

BRAVO™

BRAVO Series PIR Motion Detectors

FEATURES

- Multi-level PIR signal processing†
- Single/dual element low noise sensor
- High level static and transient protection
- Exceptional white light immunity
- Excellent RF immunity
- Temperature compensation
- LED on/off jumper
- Vertical adjustment
- Super quiet operation
- Wall, corner, or ceiling mounting
- Attractive styling for any decor
- 5 year warranty

BRAVO2

- Ideal for normal home, office, and industrial settings

BRAVO3

- Accurate coverage of large 50' x 60' (15 x 18m) areas

BRAVO4

- Quad design sensors for severe environments

BRAVO5

- 360° ceiling-mount motion detector with optional integral glass break detector

BRAVO6

- Dual PIR sensors with High Density Digital Analysis* and multi level signal processing for better intruder catch and immunity to pets weighing up to 85lbs/38kg
- Digital temperature compensation



BRAVO

Simply the best passive infrared motion detectors available in the industry! Backed by years of research and exhaustive testing, Bravo series motion detectors take advantage of microprocessor-based multi-level signal processing software and specially designed lenses to deliver superior intruder detection and reliable long-term operation while minimizing false alarms.

For normal home and office environments, the Bravo2 is the efficient choice. For larger spaces, the Bravo3 provides expanded coverage, while the Bravo4 is especially suited for use in highly changeable conditions. The ceiling-mounted Bravo5 provides the dual benefit of uniform 360° motion detection and optional glass break detection in one housing. And Bravo6 is not only immune to large pets – its intruder detection is the best in the field.

The Bravo series takes motion detectors to a new level of detection sensitivity, stability and false alarm immunity in residential, commercial and industrial settings.

BRAVO³

Bravo3 can be used for all residential, commercial and industrial applications requiring longer range sensing capability without compromising accuracy.

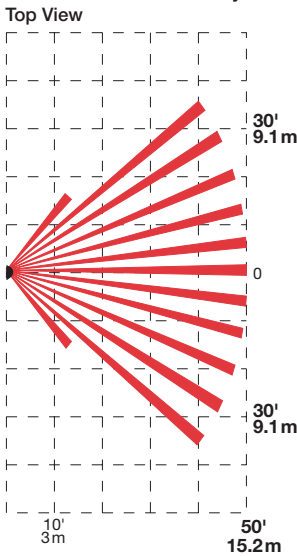
MODELS

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

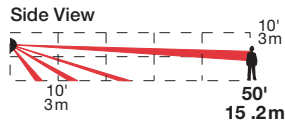
LENS COVERAGE

- Wall-to-Wall lens (BV-L1)50' L x 60' W (15.2 x 18.3m)
- Corridor lens (BV-L2)120' L x 10.5' W (36.6 x 3.2m)
- Curtain lens (BV-L3)50' L x 4.4' W (15.2 x 1.3m)
- Pet Alley lens (BV-L4)50' L x 60' W (15.2 x 18.3m)

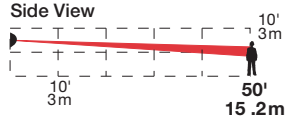
Wall to Wall & Pet Alley Lens



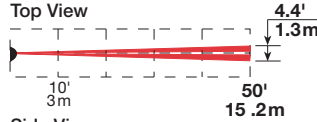
Wall to Wall Lens



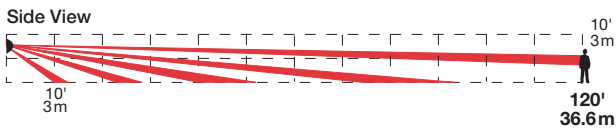
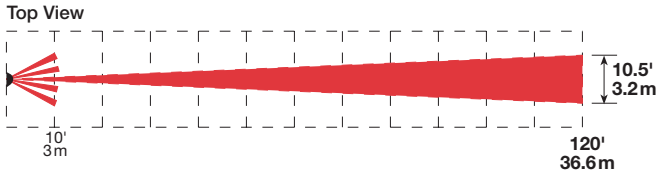
Pet Alley Lens



Curtain Lens



Corridor Lens



BRAVO⁴

Bravo4 has a quad design, suitable for commercial, institutional, and industrial applications where abnormally severe or highly changeable environmental conditions are present.

