

MPP-24 Power Pack Single Relay Room Controller

SPECIFICATIONS

Volages	120/230/240/277VAC, 50/60Hz
Operating Temperature	32°-131°F (0-55°C)
Load Requirements	
Ballast.....	20amp @120/230/240/277VAC
Tungsten.....	20amp @120VAC
Motor	1HP @120/240VAC
Output	150mA @24VDC (with relay connected)
Low Voltage Input:	
Control ON	12-24VDC
Hold ON	12-24VDC
Hold OFF.....	12-24VDC
Manual ON (momentary switch required).....	12-24VDC
Maximum 24V Low Voltage Output.....	Maximum 6 Sensors
Dimensions H x W x D.....	40.6mm x 69.9mm x40.6mm
Snap-in nipple.....	1/2"
Knockouts.....	1/2"

DESCRIPTION

The MPP-24 power pack/single relay room controller provides 24VDC operating voltage to Enerlites low-voltage occupancy sensors. The MPP-24 has one relay that is capable of controlling 15 or 20amps, a high efficiency switching power supply. The MPP-24 is the foundation for Enerlites low voltage sensors and other control devices such as plug load. The MPP-24 power pack has a 1/2" snap-in nipple that allows for easy installation onto the outside of any junction box with a 1/2" knockout. The MPP-24 comes with two sets of wires; line voltage wires for power source and lighting fixtures and 22 gauge low voltage wires for sensor and momentary switches. Each power pack can be connected with a maximum of six occupancy sensors.

Turn the POWER OFF at the circuit breaker before installing the Power Pack.

Read and understand these instructions before installing. This device is intended for installation in accordance with the National Electric Code and local regulations. It is recommended that a qualified electrician performs this installation. Make sure to turn off the circuit breaker or fuse(s) and make sure power is OFF before wiring the device. Use copper wire only.

MPP-24 LED INDICATOR

The LED on the reverse side of the MPP-24 indicates the following conditions:

- LED OFF:** No power to the MPP-24, or the +24VDC output is shorted.
- LED blinking continuously:** Flashes once every 2 seconds and be off for 0.5 seconds, relay closed (load on)
- LED normally ON:** The relay is open (load OFF).

MOMENTARY INPUT

Manual ON/OFF (Grey) – This input is for a low voltage momentary switch. Applying 12-24VDC momentary input changes the relay to the opposite state. It overrides Control ON, Hold ON and Hold OFF inputs.

WIRING DIRECTIONS

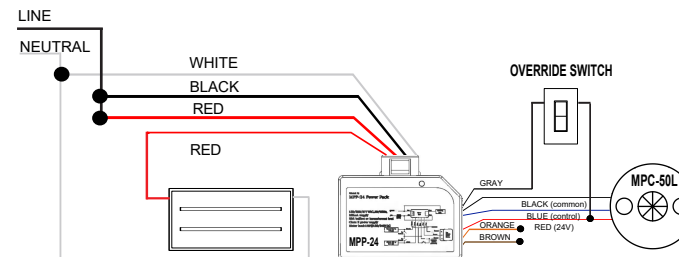
Connect the low voltage:

Test all High Voltage wires and label them before disconnecting or connecting any wires. Improper installation VOIDS ALL WARRANTY repair or replacement. Use only UL listed, 18-22 AWG, 3-conductor, Class 2 cable for low voltage wiring.

- Connect low-voltage RED wire from power pack to the +24V terminal on the sensor.
- Connect low-voltage BLACK wire from power pack to Common terminal on the sensor.
- Connect low-voltage BLUE wire from power pack to Control Out terminal on sensor.

Connect the High Voltage Wires:

1. Connect one RED LOAD wire from the Power Pack to the LOAD wire.
2. Connect the WHITE NEUTRAL wire from the Power Pack to the NEUTRAL wire.
3. Connect the BLACK HOT and one RED LOAD wire from the Power Pack to the HOT wire.



