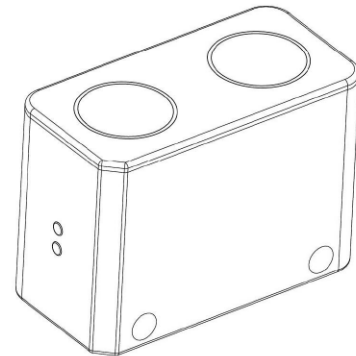


### VU0009-001 Ultrasonic Proximity Sensor

#### Description

The VU0009-001 Ultrasonic Proximity Sensor determines the presence of a nearby object within its sensing range by measuring the time interval between transmitted ultrasonic pulses and received echo pulses.

Advanced signal processing techniques are used in the module to enhance the measurement reliability and the anti-interference performance.



#### Features

- Digital level output
- Small blind zone
- Short response time

#### Applications

- Proximity Sensing
- Level Sensing

#### Ordering Information

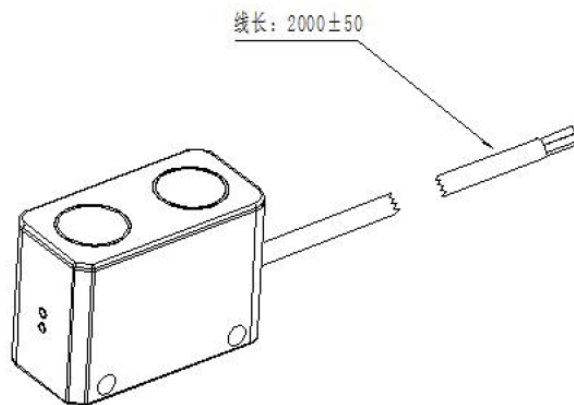
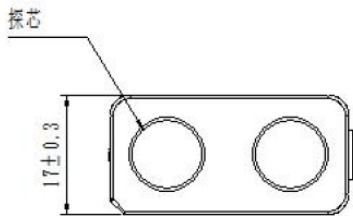
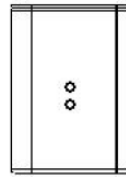
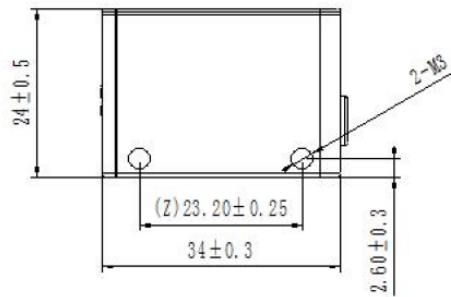
Part Number: VU0009-001

Model Number: U060KLCO-TR01C-F

#### Electrical Specifications

Parameter	Specification
Principle	Ultrasonic Time of Flight
Frequency	60 kHz $\pm$ 1KHz
Maximum Range of Object Detection	35 cm
Blind Zone	$\leq$ 2 cm
Adjustable Range	5 to 35 cm
Measurement Error	$\leq \pm 1$ cm
Horizontal Detection Angle	20°
Refresh Rate	$\leq$ 30Hz
Status LED Indication	Green: Unit working - No Object Detected Red: Unit working – Target Detected
Output Signal	Active Low Open-Drain – Driven low while object is detected
Supply Voltage	24V DC Nominal (12V to 28V)
Rated Working Current	$\leq$ 25mA
Rated Operating Current	$\leq$ 100mA
Operating Temperature	-10°C to +50°C
Storage Temperature	-40°C to +80°C
Protection	IP65
Installation Method	M3 x 2

**Appearance & Dimensions (Units: mm)**



**Module Dimensions**

Length:	34 ± 0.3mm
Width:	17 ± 0.3mm
Height:	25 ± 0.5mm

**Material Description**

Case:	PA66 + 15% GF
Transducer:	-
Wiring Harness (Outer):	PVC

**Connection Description**

Pin No.	Wire Color	Pin Name	Description
1	Brown	VCC	DC 24V Type
2	Black	DETECT	Detect Output; Active Low Open Drain This output reflects the target state as indicated by the LED status indicator. Driven low when the target is detected, floating when no target is detected
3	White	LIN	Target Information Output / Online Debugging and Upgrades
4	Blue	GND	Power Ground

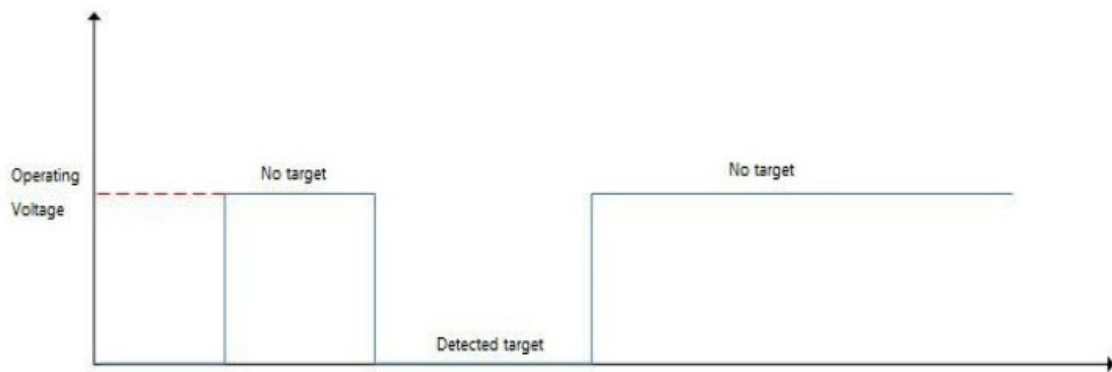
**General Operation**

After supply voltage is applied to the VU0009-001 and the module has initialized and is working properly, operation will be as follows:

Whenever no object is detected within the proximity sensing range the status LED will be Green and the Output pin will be floating.

When an object is detected within the proximity sensing range and for as long as it is present, the status LED will be Red and the Output will be driven low.

**DETECT Output Diagram**



**Shipping Information**

PCS / Bin	PCS / Carton	Carton016 Size (mm)	Bin 023 Size (mm)	Net Weight (Kg)
100	20	373 x 315 x 27	380 x 320 x 280	0.45

**Revision History**

Revision Number	Revision Date	Description	Pages Changed
A1	1-17-2020	First Release Version	

**Contacts**


For pricing, delivery, and detailed ordering information please contact:

Audiowell International  
12060 County Line Rd.  
Suite J 265  
Madison, AL 35756  
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Email: [sales@audiowell-international.com](mailto:sales@audiowell-international.com)

**Tentative Release**

This specification is based on design objectives and is strictly Preliminary and subject to change. Test data may exist, but this specification is subject to change based on the results of additional testing and evaluation. Application specific specifications will be produced for approval prior to production product being released.

 <b>WARNING</b> This product can expose you to chemicals including Lead, Chromium (hexavalent compounds) and Phthalates (DEHP) which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
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