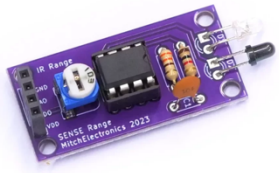
MitchElectronics Ltd.

IR RANGE SENSE

Electronic Kit | Data Sheet

PRODUCT IMAGE	SCAN FOR INSTRUCTIONS PAGE	SCAN FOR RESOURCE PAGE
		

MANUFACTURER	MitchElectronics
COUNTRY OF ORIGIN	United Kingdom
ROHS / REACH COMPLIANT	Yes
PRODUCT DESCRIPTION	The IR Range Sense is a self-build DIY electronics kit that includes everything needed to either detect the range of a surface, or the presence of a nearby object. Powered from voltages between 3V and 12V, the IR Range Sense has two outputs; one digital and one analogue. The digital output is connected to the output of the onboard comparator that produces either a logical 1 or 0 depending on the presence of IR light, and the IR Range Sense potentiometer is used to determine the sensitivity of the switch. The analogue output is a voltage that is proportional to the amount of IR light falling onto the IR sensor, and this can be useful for measuring distances, or for determining if an object has crossed in front of the sensor. While the board comes with components suitable for most applications, it is perfectly possible to change the components to adjust its operation. For example, changing the size of the IR series resistor can increase the sensitivity of the IR sensor.

PRODUCT SPECIFICATION:

- Component Count: 8
- Operating Voltage: 3V to 12V
- Output Voltage (Digital): VCC – 1.7V
- Operating Frequency: N/A
- Dimensions (PCB): 40mm x 20mm
- Mounting Holes: Yes
- Prebuilt: No – Kit form
- Batteries Not Included

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PARTS INCLUDED:

- 1 x LM358
- 1 x 8 DIP Socket
- 1 x IR Sensor
- 1 x IR LED
- 1 x 220Ω Resistor
- 1 x 1KΩ Resistor
- 1 x 100nF Capacitor
- 1 x 10KΩ Potentiometer
- 1 x 4-Way Socket

APPLICATIONS

The IR Range Sense is an excellent kit for those needing to determine a surface's range or to detect an object's presence in front of the kit. In addition to ranging, the kit can also be used to determine the presence of a reflective surface, which is commonly used in line-following robots. The IR Range Sense is also excellent for those needing to count passing objects or determine if a container is full or empty (these devices are commonly found in industrial sites that rely on automation). For applications that need to detect another IR source, it is better to use the IR Sense kit as this eliminates the onboard IR LED.

KIT INSTRUCTIONS

https://mitchelectronics.co.uk/resources/ir-range-sense-kit-instructions/

ELECTRONICS CONSTRUCTION MANUAL

https://www.mitchelectronics.co.uk/documents/electronicsConstructionManual.pdf

NOTES

Note that product specifics such as output frequency depend on the tolerance of the components. The numbers provided here are an approximation only. Also take note that the estimated delivery is not guaranteed (unless special delivery is chosen) and free delivery has a maximum waiting time of two weeks. Any product that is returned which is built using lead solder is ineligible for a refund.

All parts sold by MitchElectronics are compliant with RoHS and REACH directives which ensure that they can be used in commercial environments as well as complying with environmental laws.