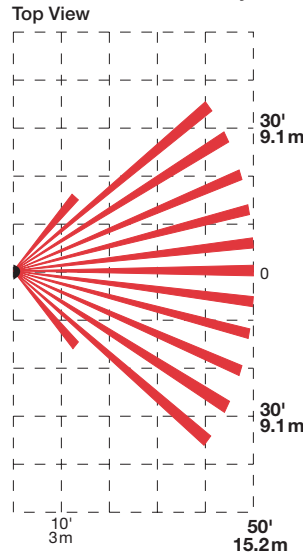
MODELS

- BV-400 Form 'A' alarm contact
- BV-401 Form 'A' alarm contact & tamper switch
- BV-402 Form 'C' alarm contact & tamper switch

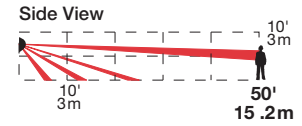
LENS COVERAGE

- Wall-to-Wall lens (BV-L1)50' L x 60' W (15.2 x 18.3m)
- Corridor lens (BV-L2)60' L x 5' W (18.3 x 1.5m)
- Curtain lens (BV-L3)50' L x 4.4' W (15.2 x 1.3m)
- Pet Alley lens (BV-L4)50' L x 60' W (15.2 x 18.3m)

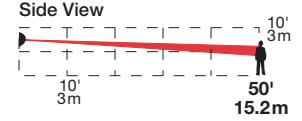
Wall to Wall & Pet Alley Lens



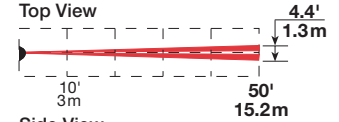
Wall to Wall Lens



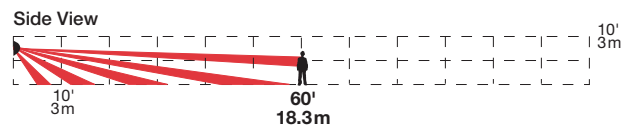
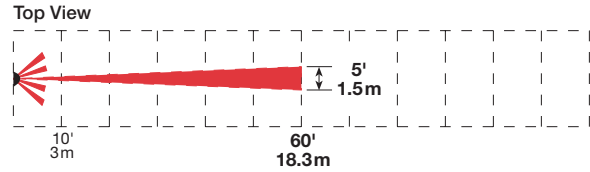
Pet Alley Lens



Curtain Lens



Corridor Lens

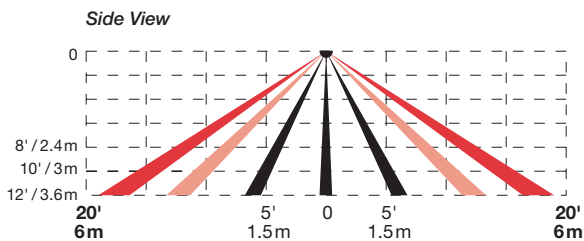
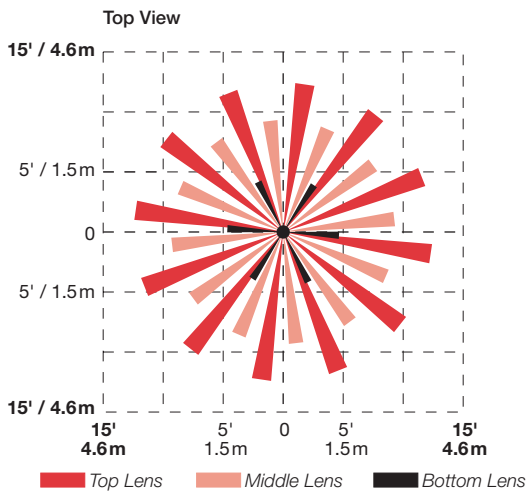


BRAVO 5™

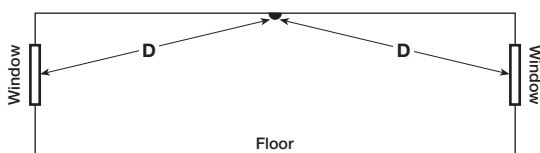
A 360° ceiling-mount quad element PIR motion detector with optional integral glass break detector, Bravo5 is ideal for rooms requiring a uniform 360° detection pattern *or* for rooms requiring the benefit of having both motion and glass break detectors in one housing.



