

# USER MANUAL

# **RSA**

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## Preface

Thanks for choosing our products and this manual is suitable for water sensor RSA. This manual contains important safety and operation instructions. Read it before any operation/installation and keep it well for future reference.

Product installation and maintenance need to be conducted by a well trained technician or electrician. Please pay more attention to below items:

1. Please use correct voltage to power this product
2. Please insure DC positive and negative are connected correctly. No reverse polarity connection is allowed
3. Please use power cable as short as possible for connection and ensure all connection is well
4. Only TBB engineer or authorized electrician can open the case.



**All products has been well inspected before delivery from manufacturer. If there is faulty for example housing swelling is found when open product box, please contact TBB or TBB's re-seller immediately. The environment condition will also has influence to product performance, please make sure product is used in proper environment condition**

**Remarks: As continuous update on product, this manual might not reflect latest version of product. Please contact TBB or TBB's re-seller if wants to learn most update on product**

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## 1. General Safety Instruction

### 1.1 Safety Instruction

- Please read this manual and remark, sticker on product before installation or operation.
- Please abide by required electrical safety procedure and requirement to prevent any damage or injury. Safety instruction in this manual is not equal to these safety procedure and requirement.
- Manufacturer takes no responsibility for any consequence of break above safety procedure or requirement.

### 1.2 General Precaution

- To avoid fire and electric shock, make sure all cables selected with right gauge and being connected well. Smaller diameter and broken cable are not allowed to use.

## 2. Product Introduction

### 2.1 General Introduction

The RSA is a resistive water level sensor developed by TBB. As one of the core functional components of TBB's system solutions, the RSA has been widely used in RVs, boats, special vehicles, and other fields. It consists of five stainless steel probes of different lengths, a plastic housing, and a wiring harness. The sensor has four levels: 25%, 50%, 75%, and 100%, enabling real-time detection of water tank levels.

### 2.2 Working Principle

The RSA is a resistive water level sensor. The longest stainless steel probe serves as the common electrode. By detecting whether the other stainless steel probes come into contact with the water level, changes in voltage are generated to determine the remaining water level in the tank.

## 2.3 Product Appearance



*Fig.2-1 Picture of RSA*

## 2.4 Stainless Steel Probe Length

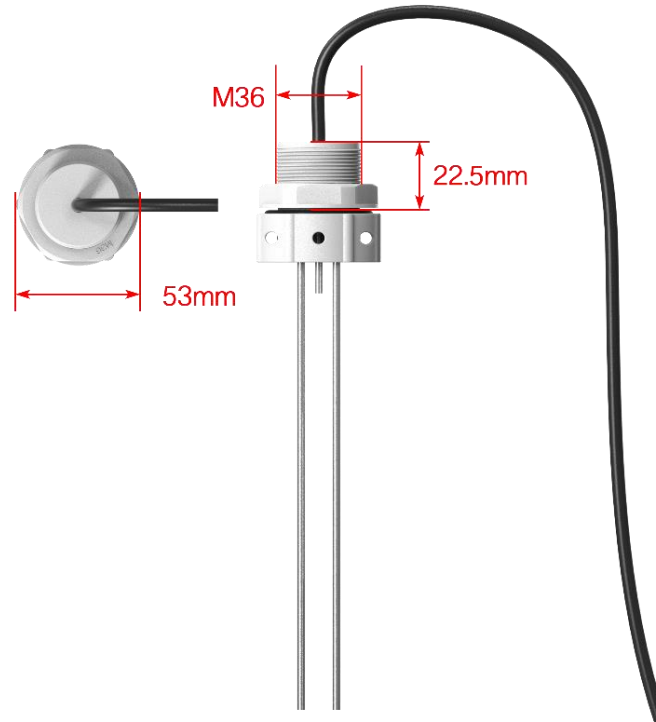
The exposed length of stainless steel probes varies by product model. Please refer to the table below for probe length specifications.

Product Model	Common Electrode Probe Length (mm)	25% Water Level Probe Length (mm)	50% Water Level Probe Length (mm)	75% Water Level Probe Length (mm)	100% Water Level Probe Length (mm)
RSA200	200	200	138	77	15
RSA260	260	260	178	110	15
RSA300	300	300	200	110	15
RSA400	400	400	272	138	15

*Table 2-1 Probe Exposed Length Reference Table*

### 3. Installation

1. Drill a hole at the cover of service open. The recommended cutout diameter is 37~38mm. The product dimensions are as follows.



*Fig.3-1 RSA product dimensions*

2. Pass RSA through that hole on service open from bottom to up.



*Fig.3-2 Pass RSA through the hole on service open*

3. Pass screw cap of RSA through cable and fix it with thread body.



*Fig.3-3 Pass screw cap of RSA through the cable*

4. Well fix the screw cap with thread body by proper tool to prevent any leakage or loose.



*Fig.3-4 Fix screw cap with thread body*



5. Fix cover of service open back. The installation of RSA is finished.



*Fig.3-5 Fix back cover of service open*

#### Remarks


- 1) Please keep installation of RSA away from water inlet with distance at least 10cm. Or it will cause measurement is not accurate.
- 2) The probe length has been calibrated by manufacturer before delivery to customer. It's not allowed to cut probe length by user.







Visit official website for more information.

## **TBB POWER (XIAMEN) CO.,LTD**

 [sales@tbbpower.com](mailto:sales@tbbpower.com)

 [www.tbbpowermobile.com](http://www.tbbpowermobile.com)

 +86-592-5212299

 +86-592-5796070