



# **WB-TSD Tank level Display**

## **USER MANUAL**

**V2.0 SEPTEMBER 2016**

## ***WB-TSD Tank level Display User Manual***

---

### **Welcome to use WINDBELL WB - TSD tank level display!**

This product has passed strict inspection before delivery out of factory. For the correct installation and usage, please read this manual in advance, and in accordance with the relevant operating steps, to avoid damage or dangerous because of wrong operation.

Please properly retention of this manual, so that you can get help in time.

### **Copyright statement**

This manual copyright belongs to Zhengzhou Windbell Measurment and Control Technology co., Ltd. Without the written permission, any part of this manual shall not copy, translation, stored in a database or retrieval system inside, also cannot spread by electronic, remake, recording etc. any means.

Windbell adhering to the principle of scientific and technological progress, constantly committed to the product improvement, improve product performance; the company keeps the right not to notice prior for any product improvements.

If the user repair or change without authorization from Windbell or authorized distributors, we are not be liable for all responsibilities.

Product appearance depends on goods.

### **Customer service guidance**

1. Before using this product, please check the attachments carefully according to the packing list, whether the product certification and warranty card is complete, if any miss, please immediately contact the seller or manufacturer.
2. Warranty is 12 months since delivery date.
3. The damage caused by violation of operating regulations and requirements, or caused by force majeure factors, we will charge for repair or replace.
4. Please show the warranty card for warranty products, otherwise will charge.

**If you have any questions about the products and services, please do not hesitate to contact us!**

# *WB-TSD Tank level Display User Manual*

---

## **Content**

<b>1. Summary</b> .....	1
<b>2. Technical Parameters</b> .....	1
<b>3. Construction</b> .....	2
<b>4. Dimension ( Unit: mm)</b> .....	2
<b>5. Installation and Connection</b> .....	3
<b>5.1 Installation position</b> .....	3
<b>5.2 Wiring</b> .....	4
<b>6. Diagram</b> .....	4
<b>7. Problem Shooting</b> .....	5
<b>8. Notes</b> .....	5
<b>9. Contact Us</b> .....	5

### 1. Summary

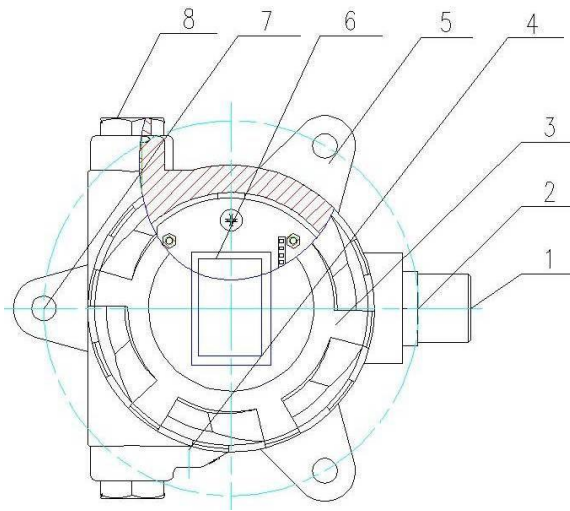


- WB-TSD tank level display is the new type level display instrument, it adopts the advanced microcontroller technology, combined with excellent SMD manufacture process. It has excellent characteristics of temperature and humidity, long service life, easy installation, etc.
- WB-TSD tank level display connects with SS160 Plus console, display oil level, water level and temperature on LCD screen. Communicate by RS485 transmission, with remarkable advantages of long transmission distance, anti-interference performance, etc.
- Apply to underground storage tank or aboveground tanks, real-time display liquid Level.

