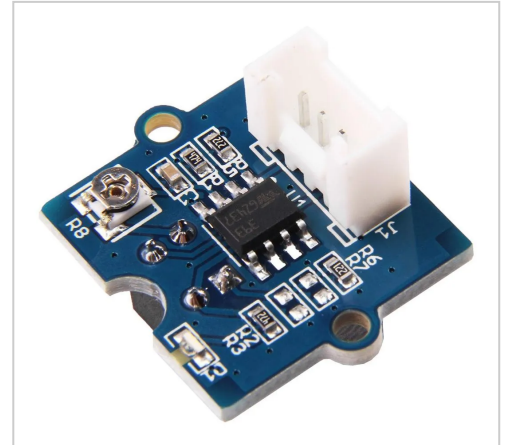


seeed Grove - IR distance interrupter v1.2

Provided a high-sensitivity RFR-359F photo-reflector, Grove - IR Distance Interrupter v1

Product number SE-101020175

Weight 0.008kg



Product description

Seeed Grove - IR Distance Interrupter v1.2

The Grove - IR Distance Interrupter v1.2 is a sensor for detecting objects that interrupt the path of an infrared light beam. The module is based on the ITR9909, a reflective infrared photosensor consisting of an IR LED and an NPN silicon phototransistor. Both components are embedded next to each other on a converging optical axis in a black thermoplastic housing. The phototransistor normally only receives direct IR radiation. If the radiation is interrupted by an object, the phototransistor can no longer receive the light.

If reflected light is detected, the module supplies a digital HIGH signal (binary 1) on the SIG pin and the integrated LED indicator lights up. If no reflected light is detected or the object is out of range, the output remains LOW (binary 0) and the LED goes out. The sensor has an adjustable sensitivity, which is controlled by a potentiometer, and an LM393 rail-to-rail operational amplifier to amplify the output signal of the phototransistor.

The Grove - IR Distance Interrupter v1.2 is suitable for applications where non-contact based object detection is required. Typical applications include optical switches, line-tracking robots, counting systems, scanners, disc drives and copying units. Thanks to its high sensitivity, range of 7.5 to 40 cm and robust design, the module can be used flexibly.

The sensitivity of the sensor can be customised by adjusting the potentiometer. White or light-coloured surfaces reflect more IR radiation than dark surfaces, which results in a higher sensitivity to light-coloured objects. The module is equipped with a Grove interface, which enables easy integration into existing development environments.

Features at a glance

- Infrared object detection based on the ITR9909
- Reflection-dependent digital output with LED status display
- Sensitivity adjustable via potentiometer
- Amplification via rail-to-rail operational amplifier (LM393)
- Detection range from 7.5 to 40 cm

Compatibility

- Grove-compatible systems
- Arduino
- Raspberry Pi

Technical specifications

- Dimensions: 130 mm x 90 mm x 12 mm
- Weight: 2.5 g (module), 8.5 g (complete package)
- Battery: Not included
- Operating voltage: 3.3V or 5V
- Operating current: max. 20 mA
- Detection range: 7.5 - 40 cm

Other data

- Integrated LED display for light reflection
- Sensitivity control via adjustable potentiometer

Scope of delivery

- 1x Grove - IR Distance Interrupter v1.2
- 1x Grove cable

Product properties

Gross Weight (kg)	0.008
Country of Origin	China
Brand	seeed
Product ID	SE-101020175
Manufacturer ID	101020175
EAN	4060137091001
Zolltarifnummer	90230010

More images

