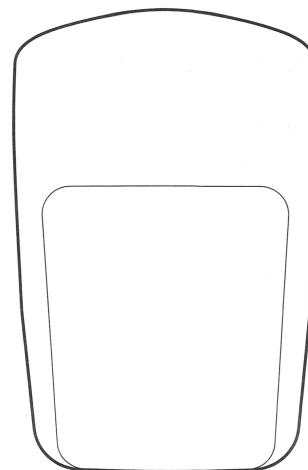


BR11

Motion Sensor



SENSOR INITIALIZATION

Following power-on, a **BR11** sensor is fully operational after a two-minute warm-up. During warm-up, its LED is ON. After warm-up, the sensor starts a ten-minute walk-test mode.

WALK TEST

Note: The **BR11** should be tested once per year.

In Normal Operating Mode: Enable the LED (S1:1/JP1 ON). (See page 2, Operation Programming). If the LED is not enabled, then, without removing power, set S1:1/JP1 to ON. Walk across the monitored area (within the sensor's optical fields-of-view). With sensitivity set at STANDARD, the LED should turn ON (for Alarm) after about three to five normal steps. With the sensitivity set at HIGH, the LED should turn ON (for Alarm) after about two to four normal steps. Each time the LED turns ON, wait for it to turn OFF. Then, wait 12 seconds before continuing the walk-test. When there is no more motion in the monitored area, the LED should remain OFF.

In Special Modes: Cycle power-off/power-on, then Walk-test immediately after warm-up with one of the 10-minute walk-test modes.

10-MINUTE WALK-TEST MODES

Immediately after completion of warm-up, the sensor starts one of two types of ten-minute walk-test mode, according to the position of S1:2/JP2. (See page 2, Operation Programming, for sensitivity setting).

Flash Counting Mode: With the sensor sensitivity set at STANDARD, the sensor LED flashes*, until an Alarm occurs (upon the third flash for nominal signals; upon the second flash for strong signals). When an Alarm occurs, the LED stays ON for five seconds (while the Alarm relay is open).

View Finder Mode: With sensitivity set at HIGH, the sensor LED flashes* each time a person enters or leaves one of the sensor's optical fields-of-view (FOV). In this mode, the LED does not indicate Alarm state, though the Alarm works normally.

*The LED flash indicates an "event" - generally when a person enters or leaves one of the sensor fields-of-view.

After the end of the ten-minute walk-test mode, the LED operates as selected by the LED enable switch S1:1/JP1.

REMOTE LED ENABLE

The Remote LED Enable terminal functions exactly in parallel with S1:1/JP1, in a logical OR arrangement. Thus, if either S1:1/JP1 is ON or if the Remote LED Enable terminal is fed its LOW (active) voltage, then the LED is enabled.

The LOW (LED enabled) voltage range is 0-1.5 Vdc.

The HIGH (LED disabled) voltage range is 3.5-18 Vdc.

SUPERVISION

BR11 supervision functions include these tests:

Ambient temperature in-range;

Detector electronics okay.

** Supply voltage > 7.5 Vdc;

** Self-test (by active IR signal).

When a failure is detected, then:

1) the LED blinks ON/OFF every second;

2) Alarm relay will not re-close after an alarm signal event.

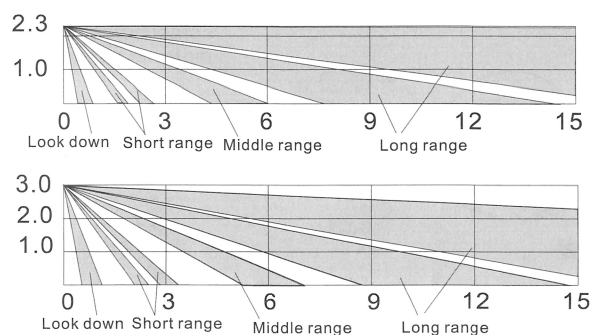
** Self-test occurs just after warm-up; then every 24 hours.

NOTE: The sensor will NOT initiate an alarm upon failure.

SPECIFICATIONS

Range: 15 meters

Sensor Optical View Pattern (side view, in meters)

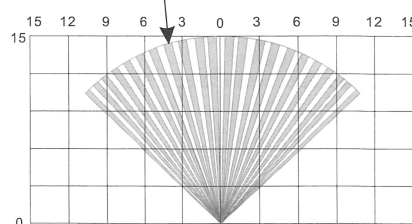


Optical Fields-of-View:

Long-range 44 Mid-range 12 Short-range 6 Look-down 4

Sensor Optical View Pattern (top view, in meters)

One FOV (field of view)



Power Supply:

8-16 Vdc; 15 mA at 12 Vdc

Sensitivity:

Selectable: 2-event or 3-event

Alarm Relay:

Solid state, 30V, 50 mA,
1500 V_{rms} isolation

Operating Temperature

Range:
-40°C to +55° C

Tamper Switch:

Form A (NC). 50 mA at 30 Vdc

Temperature compensation:

Bi-directional

Dimensions:

94 x 50 x 42 mm (H x W x D)