### 2. Technical Parameters

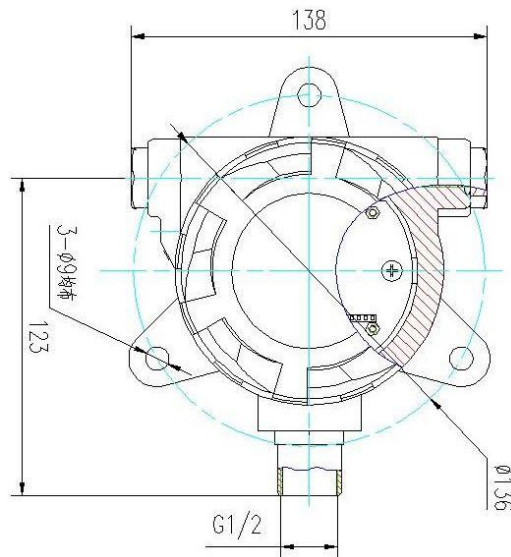
<b>Power</b>	DC12V $\pm$ 25%, 25mA
<b>Display</b>	128*64 LCD screen
<b>Resolution</b>	Oil level --0.1mm; temperature --0.01 °C
<b>Response time</b>	<3s
<b>Communication port</b>	RS485
<b>Environment temperature</b>	-40°C ~60°C (-40 to 140°F)
<b>Relative humidity</b>	<98%
<b>Explosion proof mark</b>	[Ex ia Ga] IIA T4 Ga
<b>Intrinsically features</b>	Power terminal to Earth: Ui=12.6; Ii=291mA; Pi=0.92W; Ci=0.42 $\mu$ F; Li=0 Signal terminal to Earth: Ui=7.14V; Ii=147mA; Pi=260mW; Ci=0 $\mu$ F; Li=0
<b>Protection grade</b>	IP 65

**3. Construction**



No.	Name	No.	Name
1	In-out wire port	5	Lower cover of screen
2	Connector	6	Display screen
3	Cover of screen	7	Open hole
4	Grounding nut	8	Plug