1. When lights are manually turned off, switch must be returned back to the on position for the occupancy function as set.

To add a MANUAL SWITCH such as the Momentary Switch connect the following wires to the low voltage wires on the Power Pack:

- Connect the Gray wire on Power pack to a terminal screw on the momentary switch.
- Connect a low voltage wire from the other terminal screw on the momentary switch to the RED +24 VDC wire on the Power Pack.

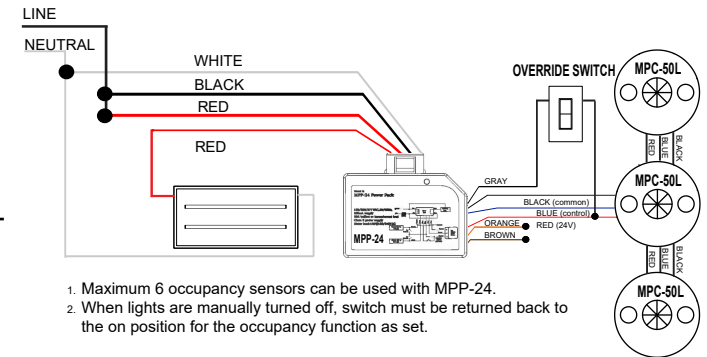
To add a "HOLD ON" DRY CONTACT SWITCH connect the following wires to the low voltage wires on the Power Pack:

- Connect the ORANGE wire on Power pack to a terminal screw on the dry contact switch.
- Connect a low voltage wire from the other terminal screw on the dry contact switch to the RED +24 VDC wire on the Power Pack.

To add a "HOLD OFF" DRY CONTACT SWITCH connect the following wires to the low voltage wires on the Power Pack:

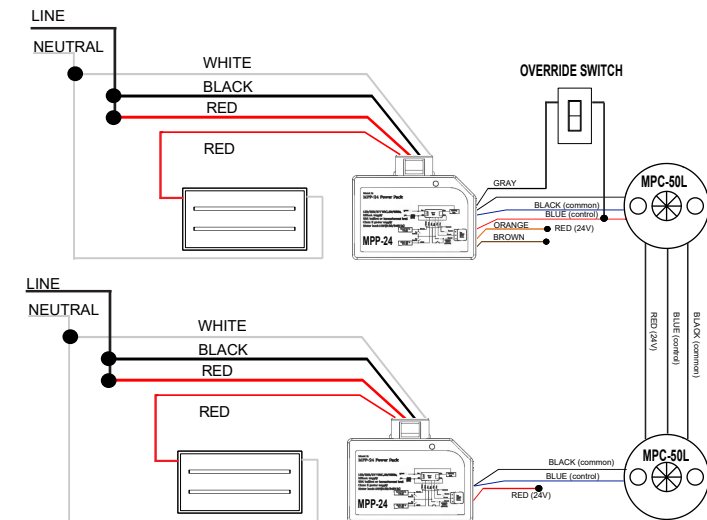
- Connect the BROWN wire on Power pack to a terminal screw on the dry contact switch.
- Connect a low voltage wire from the other terminal screw on the dry contact switch to the RED +24 VDC wire on the Power Pack.

MULTIPLE SENSORS WIRING



1. Maximum 6 occupancy sensors can be used with MPP-24.
2. When lights are manually turned off, switch must be returned back to the on position for the occupancy function as set.

MULTIPLE POWER PACKS WIRING



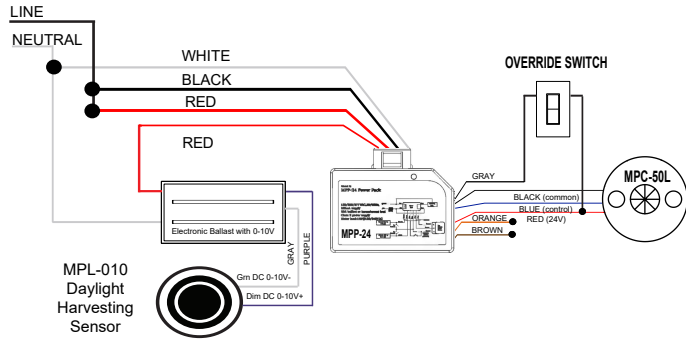
OVER CURRENT PROTECTION

The MPP-24 contains built-in short circuit and thermal protection circuitry that shuts down the +24VDC output (low voltage red wire) when the output exceeds 200MA to prevent permanent damage to the power pack.

