

**FEATURES**

- **Multi-Level Signal Processing \***
- **Dual element low noise sensor**
- **Four interchangeable lenses**
- **High level static protection**
- **High level transient protection**
- **High level of White Light Immunity**
- **Excellent RF immunity**
- **Temperature compensation**
- **Fast / slow detection jumper**
- **LED on / off jumper**
- **Vertical adjustment**
- **SMD construction**
- **Super quiet operation**
- **Wall / corner mounting**
- **Small size**
- **Blends with any decor**
- **5 YEAR WARRANTY**

**INTRODUCTION**

The Bravo 3 is a general purpose PIR designed to provide reliable motion detection for larger residential and commercial applications.

Exceptional design care and factory testing ensure years of trouble free performance. Immunity against false alarms from RF, static, electrical transients and white light are all designed in features.

Multi-Level Signal Processing\*, temperature compensation and large multi-beam lens design means the human target will not slip by unnoticed even on a hot summer day.

Four interchangeable lenses, wall or corner mounting and vertical adjustment provide application versatility, and your client will appreciate the small size and elegant simplicity of the case design.

Our Bravo 3 with its 5 year warranty is your assurance of a trouble-free installation.

**\* PATENT PENDING**

**SPECIFICATIONS**

Operating voltage .....	9.5 Vdc to 14.5 Vdc
Supply voltage ripple .....	3.0 VP-P @ 12 Vdc
Standby current .....	16 mA
Current in alarm .....	20 mA
Contact rating (alarm & tamper) .....	100 mA @ 24 Vdc
Alarm contact resistor in common .....	10 ohm 0.25 W
Operating temperature .....	0°C to 50°C (32°F to 122°F)
Storage temperature .....	-40°C to 60°C (-40°F to 140°F)
Operating humidity .....	5% to 95% RH non-cond.
Storage humidity .....	up to 99% RH non cond.
RF immunity .....	50 V/m over range 0.01 MHz to 1.2 GHz
Static immunity .....	25 kV
Transient immunity .....	2.4 kV @ 1.2 joules
White light immunity .....	20 000 Lux at the detector
Walk detection speed ..	0.5' to 10'/s (0.15 m/s to 3 m/s)
Coverage angle (wall/wall lens) .....	90° minimum
Vertical adjustment .....	+5° to -10°
Mounting heights .....	6' to 10' (nominal 7.5') 2 m to 3 m (nominal 2.3 m) 4' to 5' (pet alley only) 1.2 m to 1.5 m (pet alley only)

**COVERAGE**

Wall-to-Wall lens . (BV-L1) ....	50' l x 60' w (16 m x 18 m)
Corridor lens .....	(BV-L2) .... 120' l x 10.5' w (36.5 m x 3 m)
Curtain lens .....	(BV-L3) .... 50' l x 4.4' w (16 m x 1.3 m)
Pet Alley lens .....	(BV-L4) .... 50' l x 60' w (16 m x 18 m)

**PHYSICAL**

**DIMENSIONS**

3.5" h x 2.5" w x 1.87" d (89 mm x 64 mm x 48 mm)

**COLOUR**

White with light gray lens

**SHIPPING WEIGHT**

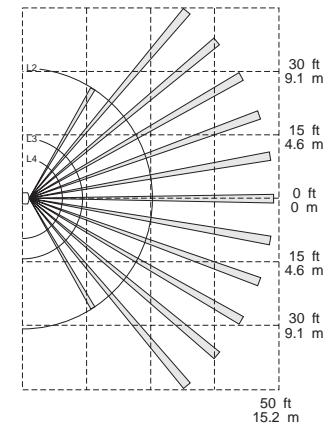
6 oz. (190 g)

**MODELS**

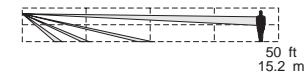
BV-300	Form A alarm contact
BV-301	Form A alarm contact & tamper switch
BV-302	Form C alarm contact & tamper switch

**WALL-TO-WALL LENS**

**TOP VIEW**

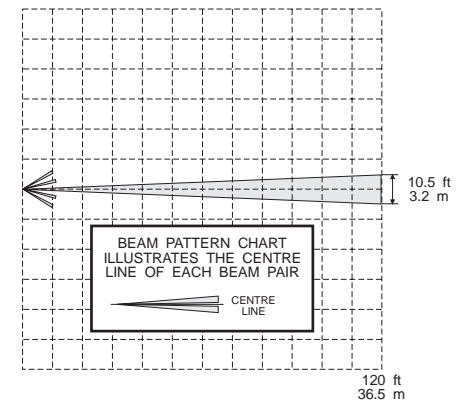


**SIDE VIEW**

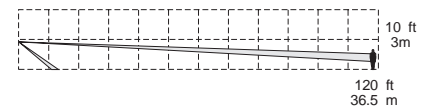


**CORRIDOR LENS**

**TOP VIEW**

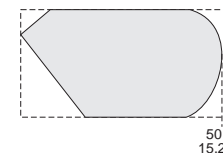


**SIDE VIEW**

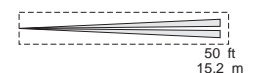


**CURTAIN LENS**

**SIDE VIEW**



**TOP VIEW**



## LOCATING THE DETECTOR

Select a detector location that will provide the coverage required keeping in mind the following potential problems

### Reflective Surfaces

Do not aim the detector at reflective surfaces such as mirrors or windows as this may distort the coverage pattern or reflect sunlight directly onto the detector.