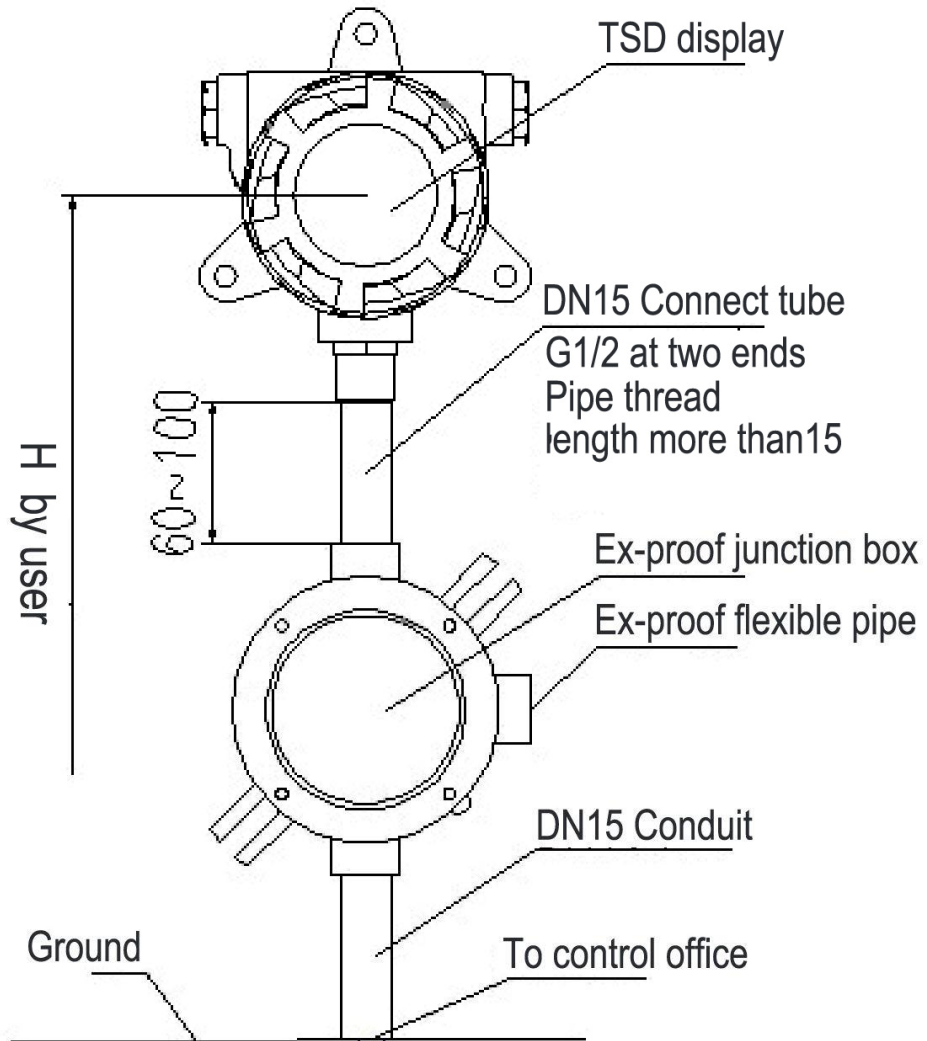
**4. Dimension ( Unit: mm)**



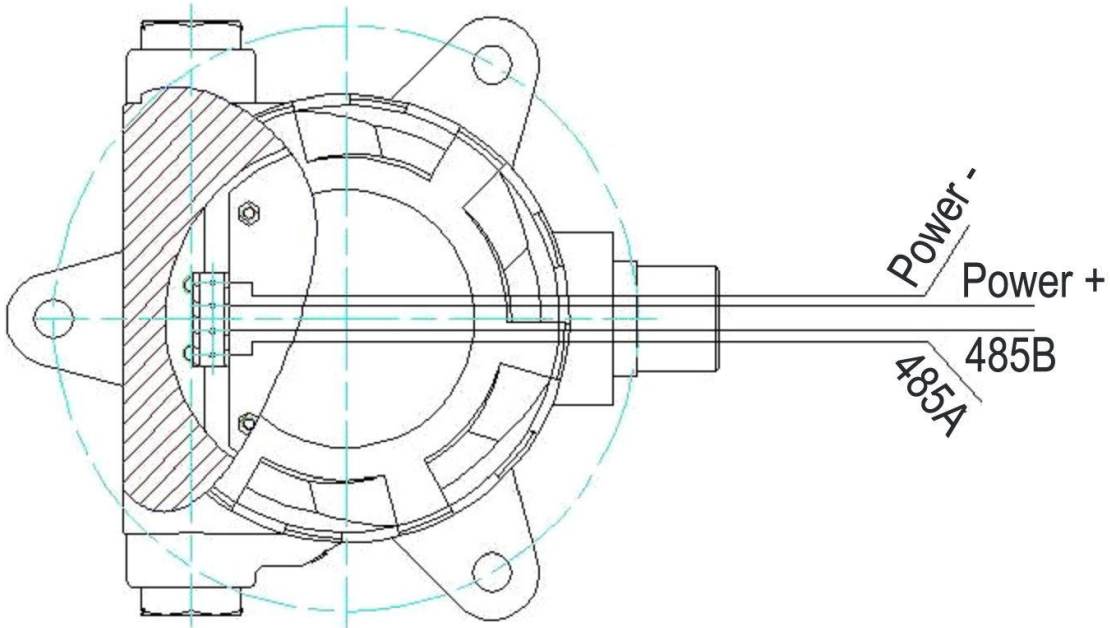
## 5. Installation and Connection

### 5.1 Installation position

TSD Tank level display is installed nearby tank, and connects to ex-proof junction box. Details please see figure.