360° QUAD Element PIR... at 8' (2.4m) height



360° Glass Break Detector



MODELS...Motion Alone

BV-500	Form 'A' alarm contact
BV-501	Form 'A' alarm contact & tamper switch
BV-502	Form 'C' alarm contact & tamper switch

MODELS...Motion & Glass Break

BV-500GB	Form 'A' alarm contact (motion), form 'C' contact (glass break)
BV-501GB	Form 'A' alarm contact (motion), form 'C' contact (glass break) & tamper switch
BV-502GB	Form 'C' alarm contact (motion), form 'C' contact (glass break) & tamper switch

SPECIFICATIONS

Electrical :

Input voltage	.9 to 14.5VDC
Current (typical with glass break)	.38/35mA (alarm on/off) @ 12VDC
Current (typical without glass break)	.18/15mA (alarm on/off) @ 12VDC

Contact Rating :

Alarm relay (PIR)	.01A @ 24VDC
Alarm relay (glass break)	1.0A @ 24VDC
Tamper switch	.01A @ 24VDC

Environmental/Immunity :

Operating temperature	.32 to 122°F (0 to 50°C)
Operating humidity	.5% to 95% non-condensing
Radiated immunity	.10V/m +80% (AM @ 1kHz) from 80MHz to 1GHz
Conducted immunity	.10V +80% (AM @ 1kHz) from 150kHz to 80MHz
Transient immunity	2.4kV @ 1.2 joules

Physical :

Dimensions	4.6"Ø x 1.4" H (11.7 x 3.6cm)
Color	designer white

360° PIR DETECTOR RANGE

Mounting height	8' (2.4m)	10' (3.0m)	12' (3.6m)
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Detection diameter at floor	24' (7.3m)	30' (9.2m)	40' (12.2m)
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360° GLASS BREAK DETECTOR RANGE

Glass Type & Thickness	Sizes	Maximum 'D' Detection Range	
		Level 1†	Level 2†
Plate/Tempered 1/8" - 1/4" thick (3 - 6mm)	18" x 18" and up (46 x 46cm)	25' (7.6m)	15' (4.6m)
	12" x 12" to 18" x 18" (30 x 30 to 46 x 46cm)	15' (4.6m)	10' (3m)
Wired/Laminated 1/4" thick (6mm)	18" x 18" and up (46 x 46cm)	20' (6m)	DO NOT USE
	12" x 12" to 18" x 18" (30 x 30 to 46 x 46cm)	10' (3m)	DO NOT USE

†Jumper selectable

BRAVO6™

Bravo6 features dual PIR sensors incorporating High Density Digital Analysis* and multi-level signal processing with a vertically interleaving beam pattern for superior intruder detection while being immune to pets weighing up to 85lbs/38 kg.



SPECIFICATIONS

Operational :

Mounting height 6' to 10' (2 to 3m)
 Lens horizontal pattern angle 100° maximum
 Vertical adjustment from +5 to -10°
 Alarm duration 2 to 3 seconds
 Walk speed 0.5 to 10ft/s (0.15 to 3.0 m/s)

Environmental/Immunity :

Operating temperature 32 to 122°F (0 to 50°C)
 Operating humidity 5% to 95% non-condensing
 RF immunity 10V/m 80% A.M., from 80 to 1,000MHz
 Transient immunity 2.4kV at 1.2 joules
 Static immunity 15kV
 White light immunity 4 kLux

Electrical :

Operating voltage 9.5 to 14.5VDC
 Ripple tolerance 3Vpp at 12VDC
 Standby current 17.5 mA at 12VDC
 Alarm current 25 mA at 12VDC
 Contact ratings 100mA at 24VDC
 Alarm contact series resistance 10 ohm 0.25W

Physical :

Dimensions 4.9"H x 2.76"W x 1.75"D
 (12.5 x 7.0 x 4.5cm)
 Mounting wall or corner
 Color designer white, with white lens

* patent pending

MODELS

BV-600 Form 'A' alarm contact

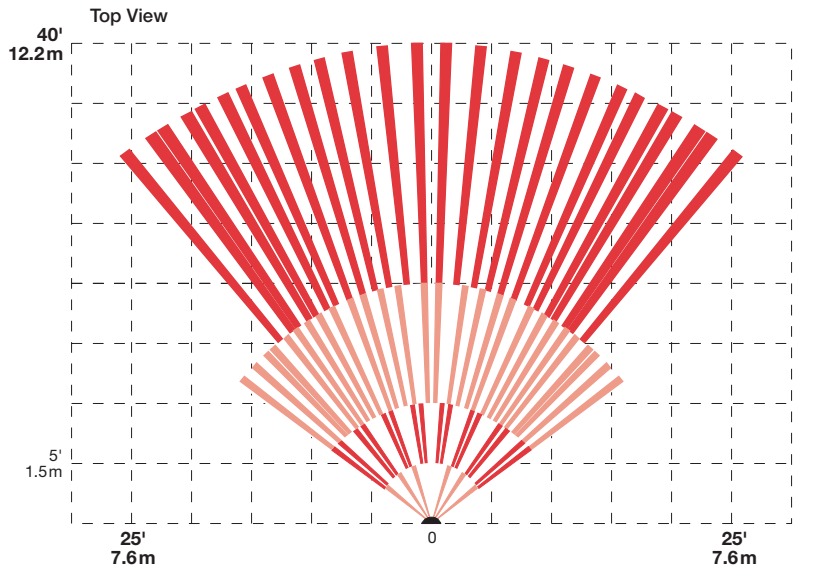
BV-601 Form 'A' alarm contact & tamper switch

