



## SPECIFICATION FOR APPROVAL

CUSTOMER \_\_\_\_\_

AUDIOWELL P/N TS106 CUST P/N \_\_\_\_\_

DESCRIPTION ULTRASONIC RANGE FINDER

DATE 3/31/2008 NUMBER \_\_\_\_\_

|   |              |                     |              |
|---|--------------|---------------------|--------------|
| <p><b>THE ULTRASONIC EYES RANGE FINDER</b></p> <p>1. INTRODUCE<br/>                 2. FEATURES<br/>                 3. ELECTRICAL SPECIFICATIONS<br/>                 4. DIMENSIONS<br/>                 5. CONNECTIONS<br/>                 6. WORKING MODE</p> |              |                     |              |
| <p>CUSTOMER APPROVAL</p>  | <p>APPD.</p> | <p>COMPANY CHOP</p> |              |
|   |              |                     |              |
| <p>DRAWING</p>  | <p>DWN.</p>  | <p>CHECK.</p>       | <p>APPD.</p> |
|   |              |                     |              |

## Ultrasonic Electronic Eye Telemeter Module

### 1. Introduction

Through the technology of non-contacted ultrasonic measurement, TS106 ultrasonic electric telemeter module can measure a distance within 0.03-3M effectively. And transform the data into impulse with different width. By employing ultrasonic intelligence software processing technology, the reliability of measurement are improved, as well as the capability of anti-jamming.

### 2. Characteristics of product

High sensitivity

Narrow fade zone

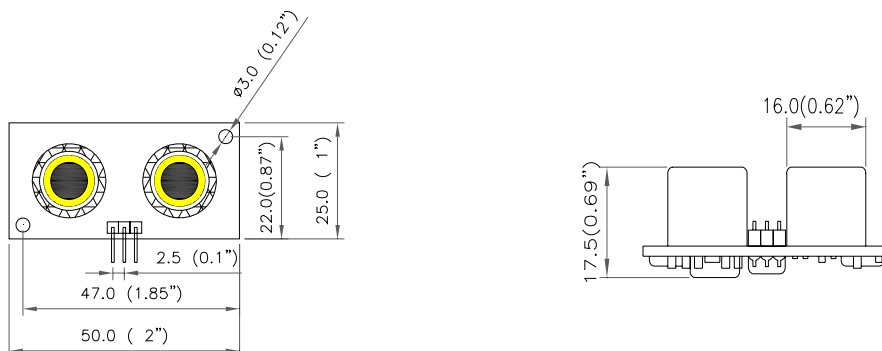
Quick response

Intelligence processing technology for Ultrasonic

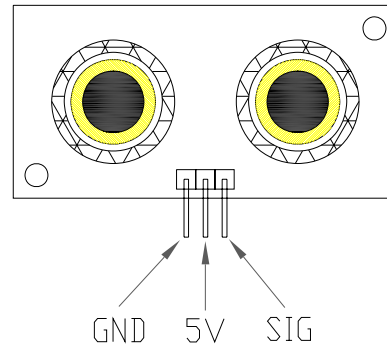
### 3. Specification

|                          |                      |
|--------------------------|----------------------|
| Principle of measurement | Ultrasonic detect    |
| Typical application      | Distance measurement |
| Range of measurement     | 0.03~3 M             |
| Precision of measurement | ±2CM                 |
| Mean of output           | Impulse width        |
| Rated working voltage    | 5 VDC                |
| Working current          | ≤15 mA               |
| Frequency of sensor      | 40 KHz               |
| Continual response time  | 5ms                  |
| Working temperature      | 0 °C ~ 70 °C         |
| Ralitive moisture        | ≤85%                 |
| Atmosphere pressure      | 86~106 Kpa           |

### 4. Appearance and dimensions Unit: mm

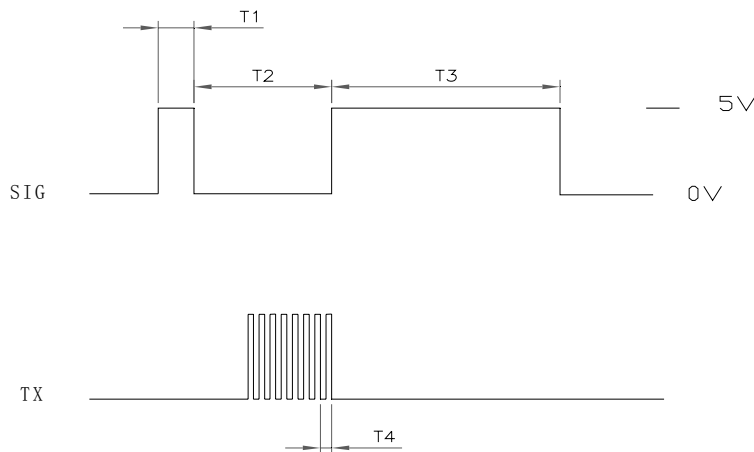


## 5. Electric connection



## 6. Principle of operation

The host offers the TS106 module with a impulse through SIG, the trailing edge springs, and transmits a string of ultrasonic signal of 40KHz when the module receives it. Then the electrical level of SIG stitch will be risen. The duration of high level T3 will be ensured by the distance between the object and the telemeter. After 18.5ms, the high level descends, when no object is in a distance of 3M. The host computes the distance though the impulse width input by the electronic eye module:  $S=V*3/2T$ .



- T1 ( Trigger):  $5\mu\text{s}$
- T2 (Postpone):  $200\mu\text{s}$
- T3 ( Pulse width): 0-18.5ms
- T4 ( Cycle) :  $25\mu\text{s}$