

Dual Relay Switchpack

Catalog#	Prepared by
Project	Date
Comments	Type





Overview

Switchpacks provide 24 VDC operating voltage to all low voltage, Greengate occupancy sensors and daylighting controllers. These switchpacks can be used where two circuits need to be controlled at the same point. A single switchpack can provide power for up to five sensors. Up to ten switchpacks can be connected to one sensor for control of multiple circuits. Isolated contacts may also be used to control HVAC, contactors, motors, etc.

Features

- Replaces separate transformers and relays
- Zero-crossing circuit provides increased durability, especially with today's high inrush loads
- Capable of switching up to 20 amps
- Suitable for Plenum installations
- Rated for Ballast, Tungsten and Motor Loads

Specifications

Electrical Ratings	Input: 120/277 VAC, 50-60 Hz operation. Contacts are isolated and may be used to control low voltage circuits Output: 24 VDC 125mA to operate up to five sensors
Control	Connecting the 22 AWG blue and yellow control leads to the red lead will close the relay contacts
Ballast Compatibility	Compatible with magnetic and electronic ballasts
NOTE	The life of some compact fluorescent lamps (CFLs) is shortened by frequent automatic or manual switching. Check with the CFL and ballast manufacturer to determine effects of cycling
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C) Relative humidity: Less than 95%, non-condensing For indoor use only
Housing	Medium impact injection molded housing. ABS resin complies with UL 94V-0. Plenum rated for external junction box mounting, with Teflon coated leads
Motor Load	1 HP 120 VAC; 2 HP 250 VAC
Size	4 3/4" x 2" x 3 1/4"
Mounting	Mounts directly to 4" square box
Standards	UL, CSA Listed  

Description/Operation

The switchpack has three main components: a transformer and two high current relays. The transformer has a primary line voltage input and a secondary low voltage output. The low voltage output, 24 VDC, provides operating power to connected low voltage Greengate occupancy sensors. When an occupancy sensor detects motion, it electrically closes an internal circuit, pulling up the control signal between the sensor and the switchpack. This signals the switchpack to close its high current relays, turning connected loads on.

Applications

The switchpack is designed to work with low voltage Greengate sensors which require switchpacks. It cannot be used with sensors designed for use with any other low voltage relay systems. Consult sensor spec sheets for other sensor/relay combinations.

Wiring Diagrams

SPD20-MV-NO (Line Voltage Switches)

AUTOMATIC MODE OPERATION:

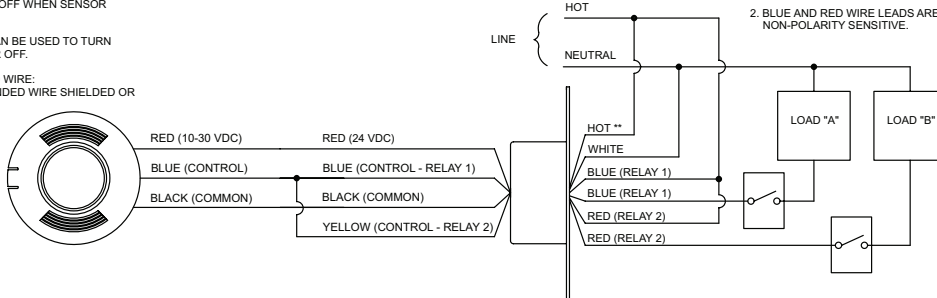
1. WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.
2. LOADS TURN OFF WHEN SENSOR TIMES OUT.
3. SWITCHES CAN BE USED TO TURN LOADS ON OR OFF.

RECOMMENDED WIRE:
18-3 AWG STRANDED WIRE SHIELDED OR NONSHIELDED

**USE BLACK LEAD FOR 120 VAC.
USE ORANGE LEAD FOR 277 VAC.
CAP UNUSED LEAD.

NOTES

1. SPD20-MV-NO SWITCHPACK SHOWN. 120/277 VAC 20AMP RATING PER RELAY.
2. BLUE AND RED WIRE LEADS ARE NON-POLARITY SENSITIVE.