BV-602 Form 'C' alarm contact & tamper switch

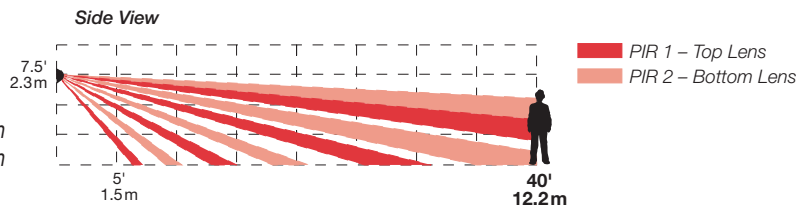
LENS COVERAGE

Dual sensor PIR lens pattern . . . 40' L x 50' W (12.2 x 15.2m)

Multi-Level Dual Sensor PIR Lens



(For clarity, overlapping beams are not shown)



Multi-level signal processing with a vertically interleaving beam pattern

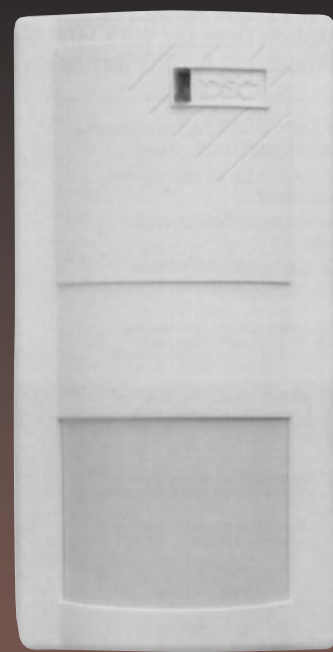
FORCE 2[®]

PIR/MICROWAVE MOTION DETECTOR

FEATURES:

- Multi-level PIR signal processing**
- Digital Microwave signal processing
- DRO microwave technology for low current and reliable operation
- MOV transient/static protection
- High RF immunity with SMD construction
- Exceptional white light immunity
- Microcontroller low voltage reset circuit
- Optional tamper switch
- Optional Form 'C' alarm contacts
- Digital temperature compensation (F2-200, F2-220 only)
- Adjustable microwave detection pattern to match room size (F2-200, F2-220 only)

** patent pending



Force 2[®]

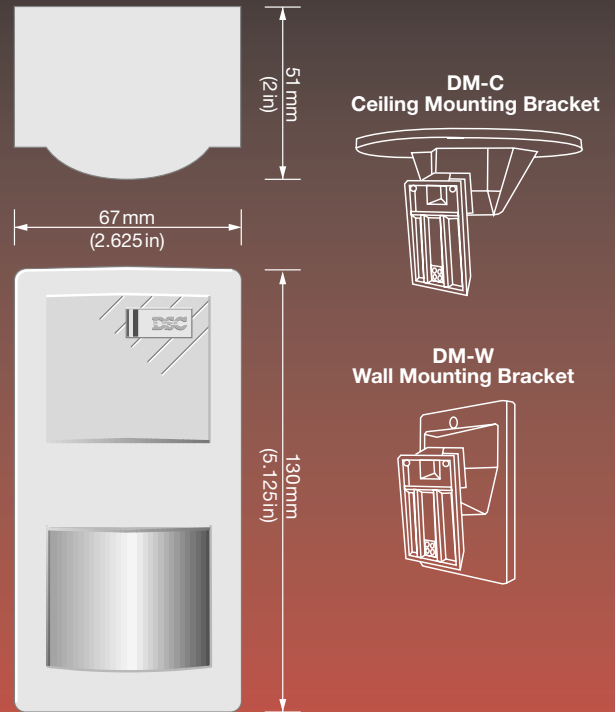
FORCE 2 motion detectors are Dual Detectors employing both Microwave (MW) and Passive Infrared (PIR) motion sensors. The sensors are combined through a microprocessor to provide "intelligent" motion detection designed to eliminate "single detector" false alarms.