### Air Flow

Avoid locations that are subject to direct high air flow such as near an air duct outlet.

### Moisture

Do not locate the detector near sources of steam or oil.

### The Sun

Do not aim the detector such that it will receive direct or reflected (mirror) sunlight,

### Pets

If there are pets on the premises, use the pet alley lens.

### Obstruction

Do not limit the coverage by large objects within the detection area such as plants or filing cabinets.

## MOUNTING

To open the case, use a small flat blade screwdriver and gently push in the tab at the bottom of the case and pull the cover straight out at the bottom. Loosen the printed circuit board screw, and push the board up as far as it will go. Using a small screwdriver, remove the appropriate knockouts for the mounting screws. Remove the left and/or right wiring entrance knockouts located at the top of the backplate. Mount the backplate using the screws supplied.

## MOUNTING HEIGHT CHART

HEIGHT ft / m	SETTING FOR FULL RANGE			
	WALL/WALL	CORRIDOR	CURTAIN	PET ALLEY
10' / 3 m	0.00	-0.25	0.00	=====
8' / 2.4 m	+0.50	+0.25	0.00	=====
7' / 2.1 m	+0.75	+0.25	0.00	=====
6' / 1.8 m	+1.00	+0.50	0.00	=====
5' / 1.5 m	=====	=====	=====	0.00
4' / 1.2 m	=====	=====	=====	0.00

## VERTICAL ADJUSTMENT

**NOTE: Range and dead zones may vary due to settings.**

Using the Mounting Height chart, set the vertical adjustment to get the desired coverage. Ensure that the PCB retaining screw is tightened just enough to prevent board movement.

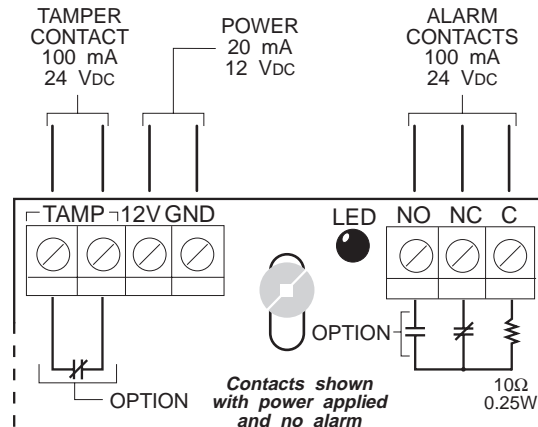
Moving the circuit board DOWN will **increase** the far range and bring the near beams closer to the mounting wall. Moving the circuit board UP will **reduce** the far range and move the near beams farther out from the mounting wall. Moving the circuit board UP too much will cause the far beams to "look" above the target; as a result, the range may appear shorter.

JUMPER J1 will enable/disable the alarm LED. If J1 is OFF, the LED will not operate on alarm. If J1 is ON the LED will operate on alarm. JUMPER J2 selects between "FAST" and "SLOW" operation. For a typical environment, the unit should be set on "FAST" (J2 ON). If the environment presents potential disturbances that cannot be avoided, set J2 to OFF for "SLOW" operation.

**NOTE: The corridor lens should not be used in a corridor that is less than 10.5' (3.2 m) wide. Ensure the beams are aimed directly down the centre of the corridor. With the corridor lens set J2 to "FAST".**

## CHANGING LENSES

The Bravo 3 is supplied with the "wall/wall" lens. To change the lens, release the top tab and pull the lens holder out. This action releases the lens. Insert the lens with the GROOVES FACING INWARD. The bottom of the lens is indicated by two triangular indentations. Ensure that the lens is centred left to right then reinstall the lens holder. The lens holder will snap into place sealing the lens into position.



## WIRING

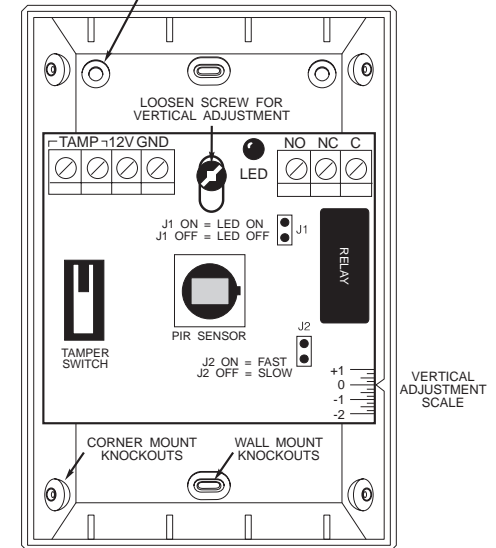
### WALK TESTING

Once the detector has been set up, walk test the entire area where coverage is desired. Should the coverage be incomplete, re-adjust or relocate the detector to obtain full coverage. Once coverage is as required, the alarm LED may be disabled by setting J1 to OFF.

**IMPORTANT NOTE: Upon installation, the unit should be thoroughly tested to verify proper operation. The end user should be instructed on how to perform walk tests, and should walk test the detector regularly.**

### DM-C and DM-W Detector Mounting Brackets

Use the optional DM-W Wall Mount and DM-C Ceiling Mount brackets to solve difficult placement problems. The DM-W and DM-C mount to either the wall or ceiling and allow for full vertical and horizontal positioning of the motion detector - the detector can be tilted up or down and rotated through 90° to obtain the best position for optimal coverage. The Bravo PIR has been designed to be fully compatible with the DM-W and DM-C brackets. Contact your DSC distributor for more information.



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