# NV500 High-Performance Digital Infrared Motion Detector: Installation Manual V1.0





### **A** Wiring Diagram



#### **Power-up Sequence**

- 1) LED and relay will toggle on/off for 4 seconds.
- Sensitivity level indication: 1 to 5 short flashes to indicate trimpot position (see B: Sensitivity Settings).
- Jumper setting indication. 1 to 4 short flashes to indicate jumper setting (see C: Jumper Settings).
- Detector is ready for alarm detection. Total power-up sequence = 10 seconds.

## **B** Sensitivity Settings

Configure sensitivity via trimpot. Adjust from 1 (lowest sensitivity) to 5 (highest sensitivity), default =  $3\Delta$ . The detector must be installed at 2.1 meter or higher).

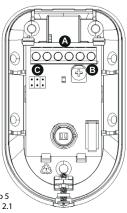
Viewing sensitivity settings: After power-up, or right after setting the trimpot to a new sensitivity level, the LED will flash a consecutive amount of times to show the setting, then adjust the setting accordingly. Thus if the sensitivity is set to 3, the LED flashes 3 times.

Turn clockwise = Increase sensitivity

 $Turn\ counterclockwise = Decrease\ sensitivity$ 

Warning: The sensitivity trimpot is fragile. Do not overtorque.





### **G** Jumper Settings

The NV500 features 4 pre-programmed profile settings. The number associated with the profile (1 to 4) depicts the number of LED flashes when changing jumper settings.

- **1. Normal (DEFAULT)**: This profile allows for faster detection. Use this profile only in normal environments that have minimal interference.
- **2. Moderate Risk**: This profile provides better false alarm rejection. Dual-edge processing requires balanced detection from both sensor's elements and requires that a beam must be fully crossed even at close range.
- **3. Pet Immunity**: Use the Pet Immunity profile if you have pets that weigh up to 16 kg (25 lb).
- **4. Harsh**: Use the Harsh profile when the detector is installed in high-risk environments (potential interference) and to provide greatly increased false alarm immunity.

SETTING	APSP	EDGE	JUMPER
1. NORMAL	NORMAL	SINGLE	
2. MODERATE	NORMAL	DUAL	
3. PET IMM.	HIGH	SINGLE	• • •
4. HARSH	HIGH	DUAL	• • •
	LED ON		:::

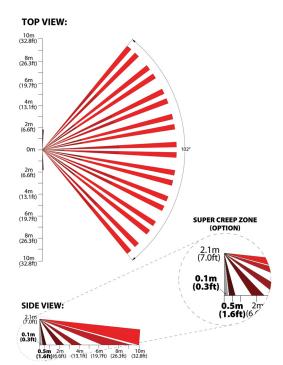
#### LED Feedback

During alarm: ON for 3 seconds During sensitivity adjustment: See Sensitivity Settings During power-up sequence: See Power-up Sequence





#### Beam Pattern



# **Technical Specifications**

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Installation height	2.1m-3.1m~(7.0'-11'ft). For a 10m range and above, unit must be installed at a height of 2.1m and above. Do not obscure the detector's field of view, partially nor completely.	
	Dual rectangular element, low noise, high sensitivity, EMI immunity	
Lens	Hybrid Cylindrical Spherical 3rd gen. Fresnel Lens, equal beam sensitivity (patent pending)	
Processing	High resolution digital signal processing. Four profiles (Normal, Moderate, Pet Immunity, Harsh). True digital temperature compensation.	
Super Creep Zone	Add on mirror option for enhanced creep zone at 0.1m from the wall (no Pet Immunity)	
Range adjustment	Five level range adjustments	
Startup time	10 seconds	
Detection speed	0.2m to 3m/s (0.6ft to 9.8ft/s)	
Current consumption	10.5mA @ Standby / 11.3mA @ Alarm	
Power input	10Vdc to 15Vdc	
Coverage	10m (32.8ft) x 90°, 0.5m down looking w/ optional Creep Zone	
PET Immunity	Up to 16Kg (35 lb)	
Alarm indicator	Red LED for 3 seconds	
Alarm output	Solid State, N.C. 150mA	
Anti-tamper switch	N.C. 28Vdc, 0.15A	
Operating temperature	-10°C to 50°C (14°F to 122 °F)	
Humidity	95% max.	
Dimensions	9 x 5.5 x 4cm (3.5 x 2.2 x 1.6 in.)	
RF Immunity	EN 50130-4: 10V/m 80MHz to 2GHz	
Standards	EN 50131-2-2 Security Grade 2 / Environmental Class I	

Patents: One or more of the following US patents may apply: 7046142, 6215399, 6111256, 6104319, 5920259, 8886632, 5721542, 5287111, and RE39406 and other pending patents may apply. Canadian and international patents may also apply.

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