Significant new technical features such as Multi-Level PIR signal processing, digital temperature compensation, a high reliability DRO microwave sensor, and digital MW signal analysis combine for a new level of detection sensitivity, stability, and false alarm immunity.

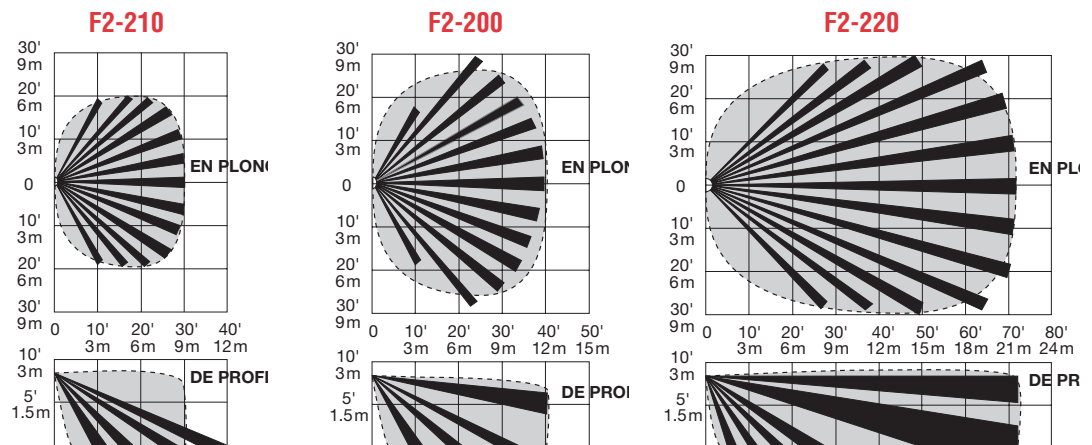
The PIR and MW systems are each designed as independent, high quality motion detectors. When combined, the result is a detector with unmatched performance.

SPECIFICATIONS*

- ELECTRICAL :**
 - Operating voltage.....9.5 to 14.5Vdc
 - Ripple tolerance.....3VP-P at 12VDC
 - Stand-by current30mA at 12VDC
 - Alarm current30mA at 12VDC
 - Alarm contactsForm 'A' (standard)
 -Form 'C' (optional)
 - Tamper contactOptional
 - Contact ratings100mA at 24 Vdc
 - Alarm contact series resistance10Ω 0.25W
- OPERATION :**
 - Alarm duration2 seconds
 - Walk speed0.5 to 10ft/s
 -(0.15 to 3.0m/s)
 - Nominal mounting height7.5ft (2.3m)
 - JumperAlarm LED on/off
- IMMUNITY :**
 - RF immunity30V/m over range 0.01 to 1200MHz
 - Transients at terminals.....2.4kV at 1.2 joules
 - Static discharge immunity25kV
 - White light20,000Lux at the detector
 - Operating temperature32° to 122°F (0° to 50°C)
 - Humidity5% to 95% RH non-condensing



- F2-200, 210, 220 - with Form 'A' alarm contact
- F2-201, 211, 221 - with Form 'A' alarm contact & tamper switch
- F2-202, 212, 222 - with Form 'A' alarm contact & tamper switch



Coverage (max. L x max. W) : 30 x 40ft (9 x 12m)
 MW range adjust :
 Temperature compensation :

40 x 50ft (12 x 15m)
 10 to 40ft (3 to 13m)
 over entire operating range

70 x 60ft (21 x 18m)
 30 to 70ft (9 to 21m)
 over entire operating range

ARCHITECTS SPECIFICATIONS

* Specifications are subject to change without notice

Motion detectors shall be the dual detector type, employing both Microwave and Passive Infrared motion sensors. To prevent false alarms, both sensors must detect motion within a 10 second period of each other before any alarm is sent.

For additional reliability and false alarm protection, detectors shall employ MOV transient/static protection, SMD construction for high RF immunity, protection from white light, and microcontroller low voltage reset circuit.

Short, medium, and long range motion detectors shall be selected as required to suit the room in which they are to be installed. Medium and long range detectors shall have adjustable microwave detection pattern and built-in temperature compensation.

Detectors shall have built-in tamper switch and form 'A' or 'C' alarm contacts as required to suit the application.