

# TECHNICAL DATASHEET

## MS-360 PIR Motion Sensor Module

### INTRODUCTION

IR-TEC MS-360 is a multipurpose, low cost Passive Infrared Motion Sensor Module designed for OEM applications. This sensor can detect the human body movement within its detection range and generate a TTL open collector signal output. The sensor employs a dual element pyroelectric infrared sensor and advanced electronics circuit to provide following outstanding features.

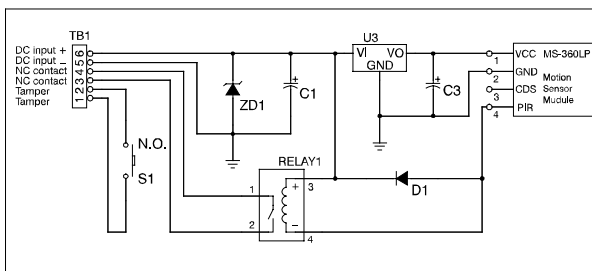
- Excellent motion detection capability.
- Wide operation power voltage range.
- 360° detection compact dome lens.
- Low operation power consumption.
- TTL open collector digital output.
- Built-in CdS photocell sensor output.
- Available for ceiling/wall mount device.

### APPLICATIONS

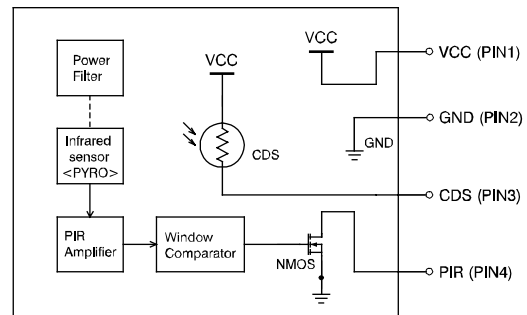
IR-TEC MS-360 Passive Infrared Motion Sensor can be integrated with the following OEM products.

- Light control sensor
- HVAC thermostat
- Toilet ventilation fan
- Indoor air quality filter
- Vending machine

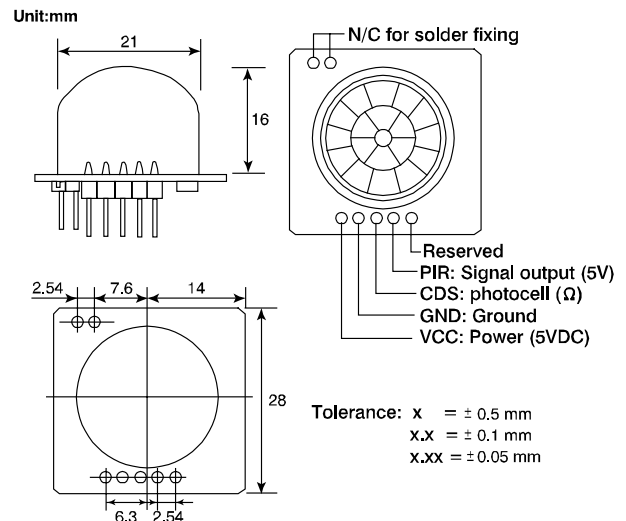
### REFERENCE CIRCUIT



### BLOCK DIAGRAM



### DIMENSIONS



### DESIGN NOTICES

If maximum detection coverage is required, please do not block any segment of dome lens. Masking the segments of the lens could block the detection respectively.

The sensor is more sensitive to the movements across (crosswise) the sensor than toward (longitudinal) it.

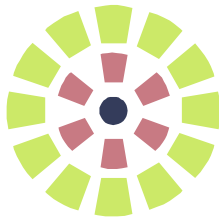
Ensure to provide clean and stable power to the module to assure its detection reliability.

# TECHNICAL DATASHEET

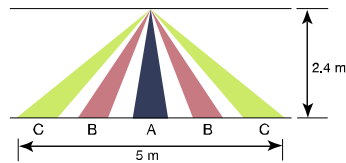
## DETECTION PATTERN

### Ceiling Mount

Top View

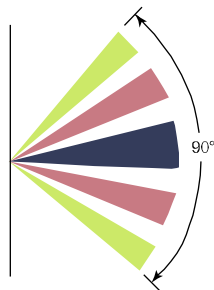


Side View

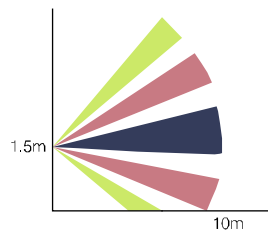


### Wall Mount

Top View



Side View



## SPECIFICATIONS

Infrared sensor	Dual element pyroelectric
Light sensor	CdS photocell
Operation power (V <sub>cc</sub> )	5 ± 1.5 VDC
Current drain (I <sub>w</sub> )	Less than 1 mA
CdS resistance	35 ~ 65 KΩ @10 lux
CdS Gamma value	Typ. 0.75, 10 ~ 100 lux
Warm-up time	Approx. 50 seconds
Signal output format	TTL open collector
Signal output time	1 ~ 2.5 seconds
Detection range @25°C	Ceiling: 5m @2.4m high Wall: 90°, 10m
Mounting height	Ceiling: 1.8 ~ 3.0m (6 ~ 10ft) Wall: 1.2 ~ 1.8 m (4 ~ 6 ft)
Detection zones	38 zones
Optical lens	Fresnel lens, 21-mm dome
Detectable speed	0.15 ~ 3 m/sec.
Maximum power voltage	7 VDC
Maximum output voltage	30 VDC
Maximum output current	100 mA
Op. temperature	-20°C ~ 50°C (4°F ~ 122°F)
Dimensions	28 x 28 x 16 mm

Specifications are subject to change without prior notice.