CAUTION: Before installing or performing any service on a Greengate system, the power **MUST** be turned OFF at the branch circuit breaker.

SPD20-MV-NO (Low Voltage Switching)

*This configuration is for single sensor application only

MANUAL MODE OPERATION:

1. SWITCHES ARE REQUIRED TO TURN CORRESPONDING LOADS ON.
2. LOADS TURN OFF WHEN SENSOR TIMES OUT OR WITH THE SWITCH.

AUTOMATIC MODE OPERATION:

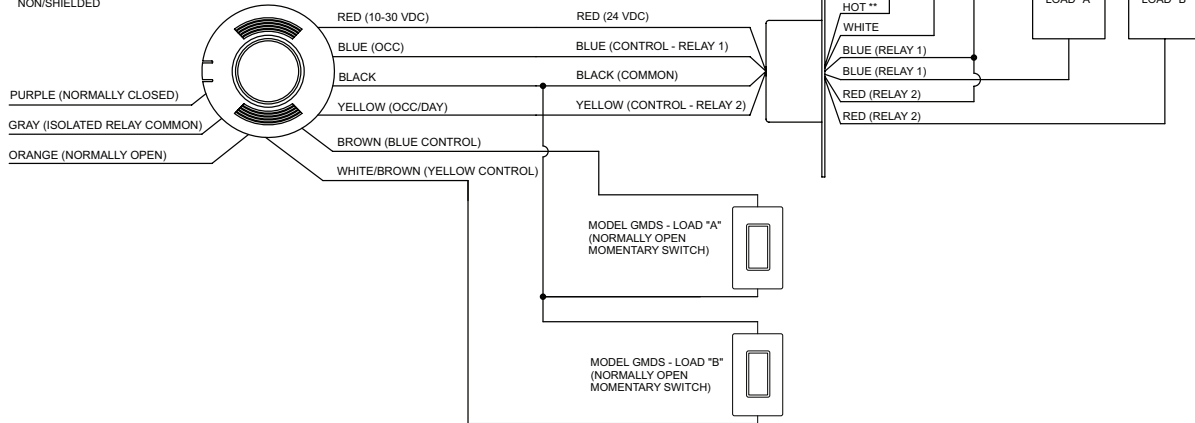
1. WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.
2. SWITCHES CAN BE USED TO TURN LIGHTS ON OR OFF.
3. IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

RECOMMENDED WIRE:
18-3 AWG STRANDED WIRE SHIELDED OR NONSHIELDED

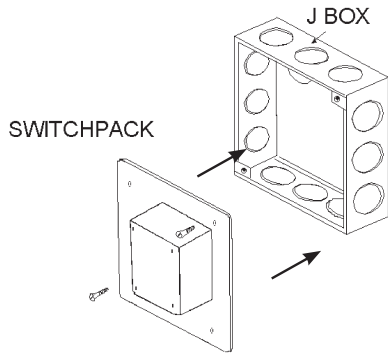
**USE BLACK LEAD FOR 120 VAC.
USE ORANGE LEAD FOR 277 VAC.
CAP UNUSED LEAD.

NOTES

1. SPD20-MV-NO SWITCHPACK SHOWN. 120/277 VAC 20AMP RATING PER RELAY.
2. BLUE AND RED WIRE LEADS ARE NON-POLARITY SENSITIVE.



Mounting



All connections are made via pigtails with twist-on wire connectors.

Notes: Connect either the orange or black supply lead to the power source, depending upon the power requirements. Cap the unused lead.

Ordering

Catalog #	Ratings	Ballast	Tungsten	Motor (HP)	Output
SPD20-MV-NO	120/277V 30/60 Hz	20A 120 VAC 20A 277 VAC	15A, 120 VAC	1HP-120 VAC, 2HP-250 VAC	24 VDC, 125mA

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

© 2020 Cooper Lighting Solutions
All Rights Reserved
Printed in USA
Publication No. ACC131667
September 17, 2014

Cooper Lighting Solutions is a registered trademark.

All other trademarks are property of their respective owners.