

BRAVO™ 6

Dual PIR
Motion Detector

INSTALLATION INSTRUCTIONS

The Bravo 6 is a specialized **twin** dual PIR motion sensor which emphasizes immunity from false alarms caused by pets. The Bravo 6 is equipped with a specially designed lens* which enables the detector to discriminate between humans and small to mid-sized pets.

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 DSC 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.

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 6 with its 5 year warranty is your assurance of a trouble-free installation.

Features

- Immune to pets under 2.5 ft/0.75 m (up to 85 lbs/38 kg)
- Microprocessor based
- Advanced Multi-Level Signal (MLS) Processing*
- Twin, dual element, low noise sensors
- High level static protection
- High level transient protection
- UV stable lens
- High level of white light immunity
- Excellent RF immunity
- DSC Temperature compensation circuitry
- Harsh/Normal environment jumper
- LED on/off jumper
- Vertical adjustment
- SMD construction
- Super quiet operation
- Wall/Corner mounting
- Blends with any decor
- Compact size
- 5 YEAR WARRANTY

* Patent pending

** Protected by one or more of the following patents:
Canada 2099971 US 5444432

Specifications

- Operating voltage: 9.5 V_{DC} to 14.5 V_{DC}
- Supply voltage ripple: 3.0 VP-P @ 12 V_{DC}
- Stand-by current: 17.5 mA
- Current in alarm (LED on): 25 mA
- Contact rating (alarm & tamper): 100 mA @ 24 V_{DC}
- Alarm contact resistor in common: 10 ohm 0.25 W
- Operating temperature: 32°F to 122°F / 0°C to 50°C
- Storage temperature: -40°F to 140°F / -40°C to 60°C
- Operating humidity: 5% to 95% RH non-condensing
- Storage humidity: up to 99% RH non-condensing
- RF immunity:
10 V/m +80% A.M. over range, 80 MHz to 1.0 GHz
- Static immunity: 15 kV
- Transient immunity: 2.4 kV @ 1.2 joules
- Walk detection speed: 0.5'/s to 10'/s (0.15 m/s to 3 m/s)
- Coverage angle (wall/wall lens): 100° maximum
- Vertical adjustment: +5° to -10°
- Mounting heights:
6' to 10.5' / 1.8m to 3.2m (nominal 7.5' / 2.3m)

Physical

Dimensions

4.9" H x 2.76" W x 1.75" D (124.5 mm x 70 mm x 44.5 mm)

Colour

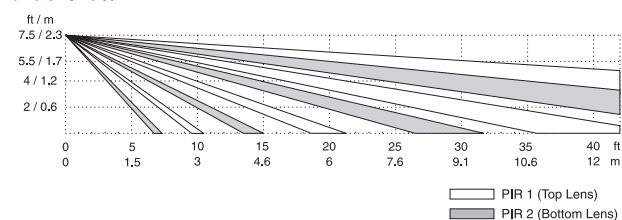
White with white lens

Models

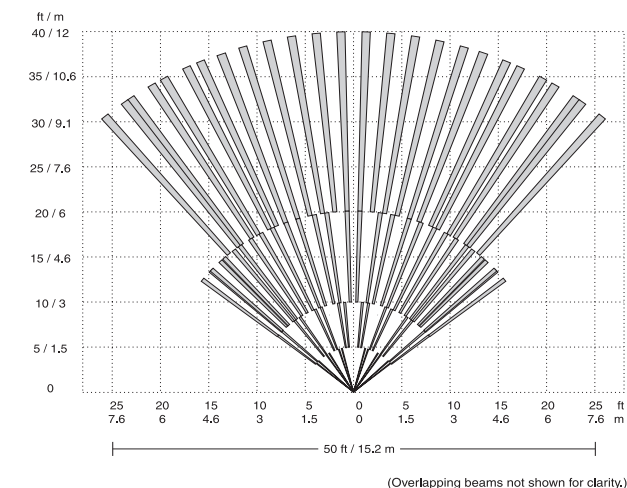
- BV-600: Form A alarm contact
- BV-601: Form A alarm contact & tamper switch
- BV-602: Form C alarm contact & tamper switch

Beam Patterns for Bravo 6 Series 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.

