

BD Din Rail Mounted Power Packs

DIN rail mounted

Zero crossing for reliability and increased product life

Hold-ON and hold-OFF inputs (BD-100E-P)



Fully self-contained transformer and relay

Manual-ON option (BD-100M)

120/277 VAC input
24 VDC/175 mA output

PROJECT

LOCATION/TYPE

Product Overview

Description

The BD-100 is a versatile, DIN rail mounted power pack supplying 24 VDC operating voltage to low voltage occupancy sensors and other lighting controls. The BD-100 is available in two models, the BD-100E-P with hold-ON and hold-OFF functions, and the BD-100M for manual-ON applications.

Operation

BD power packs consist of a transformer and a high-current relay. The transformer has a high voltage input of 120/277 VAC. The secondary output, which provides the operating power for occupancy sensors and lighting control devices, is 24 VDC, 175 mA. This 175 mA output is available with the power pack's relay connected. The power packs receive input from occupancy sensors, switches or light level sensors to switch lighting on and off. For example, when an occupancy sensor detects motion, it electronically closes an internal circuit which sends 24 VDC to the power pack. This closes the power pack relay and turns lights on. The BD-100M works with low voltage momentary switches for manual ON/OFF as well as automatic OFF control.

DIN Rail

The BD can mount to any junction box or electrical housing fitted with a DIN rail. This means that the power pack is seated in a junction box by snapping it into place onto the DIN rail. Once attached, the BD-100 accepts line voltage on one side and low voltage on the other, keeping the two voltages separate.

Applications

BD-100E-P power packs control lighting circuits, self-contained VAV systems, and setback thermostats. The hold-OFF input can be used to perform load shedding. During a power alert or peak demand, a signal from a BMS or utility meter triggers the BD to shed non-critical lighting loads. The hold-ON input is ideal for retail and commercial facilities that want to hold certain lighting ON during normal business hours. After-hours, a time clock signals the BD to no longer hold lights ON, allowing occupancy sensors to resume control. The BD-100M is well suited to applications where users require manual ON/OFF control.

Features

- Self-contained transformer relay system
- LED indicates status of relay or if there is an overcurrent on the low voltage output
- Hold-ON and hold-OFF inputs integrate with lighting control panels, BMS and other building systems (BD-100E-P)
- Hold-OFF input can provide load shedding function (BD-100E-P)
- Hold-ON input enables method to override occupancy sensor and hold lighting ON (BD-100E-P)
- Zero crossing for reliability and increased product life
- Manual-ON inputs require a low voltage momentary switch (with an attached automatic control device) to provide manual ON/OFF and automatic OFF control (BD-100M)

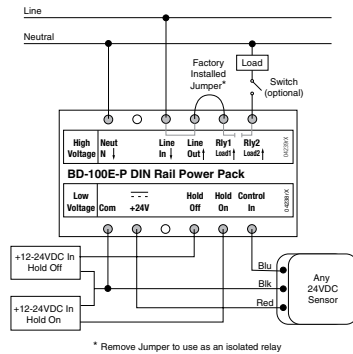


Specifications

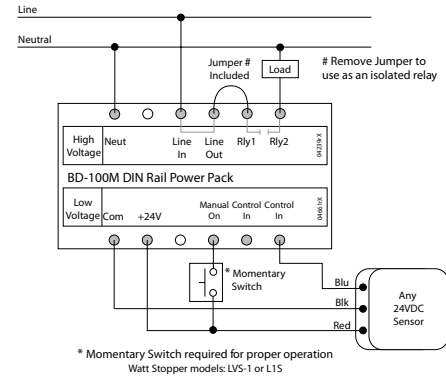
- 120/277 VAC; 50/60 Hz
- Max load ratings:
 - Ballast 20 A @ 120/277 VAC
 - Incandescent 20 A @ 120 VAC
 - Motor 1HP @ 120/240 VAC
- Output: 175 mA @ 24 VDC (with relay connected)
- Low voltage inputs: Control On +12-24 VDC; Manual ON +12-24 VDC
- Terminal torque: 4/428 inch-pound force 0.5Nm
- Operating temperature 32°-131°F (0°-55°C)
- UL 94 V0 rated plastic enclosure
- CE listed for 230 VAC applications
- Dimensions: 2.78" x 3.44" x 2.63" (71mm x 87mm x 67mm)
- UL and cUL listed
- Five year warranty

System Layout & Wiring

BD-100E-P Wiring Diagram

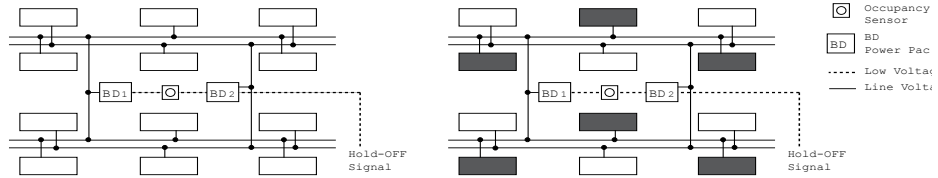


BD-100M Wiring Diagram



Hold-ON/ OFF Function

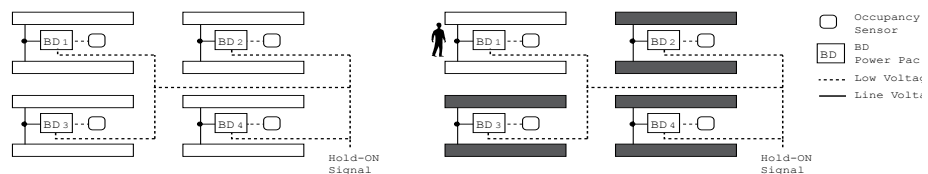
Hold-ON Retail Application



During store hours, a signal from a time clock to the BD holds lights on, regardless of occupancy.

After hours, the clock schedule cancels the hold on and occupancy sensor control takes over.

Load Shed (Hold-OFF) Application for Open Office Spaces



The occupancy sensor, connected to each BD, keeps all lights on when the space is occupied.

When the load shed command is given (by utility meter, BMS, etc.), lights connected to the BD2 are held off. Remaining lights, (BD1) are controlled by occupancy sensor.

Ordering Information

Catalog No.	Description	Input Voltage	Load Ratings			Output
			Ballast (A)	Incan. (A)	Motor (hp)	
<input type="checkbox"/> BD-100E-P	Power Pack	120/277 VAC; 50/60 Hz	20	20	1	24 VDC; 175 mA (relay connected)
<input type="checkbox"/> BD-100M	Power Pack	120/277 VAC; 50/60 Hz	20	20	1	24 VDC; 175 mA (relay connected)
Optional Switches: (Use of BD-100M requires use of 1 low voltage switch)						
<input type="checkbox"/> L1S*	Single Button switch, contract rating 25mA @ 50 VDC, max pilot load 10mA *Add to the end of catalog number: -2 Ivory, -4 Almond, -7 White, -9 Grey					
<input type="checkbox"/> 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					