Removing the excess load from the output restores the MPP-24 to proper operation. Connect the excess load to another power pack.

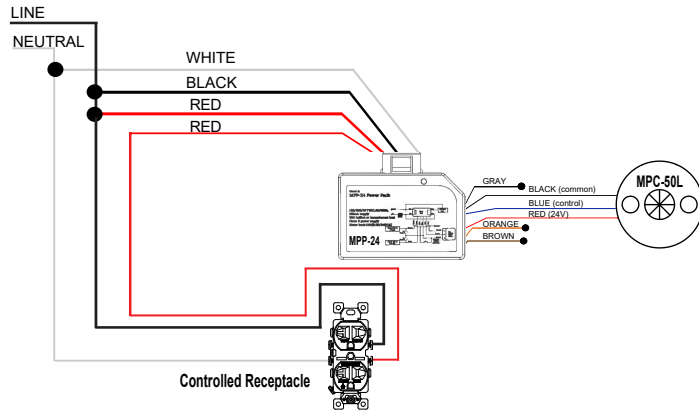
SINGLE ROOM CONTROLLER OPTIONS

DAYLIGHT HARVESTING - OCCUPANCY SENSOR SWITCH

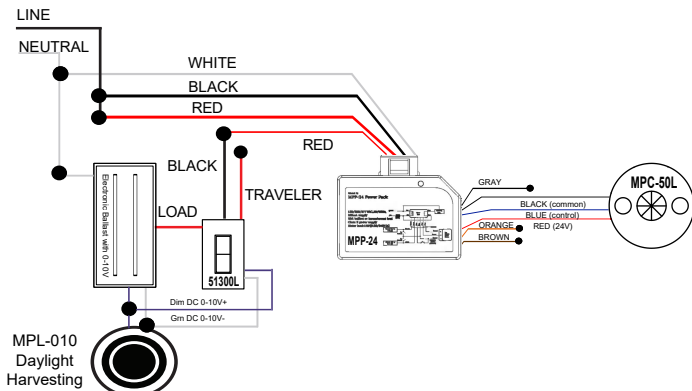


1. When lights are manually turned off, switch must be returned back to the on position for the occupancy function as set.