Installation Instructions

Mounting Location

A. Wall mounting:

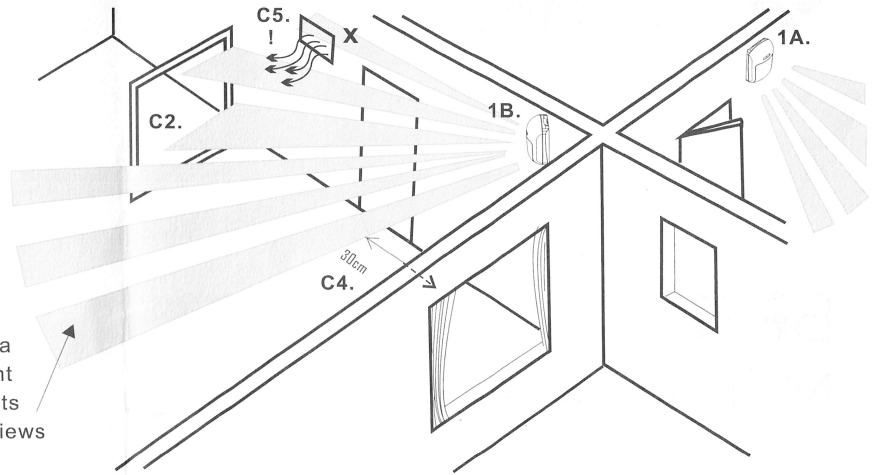
1. Sensor base fastened flat on vertical wall

B. Corner mounting:

1. Bracket fastened to inside corner surface.

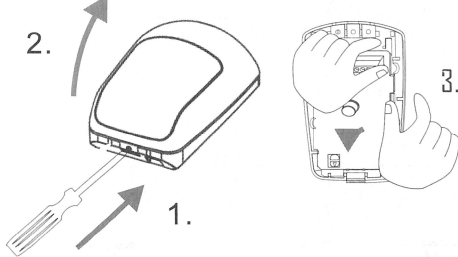
C. All mounting:

1. Height = 2.3 m or 3m above floor of monitored area
2. Clear line-of-sight from sensor to monitored area
Note: glass will block sensor's view.
3. Wall temperature similar to walls/floor of monitored area
4. Sensor aimed away from windows and reflected sunlight
5. Sensor aimed away from heaters or heater/cooler outlets
6. Sensor aimed so that likely intruder paths cross three views



Sensor Disassembly

In slot at sensor bottom, use screwdriver or thumbnail to push inward (1.) on cover latch. (2.) Remove cover. (3.) Push outward on circuit board latch at sensor base right side. Using circuit board terminal block as handle, gently lift circuit board right side and remove.

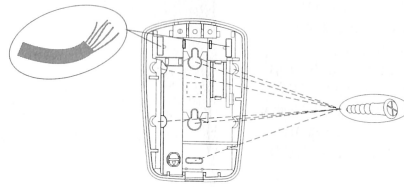


Base Hole Preparation

Identify necessary holes on diagram;

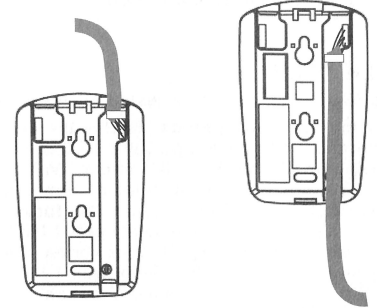
1. For wall mounting, knock out hole covers.
2. For corner or 45 degree wall mounting, use drill to open at least two holes.

If cable ties will be added for wire strain relief, select holes needed, then clear out thin plastic material covering those holes.



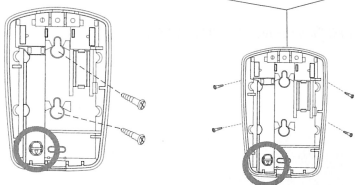
Cable Preparation

Remove 8 cm of cable jacket. Pass the cable wires through the selected hole. Lay cable in wire channel. Secure cable with cable tie.



Wall Mounting

Use screws to mount on wall or in corner.



Set circuit board alignment post in position "0" or "1" to select mounting height.



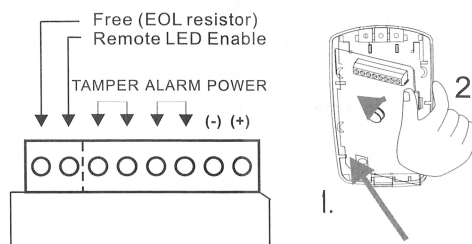
2.3m
Alignment Post position "0"
Use with:
Wide-angle lens.
Curtain lens



3.0m
Alignment Post position "1"
Use with:
Wide-angle lens
Curtain lens

Circuit Board Installation

To replace circuit board, (1.) place circuit board left edge into two left-hand mounting slots in sensor base. (2.) On right-hand side, gently press circuit board into place until latch snaps over circuit board. Cut cable wires to appropriate length and connect wires to sensor terminal block.



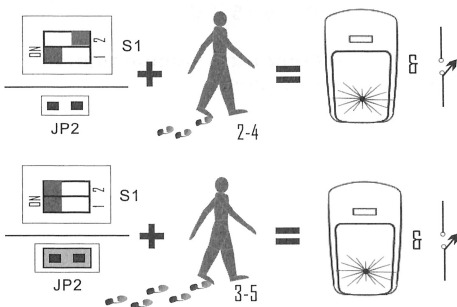
Operation Programming

Either S1:1/S1:2 or JP1/JP2 are provided for programming. Set according to need. If there is a way for intruders to pass only a very short distance in the sensor's view, or if aggressive detection is required, then use high sensitivity. Otherwise, standard sensitivity is fine for ordinary applications. Factory-set S1 positions are shown below in gray. Pulse counts: High=2; Standard=3.

BR11			
FUNCTION		ON	OFF
SENSITIVITY	S1:2 JP2	STANDARD	HIGH
LED ENABLE	S1:1 JP1	ENABLE	DISABLE

Motion Distance Sensitivity

With standard sensitivity, detection occurs in 3 to 5 steps. With high sensitivity, detection occurs in 2 to 4 steps.



LED Indicator Operation

The chart below shows possible LED indications.

BR11	
Sensor State	LED Display
Warm-up	ON
Alarm	ON 5 Seconds (IF LED ENABLED)
Failure	Flashing
Normal	OFF