

Microwave Doppler detector

the complete solution to enhance your products with detection capability

- Small, Flat Profile
- Rugged, Reliable Construction
- Low Power Consumption
- Easy to Install
- Simple to Operate
- Adjustable Detection Range
- Programmable

About the Microwave Doppler detector

This detector is a microwave transceiver that utilises the Doppler shift phenomenon to “sense” motion. Unlike Infra-red devices, this unit is sensitive to physical motion, not temperature changes, and it can be utilised in more rugged applications and environments.

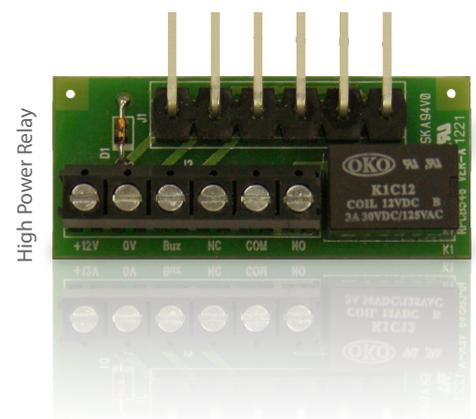
The unit operates within a broad temperature range and can be supplied as an open chassis or in a protective plastic housing. It is easy to install and operate and benefits from a low power consumption.

With minimal technical input, this cost effective, easy to integrate detector can be used to enhance the performance of a range of common products with energy saving capability or speed and movement detection. To date it has been utilised for lighting control in public places and equipment like vending machines, automated door openers, speed measurement, traffic control, people detection etc.



Features

- Integrated LED indication for activity & detection
- Outputs:
 - Optically isolated relay output
 - Buzzer output
 - LED output
- Selectable trigger time & polarity
- Integrated fluorescent light filter
- High power relay output option



Technical Details

Electrical

Operating Voltage	+9 to +30 Volts DC
Module Operation	Pulsed or continuous
Power Consumption (Quiescent) @ 12V supply	200 mW max (pulsed) 750 mW max (continuous)
Detection Range (human)	1 - 30m
Detection Range (vehicle)	5 - 80m
Fluorescent Light Filter	Selectable On/Off
Filter Frequency	100Hz/120Hz
Trigger Time	2 sec. - 64 min.
Operating Frequency	Frequencies available for use in most countries

Weight & Dimensions

Size (dependant on module)	50x58x40mm
Weight	up to 35g

Environmental

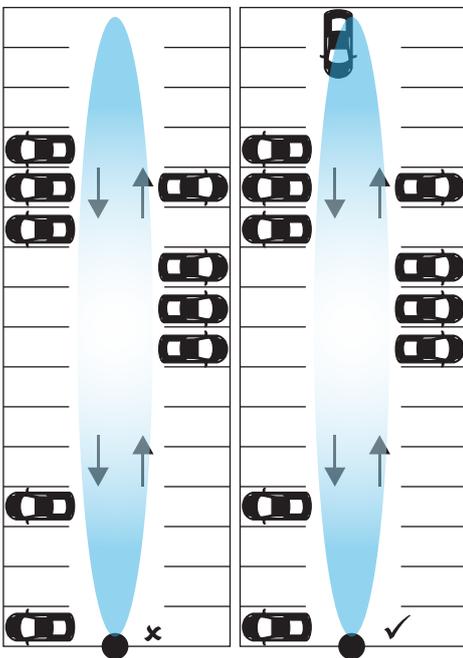
Operating Temperature Range	-10°C - +55°C
Storage Temperature Range	-20°C - +65°C

Operation

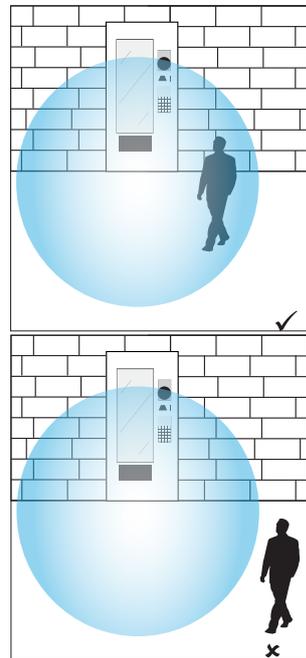
Remote Programming	Various detector parameters can be remotely programmed through an RS232 interface
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Coverage Pattern

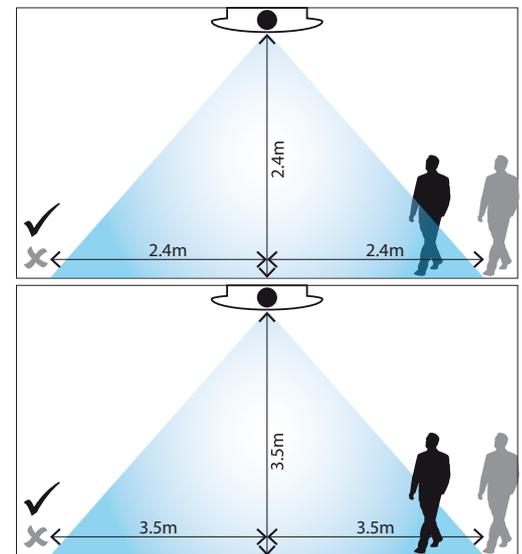
Long Range



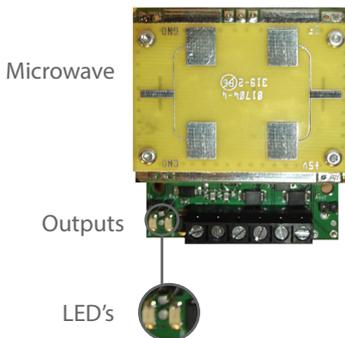
Wide Angle



Ceiling Mount



The Technology



The detector emits a low level RF signal (less than 1% of the power from a mobile phone) which bounces off all objects within its field of view and is reflected back to the detector. If any of these objects are moving, the reflected signal received by the detector will have a frequency shift, which signifies the velocity of the object. The detector processes this signal and depending on its frequency and amplitude makes a decision as to whether or not to trigger the outputs.

Two LED's on the detector indicate the detection of motion (green) and the detection of a valid trigger (red) and allow easy alignment and calibration of the detector during installation.

Sensitivity can be adjusted with a potentiometer and various other parameters can be modified through an RS232 programming interface.