

TECHNICAL DATA

TYPICAL APPLICATIONS

- Classroom w/o Obstructions
- Large Conference Room
- Hallways

FEATURES

- PIR Occupancy Detection
- Interfaces w/ G.E. RR-7 Relay
- 120° by 40ft. Coverage
- Time Delay: 30 sec. to 20 minutes
- Green LED Activity Indicator
- Programmable w/o removing cover
- 100 Hr. Burn-in Timer Mode

AVAILABLE OPTIONS

- 2nd Relay Control (-2P)
- Isolated Low Voltage Relay (-R)
- Low Temp/Hi Humidity (-LT)

SPECIFICATIONS

- Size: Rectangular, 3.0" x 3.6" x 1.75"
(7.62 cm x 9.14 cm x 4.45 cm)
- Sensor Weight: 4 Ounces
- Sensor Color: White
- Mounting: 8 to 10 ft in Corner or Ceiling using bracket (WV-BR)
- Relative Humidity: 20 to 90% non-condensing
- Operating Temp: 14° to 160° F (-10° to 29° C)
- Storage Temp: -14° to 160° F (-26° to 71° C)
- Operating Voltage: 24 VAC (half wave rectified)
- Max. Pulsing Current: 4 Amps
- Max. # of Remote Sensors: 6
- UL and CUL Listed
- 5 Year Warranty
- Made in U.S.A.

LOW TEMP/HI HUMIDITY(-LT)

- Conformally coated Circuit Board is corrosion resistant from moisture
- Operates down to -40° F(-40° C)

WV-RR7 Series

Programmable Edition!



The *WV-RR7 Series* sensor is a Wide View Passive Infrared Sensor designed

to interface directly with the G.E. RR-7 Relay. The *WV-RR7* is ideal for classrooms, or larger conference rooms without obstructions. Able to fit in the palm of your hand, the *WV-RR7* Wide View Sensor unobtrusively mounts in a corner near the ceiling; detecting small motions up to 40 feet away and large motions up to 70 feet away. The unique "Tilting feature" allows this sensor to be mounted any height from 8 to 10 feet with excellent long-range coverage. When corner or wall mounting is not possible, use the ceiling accessory bracket *WV-BR* to locate a *WV-RR7* on the ceiling where desired.

SENSOR OPERATION AND INTERFACE TO RELAY

The *WV-RR7* detects changes in the Infrared energy given off by occupants as they move within the sensors field-of-view. An internal timer, factory set at 10 minutes, keeps the lights "On" during brief periods of no activity. This timer is selectable at 2.5 minute increments from 30 seconds to 20 minutes, and is reset every time occupancy is detected. System power is provided by a Class II 24 VAC transformer. The G.E. RR-7 relay interfaces to the sensor via a 3-wire parallel connection to the local (SPDT "Momentary" type) switch. No wires from the sensor to the transformer are required; an advantage considering most transformers are typically located in a centralized panel and not easily accessible. Upon occupancy, the sensor pulses the wire to the "On" switch terminal causing the RR-7 relay to turn on the lights. Once the sensor time delay expires, it pulses the wire to the "Off" switch terminal causing the RR-7 relay to turn off the lights. The local switch can also pulse on and off the relay. For example, a room is occupied with the lights on and the occupant leaves and pulses the switch off. The sensor later times out and sends a redundant "Off" pulse. Then, when an occupant enters the sensor pulses lights on. However, if the occupant re-enters prior to the sensor timing out, the lights would remain off until the manual switch was pulsed on.

2ND RELAY CONTROL OPTION (WV-RR7-2P)

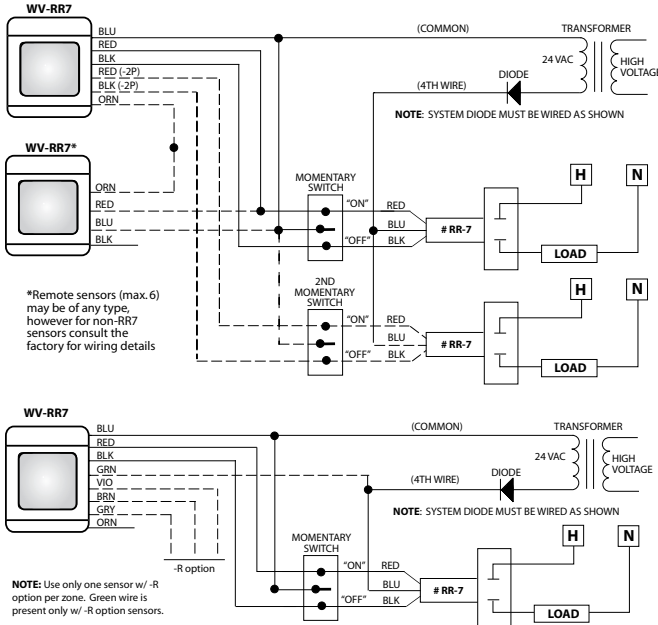
The "-2P" option provides additional "Pulse On" and "Pulse Off" wires to connect to a 2nd relay for A/B switching applications. This allows for two momentary switches to override each relay independently. For example, when a room is first occupied, both relays will pulse On. If the occupant desires one level Off, they can pulse the respective switch Off. If a single pole (non -2P) sensor's "On" or "Off" wires were connected to multiple switches, then all switches would work both relays together and lose the independent control. If more than 2 relays are to be controlled, refer to technical bulletin on using external diodes to isolate each relay in the system.