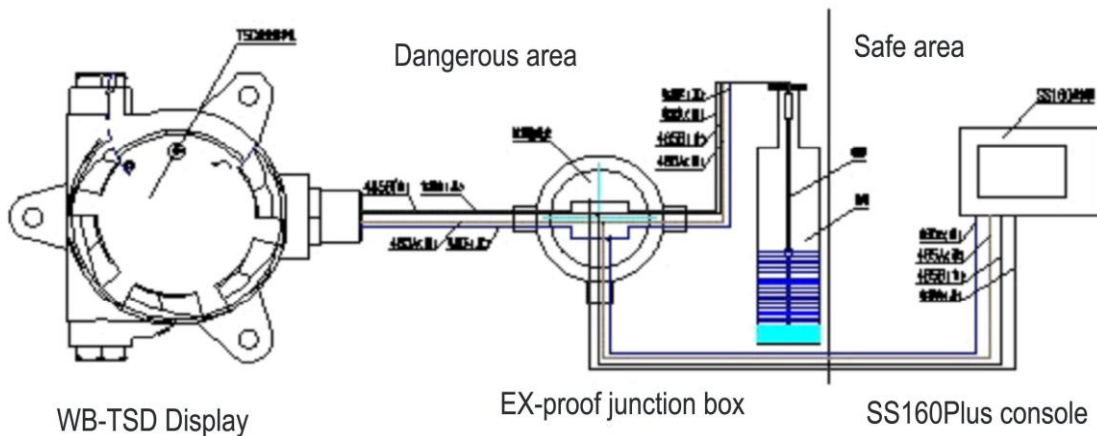
**5.2 Wiring**



**Notes:**

- After fix display tightly, as 5.1 installation position and 5.2 connection mode, please wire to the corresponding terminal, check if the wiring is correct, then take out redundant cable, finally tighten gland nut, pressure rubber seal, hold cables. If use explosion-proof pipe, it also can directly connect with the display.
- The cable between display and junction box should not less than 1.5mm (≤1000m).
- After checked connection, tighten the front cover.
- According to the site condition, user also can wiring firstly, and then fixes display.

**6. Diagram**



## **7. Problem Shooting**

- ◆ No data on screen after power on
- ✓ Please check the connection cable and wiring, connect and wire again.
- ◆ The data on TSD display is different with SS160Plus console
- ✓ Please check the communication cable of display, connect again.
- ◆ Any further failure please contact with supplier.

## **8. Notes**

- Please locate this display in the place where have no corrosive gas, soot and dust, waterproof, and prevent against from falling from up or violent vibration.
- Please record the last two digits of display S/N, install beside the corresponding tank number, otherwise data displayed is non-corresponding.
- Please offer the product S/N when ask for replacement. That is because the last two digits of new S/N should be same as previous one.
- Please seriously comply with the relevant safety and explosion-proof standards when installation.
- It is forbidden to power on before installation finish.
- Grounding nut must be reliable grounding

## **9. Contact Us**

**Zhengzhou Windbell Measurement and Control Technology Co., Ltd**

**Tel:** 86-371-6030 1609

**Fax:** 86-371-6030 1612

**E-mail:** emily@windbelltek.com

sales@windbelltek.com

**Address:** No.9, Changchun Road, High-Tech development Zone, Zhengzhou city, Henan Province, China

**Zip code:** 450001



# WINDBELL

IS DEDICATED IN PROVIDING SOLUTION TO  
ENVIRONMENT PROTECTION & SAFETY FOR  
PETROLEUM RETAIL INDUSTRY

**ZHENGZHOU WINDBELL MEASUREMENT AND CONTROL TECHNOLOGY CO., LTD**

**No.9 Changchun Road, High-tech Development Zone, Zhengzhou city,  
Henan Province, P. R. China  
P.C.:450001**

**[www.windbellatg.com](http://www.windbellatg.com)  
[www.windbellgauge.com](http://www.windbellgauge.com)**

**E-mail: [sales@windbelltek.com](mailto:sales@windbelltek.com)**

**Office Tel: +86 371 6030 1609  
Office Fax: +86 371 6030 1612**



**V2.0 SEPTEMBER 2016**