

## SPECIFICATIONS

Operating frequency	24.150 GHz
Output power (EIRP)	≤20dBm
Detectable speed	0.1 m/s min.
Vertical directionality	0...60°
Horizontal directionality	+/- 45°
Installation height	Max. 6 m
Range	1...10 m adjustable
Relay control time	1...6 sec. adjustable
Relay output configuration	Form C (SPDT)
Relay contact rating	1A @ 24V AC/DC
Detection indicator	Red LED
Operating temperature	-4°F...122°F (-20°C...50°C)
Supply Voltage	12...24 VDC/VAC
Operating current	Max. 40mA
Dimensions	6.3"(160mm) x 3.8"(95mm) x 4.4"(110mm)
Weight	1.0 lbs. (450 g)
Housing	ABS (plastic)
Connection	6.5' (2m) cable
Mechanical protection	IP66

## CAUTIONS AND WARNINGS

This product is an accessory or part of a system. Always read and follow the manufacturer's instructions for the equipment before connecting this product. Comply with all applicable codes and safety regulations. Failure to do so may result in damage, injury or death

## WARRANTY

### WARRANTY

EMX Industries Incorporated warrants all products to be free of defects in materials and workmanship for a period of two years under normal use and service from the date of sale to our customer. This warranty does not cover normal wear and tear, abuse, misuse, overloading, altered products, damage caused by incorrect connections, lightning damage, or use other than intended design.

There is no warranty of merchantability. There are no warranties expressed or implied or any affirmation of fact or representation except as set forth herein.

EMX Industries Inc. sole responsibility and liability, and the purchaser's exclusive remedy shall be limited to the repair or replacement at EMX Industries option of a part or parts found not conforming to the warranty. In no event shall EMX Industries Inc. be liable for damages of any nature, including incidental or consequential damages, including but not limited to damages resulting from non-conformity, defect in material or workmanship.



effective date January 1, 2002

**EMX**  
INDUSTRIES, INC.

# HAWK 2

INDUSTRIAL MOTION SENSOR



## OPERATING INSTRUCTIONS

### MATERIALS SUPPLIED

- Operating Instructions
- HAWK 2 Sensor

### GENERAL DESCRIPTION

The HAWK 2 is a planar technology microwave detector working in the K band. It is the ideal solution for operating all types of fast doors and industrial gates. It detects the movement of people and vehicles in the monitored area. With an appealing style, it can also be used for operating automatic doors.

Easy to install at a height of up to 20ft (6 meters), it has a versatile mechanical orientation system for accurate positioning to the required coverage area. The detection sensitivity and direction of movement (toward, away or both) are programmed by DIP switch setting. A microprocessor processes the received Doppler signals and provides set of form C relay contacts for external connection.

The LED on the front of the HAWK 2 indicates detection.

### SET-UP

The HAWK 2 motion sensor can be configured in the mono direction mode (one direction only) or in the bi-directional mode (both directions). Remove the rubber plug from the lower section of the detector (FIG. 1-A) and set the required function using the dip-switch (FIG. 1-B) settings per the following table.

#### Setting the detection range

It is possible to define the controlled area by changing the angle of the detector and the position of the dip-switch 4 (Fig. 3). Using trimmer TR1 (FIG. 1-F) the sensitivity can be optimized to activate detection only for the desired area.

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SW1	SW2	SW4	SENSITIVITY	FUNCTION
OFF	-	ON	Low	Detect in both directions
OFF	-	OFF	High	Detect in both directions
ON	OFF	ON	Low	Detect approaching
ON	OFF	OFF	High	Detect approaching
ON	ON	ON	Low	Detect leaving
ON	ON	OFF	High	Detect leaving



Fig.1

**Relay contact setting**

The HAWK 2 output is a form C set of relay contacts. The setting options are indicated in the following table. These conditions are valid when the device is powered.

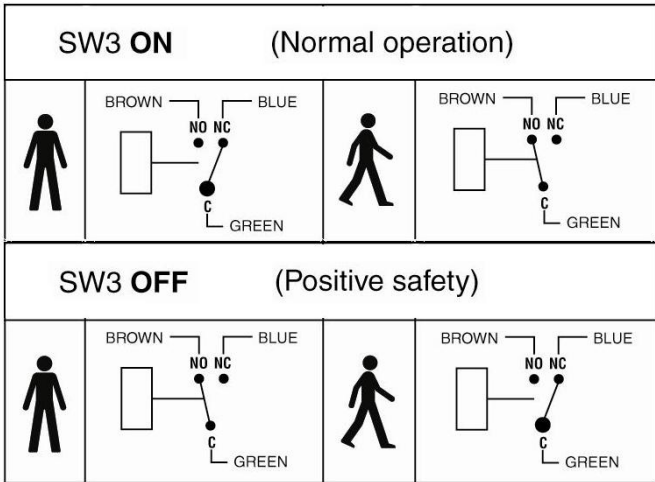


Figure 2

**Adjusting activation period**

Trimmer TR2 (FIG. 1-E) is used to set the desired duration of the output contact, variable form 1 to 6 seconds.

**INSTALLATION**

The HAWK 2 can be installed at a height of 10 to 20ft. (3 to 6 meters) to cover an area of 10 to 100 sq. ft. (3 to 30 sq. meters).

The HAWK 2 can be installed at the center of the door to be controlled, or on the side on non-vibrating structures (walls or ceiling) at a maximum height of 20 ft. Use the template supplied with the unit for preparing the mounting holes.

Fasten the device using the prepared holes, remove the lower cover of the mounting base and loosen the screw that locks the detector orientation. Aim the detector toward the area to be controlled and lock the screw in that position.

For proper operation, do not install HAWK 2:

- Facing the moving parts of a door
- Facing fluorescent lights (minimum distance 6.5 ft.)
- Facing area where rain could provoke water fluxes

These conditions could cause undesired opening of the door.

**WIRING**

Connect the pre-wired cable as indicated in table 1.

WIRE COLOR	DESCRIPTION
Red	12-24VAC/DC
Black	12-24VAC/DC
Green	Relay contact COMMON
Brown or Yellow	Relay contact NORMALLY OPEN (unpowered)
Blue	Relay contact NORMALLY CLOSED (unpowered)

**SENSITIVITY PATTERNS**

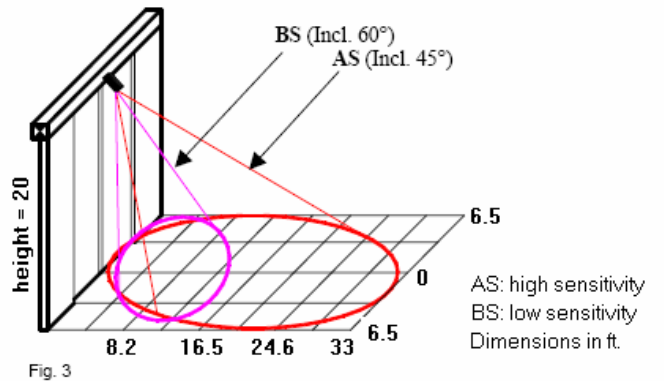


Fig. 3