INTERNAL LOW VOLTAGE RELAY OPTION (WV-RR7-R)

To enable a sensor to interface with a building management system, the -R option provides dry contact closure via a SPDT, 1 Amp, 40 Volt relay. The relay coil is energized and changes state when ALL connected sensors register "Unoccupied". When using multiple sensors, only one sensor per zone needs to have a relay.

CATALOG INFORMATION

MODEL #	DESCRIPTION	TEMPERATURE	OP. VOLTAGE	CURRENT
WV-RR7	RR-7 Compatible Low Voltage Passive Infrared Ceiling Mount Sensor	14° to 160° F	24 VAC (half wave rectified)	12 mA (rms)
Add Suffix				
-2P	2nd Relay Control			
-R	SPDT Relay, 1 Amp			31 mA (rms)
-LT	Low Temp/High Humidity	-40° to 160° F		
Accessory				
WV-BR	Ceiling Mount Bracket			



WIRING INSTRUCTIONS

Wire lead connections are Class II, 18 to 22 AWG.

STANDARD WV-RR7

- BLUE – Common (non Diode leg of transformer)
- RED - Pulse On (two present for -2P units)
- BLACK - Pulse Off (two present for -2P units)
- ORANGE – Signal to/from Remote Sensors (cap off if not used)

LOW VOLTAGE RELAY OPTION (-R) WIRING

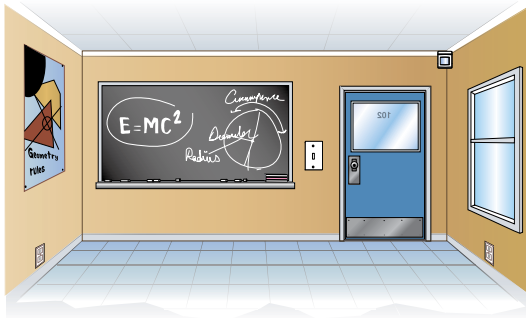
- GRAY / BROWN - Connected during Occupied state
- VIOLET / BROWN - Connected during Unoccupied state
- GREEN - Wire to transformer

Note: Relay is energized during Unoccupied state and must have power at all times for the relay to function. Sensor must be powered from both legs of the transformer therefore a “4th” wire is required.

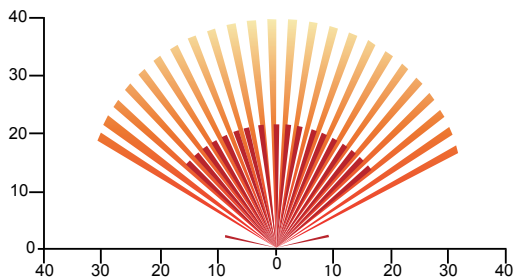
Note: A RR-9 relay provides two additional wires for a pilot light. These wire are not used with the WV-RR7 sensor.

FIELD OF VIEW

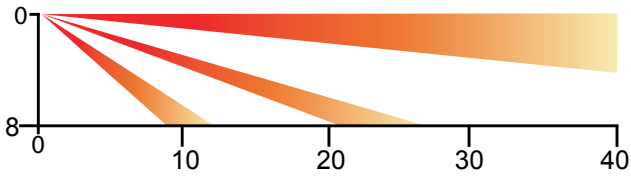
The WV-RR7's enclosure is beveled to be corner mounted at 8 to 10 feet (see tilt settings). Always mount sensor in corner above the entrance door or in corner along the same wall as entrance. If the room is large and multiple sensors are needed, mount second sensor in the opposite corner, however tilt sensor forward to ensure that the PIR collector beams are not viewing out the door. For mounting heights above 10 feet, use the WV-BR and mount sensor to angled side to provide an initial 30° look down.



TOP VIEW



SIDE VIEW



CEILING MOUNT BRACKET (WV-BR)

The WV-BR Ceiling Mount Bracket allows the WV-16 to be mounted in the corner of the area from the ceiling for conditions where mounting to the wall is not possible.



WV-BR

TILT ADJUSTMENT

Mt. Ht.	Position
7' - 8'	Vertical
8' - 9'	Center
9' - 10'	Forward
Above 10'	Use WV-BR



WARRANTY: Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of sixty months. Sensor Switch, Inc., upon prompt notice of such defect will, at its option, provide a Returned Material Authorization number and a replacement product.

LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.



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revised 3/21/2006
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