the signal, you can use a FM10 Plug-in Filter between the power line and the monitor to eliminate the effects. Known devices which can cause interference are: PC Monitors, PC's with heavy internal power supplies, Old Televisions, Xerox Copiers, Fluorescent Lights, Gas Discharge Lamps (Energy Saving Lamps)

3. Some (old) devices can also interfere with the signal by transmitting noise on the power line. Because the X-10 signals are transmitted on 120 kHz, only noise on or near this frequency will have influence on the range. When you use a FM10 Filter to connect this device to the power line, the noise will be filtered.
4. The X-10 protocol has several mechanism to avoid modules to be switched on or off by other sources than your X-10 Controllers. However, it is possible that the X-10 signals are disturbed by e.g. baby phones which are in TALK mode (continuous transmission). When these kind of signals are present on the power line it is possible that the X-10 signals will not come through.
5. The mains do not stop at the front door of your home. Everything that is attached to mains nearby your home can have influence on X-10 signals (e.g. heavy machinery). If you think that your system is influenced by devices out of your house, it is advisable to install FD10 Phase Coupler/Filter on each phase entering the house. These filters will block signals coming into or going out of your house, but will also match the impedance for the mains. The FD10's will not only filter but will also couple the phases (please see 1).

Any questions?

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Technical Data

Supply voltage:	230 V +10% -15%, 50 Hz
Supply current:	<5,5 mA.
Measurements:	46 x 46 x 17 (h x w x d)
Installation:	We advise using 50mm deep wall boxes
Capacity:	60W to 250W. Tungsten and halogen lighting (230V and halogen on low voltage).
Minimal load:	60W