Capacitive Proximity Sensor

SEN0447

Product Overview

02/14/2023
For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

The SEN0447 Capacitive Proximity Sensor from DFRobot detects all non-metallic objects with static electricity besides metal objects. This capacitive proximity sensor features an adjustable detection range from 1mm to 10mm and an indicator for feeding back device status in real-time. The SEN0447 capacitive proximity sensor features a fully enclosed PBT plastic shell that meets IP67 waterproof and dustproof rating that can be applied to both outdoor and indoor projects. This sensor operates at the $10V_{DC}$ to $30V_{DC}$ power supply range and offers a 50Hz switching frequency. The SEN0447 sensor features small temperature drift and high detection accuracy and can be used in mechanical automation, security equipment, and object detection.

Features

- Detection distance:
    - 1mm to 10mm adjustable (up to 20mm for metal and 10mm for non-metal)
- Capacitive induction type
- Output mode:
    - PNP normally open (high-level output)
- Connection mode:
    - Brown line-positive pole, blue line-negative pole, and black line-output line
- Protection mechanism:
    - Short circuit protection
    - Overload protection
    - Reverse polarity protection
- IP67 protection level

Applications

- Mechanical automation
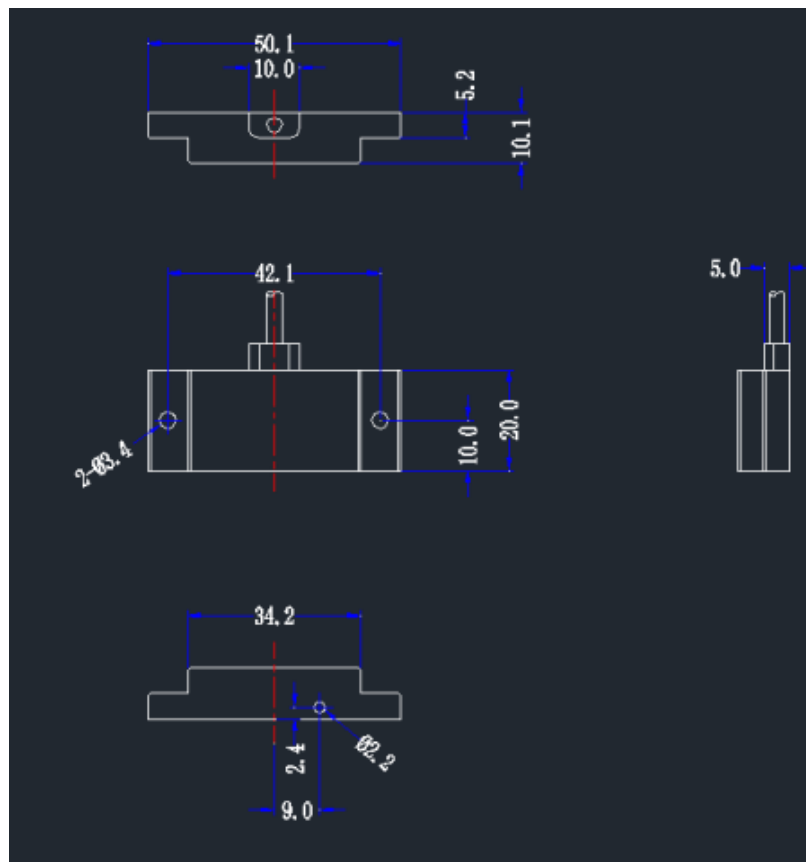- Security equipment
- Object detection

Specifications

- $10V_{DC}$ to $30V_{DC}$ power supply range
- 50Hz switching frequency
- <1.5ms response time
- <15% switch hysteresis
- <5% repeatability
- -25°C to 70°C temperature resistance range
- 50mm x 20mm x 10mm dimensions

Kit Contents

- 1x Capacitive proximity sensor
- 1x Gravity-4P I²C/UART sensor connector
- 1x Strap

Dimensions

Mouser Part Number

To learn more, visit https://www.mouser.com/new/dfrobot/dfrobot-sen0447-capacitive-proximity-sensor/