Obstruction

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

Pet Rejection

Do not aim the detector at a stairway which a pet has access to.

Do not place furniture or objects higher than 3 ft/0.9 m, which a pet can climb onto (e.g. a cat on a couch), closer than 6 ft/1.8 m to the detector.

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 desired wiring entrance knockouts located at the top or bottom of the backplate. Mount the backplate using the screws supplied.

Locate screws diagonally opposite to each other to prevent case warpage.

Vertical Height Guide

6.0' / 1.8 m	+ 0.75
7.5' / 2.3 m	0.00
8.5' / 2.6 m	- 0.50
9.0' / 2.7 m	- 0.75
10.5' / 3.2 m	- 1.25

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

Jumper J2 will enable/disable the alarm LED. If J2 is ON, the LED will not operate on alarm. If J2 is OFF, the LED will operate on alarm. Jumper J3 selects between harsh and normal environments. For a typical environment or one containing a small pet lower than 1.2 ft/0.36 m, set the unit as normal (J3 ON). For a large pet and multiple pets, the jumper J3 should be removed.

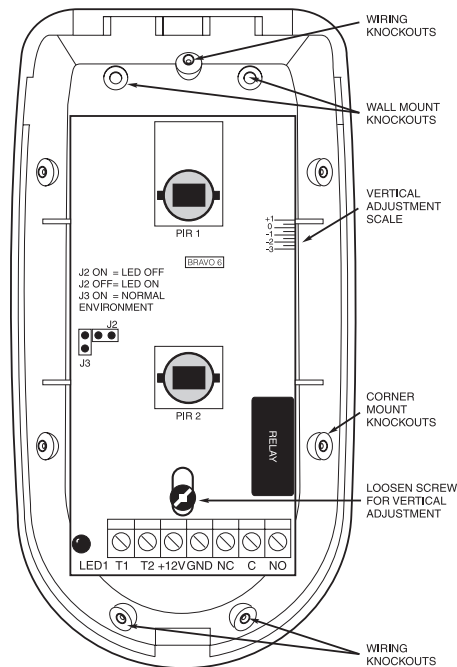
Walk Testing

Once the detector has been set up, walk test the entire area where coverage is desired. Should the coverage be incomplete, readjust or relocate the detector to obtain full coverage. Once coverage is as required, the alarm LED may be disabled by setting J2 to ON.

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 weekly.

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 6 PIR has been designed to be fully compatible with the DM-W and DM-C brackets. Contact your DSC distributor for more information.



Limited Warranty

Digital Security Controls Ltd. warrants that for a period of five years from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, Digital Security Controls Ltd. shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Digital Security Controls Ltd. such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Digital Security Controls Ltd. Digital Security Controls Ltd. neither assumes, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

In no event shall Digital Security Controls Ltd. be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product.

Motion detectors can only detect motion within the designated areas as shown in their respective installation instructions. They cannot discriminate between intruders and intended occupants. Motion detectors do not provide volumetric area protection. They have multiple beams of detection and motion can only be detected in unobstructed areas covered by these beams. They cannot detect motion which occurs behind walls, ceilings, floor, closed doors, glass partitions, glass doors or windows. Any type of tampering whether intentional or unintentional such as masking, painting, or spraying of any material on the lenses, mirrors, windows or any other part of the detection system will impair its proper operation.

Passive infrared motion detectors operate by sensing changes in temperature. However their effectiveness can be reduced when the ambient temperature rises near or above body temperature or if there are intentional or unintentional sources of heat in or near the detection area. Some of these heat sources could be heaters, radiators, stoves, barbecues, fireplaces, sunlight, steam vents, lighting and so on.

Warning: Digital Security Controls Ltd. recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Important Information: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void the user's authority to operate this equipment.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Ce dispositif satisfait aux exigences d'Industrie Canada, prescrites dans le document CNR-210. L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.



© 1997 Digital Security Controls Ltd., Toronto, Canada
1645 Flint Road, Downsview, Ontario Canada M3J 2J6
(416) 665-8460 Fax: (416) 665-7498