PLUG LOAD CONTROL

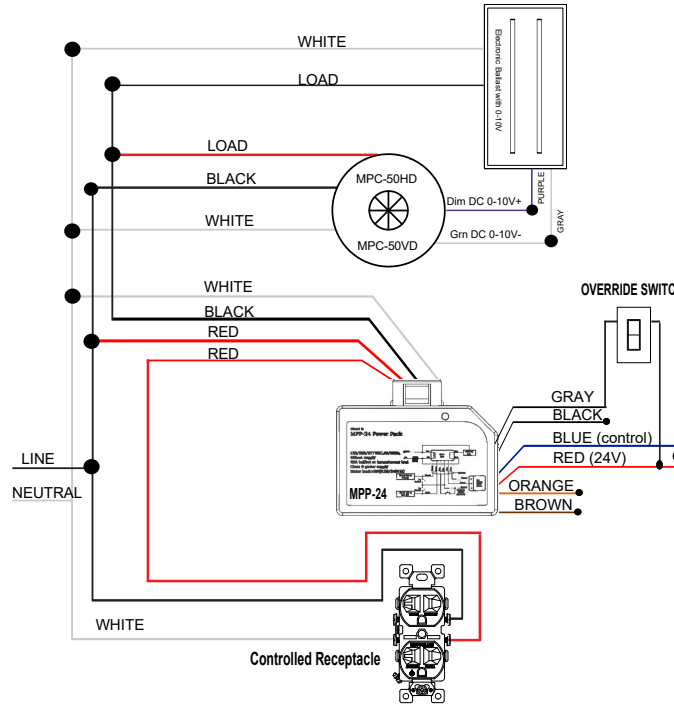


DAYLIGHT HARVESTING - OCCUPANCY SENSOR SWITCH with DIMMER CONTROLLED



1. Daylight harvesting sensor supersedes dimmer during daylight.

OCCUPANCY SENSOR with 0-10V DIMMING AND CONTROLLED RECEPTACLE



OPERATION

The MPP-24 can be automatically operated by the use of low voltage ceiling sensors, manually with momentary switches, or on a schedule by the use of a relays.

Automatic: The MPC-50L or the MDC-50L may be installed with the MPP-24 to automatically turn ON/OFF the Load based on motion detection.

Manual: This feature **OVERRIDES ALL control functions**. The Load can be turned ON/OFF manually by installing a momentary switch. The momentary switch will affect the operation of the ceiling sensor. If the Load is turned OFF manually, the Load **WILL NOT** turn on again automatically until the time delay has expired on the ceiling sensor or the Load is manually turned ON again.

Hold ON: This feature overrides the Automatic control. The MPP-24 can be turned ON based on a schedule by connecting it to a relay such as a timer.

Hold OFF: This feature overrides the Automatic control. The MPP-24 can be turned OFF based on a schedule by connecting it to a relay such as a timer.

Over Current Protection: The MPP-24 has built-in short circuit and thermal protection. It prevents over current damage to the power pack when the output exceeds 200mA. Make sure the connected Load is under the specified ratings. Use additional MPP-24 power packs to distribute the Loads evenly.

LED Indicator:

- **LED is OFF:** There's no power coming to the power pack or the +24VDC is shorted.
- **LED BLINKS continuously:** The Load is ON.
- **LED is ON continuously:** The Load is OFF.

Zero-Crossing: The relay in the MPP-24 is built with Zero-Crossing Circuit. It's deviation of $\pm 20\%$ prolongs the life of the relay and increases the reliability of movement. In other words, if an ON signal is received while the AC output to the Load is not very close to zero voltage, the relay will "wait" to switch ON again until the output AC wave reaches its next close to zero point.

TROUBLESHOOTING

The Load does not automatically turn ON after using the manual OFF switch:

- Wait for the time delay on the sensor to expire or press the Manual switch to turn back on and wait for the time delay on the sensor to expire.
- Increase the sensitivity on the sensor and reduce the time delay.

The Load does not turn ON when motion is detected: The "HOLD OFF" or the Manual switch may be overriding the control. Override the switch again by manually turning on the Load and waiting for the time delay to expire.

The Load does not turn OFF when time delay has expired: The "HOLD ON" or the Manual switch may be overriding the control. Override the switch again by manually turning the Load OFF and then back ON and then wait for the time delay to expire.

WARRANTY INFORMATION

This device is warranted to be free of material and workmanship defects for 2 years from the date of purchase. Original receipt or proof of purchase from an authorized retailer must be presented upon warranty claim. ALL claims must be verified and approved by Enerlites, Inc. Warranties from other Enerlites products may vary. This warranty is nontransferable and does not cover normal wear and tear or any malfunction, failure, or defect resulting from misuse, abuse, neglect, alteration, modification, or improper installation. To the fullest extent permitted by the applicable state law, Enerlites shall not be liable to the purchaser or end user customer of Enerlites products for direct, indirect, incidental, or consequential damages even if Enerlites has been advised of the possibility of such damages. Enerlites' total liability under this or any other warranty, express or implied, is limited to repair, replacement or refund. Repair, replacement or refund are the sole and exclusive remedies for breach of warranty or any other legal theory.



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WWW.ENERLITES.COM
0204210180
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