




**WARNING**


**TURN THE POWER OFF AT THE CIRCUIT BREAKER  
 BEFORE INSTALLING POWER PACKS  
 ONLY QUALIFIED ELECTRICIANS SHOULD ATTEMPT TO INSTALL  
 WATT STOPPER POWER PACKS**

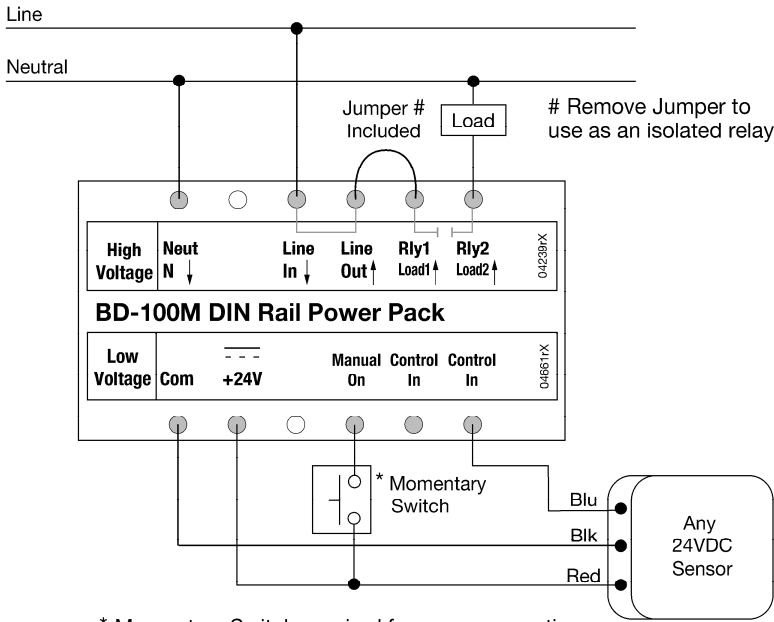
**DESCRIPTION**

The BD-100M power pack is the foundation for any low voltage lighting control system. The BD-100M supplies low voltage power to occupancy sensors and other control devices. It switches line voltage in response to signals from a manual switch and then inputs from automatic control devices. The BD power pack is attached to a DIN-rail mounted inside any electrical enclosure.

Low voltage wiring should use at least 22-gauge wire, high voltage connections should use at least 14-gauge. Always check local building codes. After initial wiring is complete, check wiring diagram to verify power pack is wired correctly. Improper wiring can cause damage to power pack, lighting system, and occupancy sensor.

**INSTALLATION**

**Wiring Diagram**



\* Momentary Switch required for proper operation  
 Watt Stopper models: LVS-1 or L1S or RS2-3

## **Installation Notes**

1. Power packs should be installed in accordance with state, local and national electrical codes and requirements.
2. Power packs are designed to attach to lighting control panels or electrical enclosures that are fitted with a DIN-rail.
3. Most applications require UL listed, 18-22 AWG, 3-conductor, Class 2 cable for low voltage wiring. For plenum return ceilings, use UL listed plenum-approved cables.

## **OPERATION**

### **Low Voltage Inputs**

One +12-24VDC momentary, and two +12-24VDC maintained inputs are provided with the following functionality:

1. Manual On – Users must press the momentary switch connected to the Manual On terminal in order to turn the load on. Lights will not turn on with motion. +24VDC at the Control In terminal must be detected within 30 seconds of activating the Manual On switch to maintain the relay ON status. Pressing the manual switch while the load is ON turns the load OFF regardless of the sensor status.
2. Control In – After the Manual On input has been activated, applying +12-24VDC to one of the Control In inputs maintains the state of the relay. Remove the Control In voltage and the relay returns to its normal state. This input is intended for sensor or control device input.

Upon removal of the voltage signal from the Control In terminal, there is a 30 second grace period. During this time, the BD-100M can re-activate the relay from a Control In signal without prior activation of the Manual On switch.

## Over Current Protection

If the current drawn from the BD exceeds 175mA (i.e., there are too many sensors per power pack) the over current protection goes into effect. First, the red LED starts blinking rapidly. If the over current condition is not corrected, the +24VDC output is turned off and the blinking red LED changes to solid red. 10 seconds after removal of the fault condition, the BD will attempt to restore the +24VDC output. This protection also applies if the low voltage outputs are shorted.

## LED Indicators

The BD has three LED indicators to inform you of various conditions.

GREEN: Power is applied

YELLOW: Relay is closed

RED indicates one of two conditions:

- Fast blink indicates that max current has been exceeded.
- Solid indicates the BD has shut down the output due to the overload.

## ORDERING INFORMATION

Catalog Number	Description	Input Voltage	Load Ratings			Output
			Ballast (A)	Incan. (A)	Motor (hp)	
BD-100M	Power Pack	100-277VAC 50/60Hz	20	20	1	24 VDC, 175 mA (w/relay connected)
L1S*	Single button switch, contact rating 25mA @50VDC, max. pilot load 10mA *Add to the end of catalog number: -2 Ivory, -4 Almond, -7 White, -9 Grey					
LVS-1**	Momentary toggle switch, single-pole, double-throw with center position rest, 3A, 24VAC/DC **Add to the end of catalog number: -W White, -I Ivory, -G Grey					
RS2-3***	Two button momentary switch, single-pole, double-throw, 2 normally open 3A 28VDC contacts. ***Add to the end of catalog number: -2 Ivory, -6 Stainless Steel, -7 White, -9 Grey					

## WARRANTY INFORMATION

The Watt Stopper®, Inc. warrants its products to be free of defects in materials and workmanship for a period of five years. There are no obligations or liabilities on the part of The Watt Stopper, Inc. for consequential damages arising out of or in connection with the use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation or reinstallation.



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