

IR Break Beam Sensor (50cm)

SEN0503

Product Overview

12-02-2022

For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

DFRobot SEN0503 IR Break Beam Sensor (50cm) are infrared break-beam sensors that are a simple way to detect motion. This IR break beam sensor detects objects up to 50cm away with a fast and stable response of <2ms. The IR break sensor is easy to install in narrow spaces as it comes in 20mm x 10mm x 9mm dimensions. This SEN0503 operates between -25°C to 60°C temperature range and a 3V_{DC} to 5V_{DC} voltage range.



The SEN0503 sensor works by having an emitter that sends out a beam of human-invisible IR light, then a receiver across the way that is sensitive to that same light. When something passes between the two and is not transparent to IR, the beam is broken, and the receiver will output a signal to let the user know. In smart robot competitions, this IR sensor can be used with Arduino for simple motion detection, speed detection, and timing.

Features

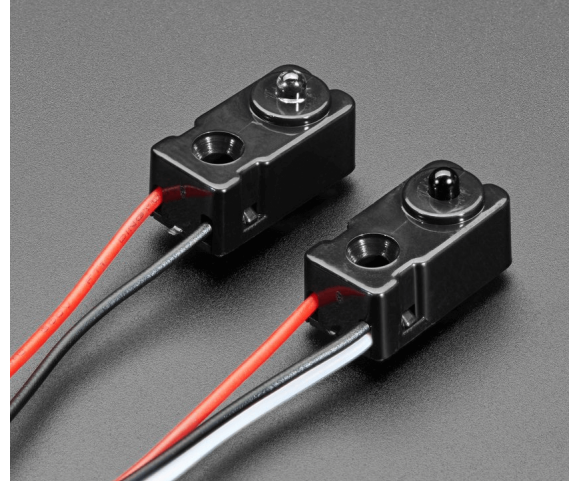
- Fast and stable response speed
- It can be conveniently installed in a narrow space

Specifications

- 50cm/(5V), 20cm/ (3.3V) induction distance
- Induction method:
 - Through-beam type (non-transparent)
- 3V_{DC} to 5V_{DC} working voltage
- 25mA working current
- NPN normally opens the output mode
- 100mA output current (can directly drive the relay)
- Straight line (infrared light) emitting angle
- < 10° receiving angle
- 2ms response time
- -25°C to 60°C working temperature
- Indoor (not waterproof) working environment
- 20mm x 10mm x 9mm (LxWxH) dimensions
- 25c9.84-inch cable length
- 3mm/0.12-inch light hole
- Transmitter:
 - Red wire = 5V_{DC}
 - Black wire = GND
- Receiving:
 - Red wire = 5V_{DC}
 - Black wire = GND
 - White wire = Out (NPN)

Kit Contents

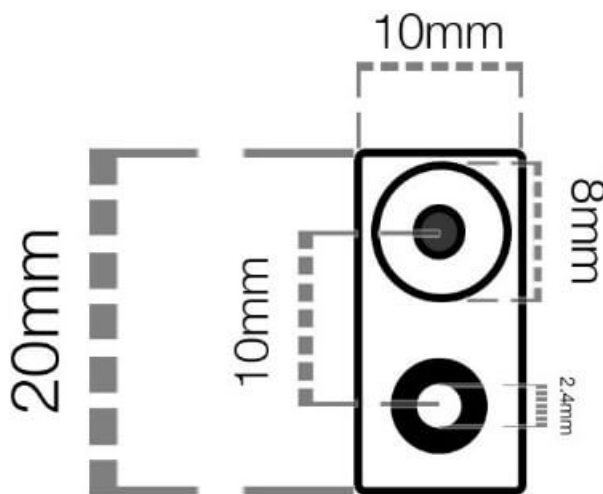
- 1x IR break beam sensor (50cm) - receiver
- 1x IR break beam sensor (50cm) - transmitter



Applications

- Simple motion detection
- Speed detection
- Timing

Sensor Dimensions



Mouser Part Number

[View Part](#)

To learn more, visit <https://www.mouser.com/new/dfrobot/dfrobot-sen0503-ir-break-beam-sensor/>