

# Catalog

<b>1 INTRODUCTION .....</b>	<b>- 1 -</b>
1.1 BRIEF DESCRIPTION .....	- 1 -
1.2 OPERATING PRINCIPLE .....	- 1 -
1.3 APPLICATION .....	- 1 -
<b>2 CONFIGURATION AND CHARACTERISTIC .....</b>	<b>- 2 -</b>
2.1 CONFIGURATION .....	- 2 -
2.2 CHARACTERISTICS .....	- 2 -
<b>3 TECHNICAL DATA .....</b>	<b>- 3 -</b>
<b>4 ELECTRICAL CONNECTION .....</b>	<b>- 3 -</b>
4.1 SAFETY NOTED .....	- 3 -
4.2 CONNECTION CABLE .....	- 3 -
4.3 WIRING DIAGRAM .....	- 4 -
<b>5 SETUP NOTICE .....</b>	<b>- 4 -</b>
<b>6. INSTRUMENT REPAIR .....</b>	<b>- 5 -</b>
<b>7 STORAGE AND TRANSPORT .....</b>	<b>- 5 -</b>
7.1 PACKAGING .....	- 5 -
7.2 TRANSPORT .....	- 5 -
7.3 STORAGE .....	- 5 -
<b>8 DIMENSIONS .....</b>	<b>- 6 -</b>

## 1 Introduction

### 1.1 Brief description

In Float-11 series products, high quality plastic reed switches are assembled.

Jiwei has developed innovative techniques, focused on details of manufacturing process, introduced strict process management and quality inspection to ensure Float-11 with great reliability.

Float-11 series have two models for various liquids with different chemical properties:  
Float-11A Standard: Made of 304 or 316L stainless steel, suitable for most liquids.  
Float-11P Coated: With ECTFE/PTFE coating for strong corrosive liquids level measurement.

### 1.2 Operating principle

Float-11 series are used for the high-accuracy, continuous level detection of liquids and are based on Archimedes Buoyancy Principle. The float moves with the changes in the liquid level, and the reed switches are magnetically actuated as the float moves with the liquid level.

As the float moves, the proximal reed switches in chamber are magnetized by permanent magnet in the float and change the status from “open” to “closed” due to magnetic effect. The resistance value in the sensor changes linearly. The change of resistance value is then converted into 4 ~ 20mA standard DC output signal for remote detection and control. Jiwei offers different floats for fluids with different density to reach the optimal measurement accuracy.

### 1.3 Application

Level measurement for liquids, including industrial wastewater, petroleum, chemical industry, light industry and medicine industry.

## 2 Configuration and characteristic

### 2.1 Configuration

As shown in Fig. 1, Float-11 consists of the components:

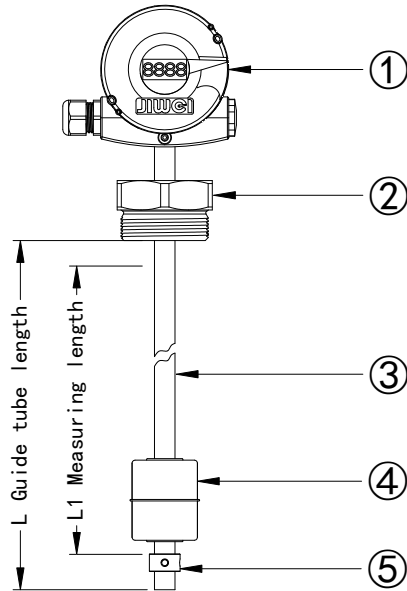


Fig. 1: Float-11 Configuration

①Housing cover ②Process fitting ③Guide tube ④Lock nut

### 2.2 Characteristics

- (1) High quality plastic reed switches from international market as the key components, providing the best endurance and durability.
- (2) LED display with strong brightness, can be configured in horizontal or upright, convenient for observation under various conditions.
- (3) Flameproof Enclosure (Ex db IIC T6 Gb) and Intrinsic Safety (Ex ia IIC T6 Ga) are approved.
- (4) Unique sealing techniques, Ingress Protection rating reaches IP66/IP67.
- (5) Flexibility for varied fluid environments. Material for wetted parts can be selected from 304, 316L, and coating material ECTFE/PTFE for highly corrosive liquid.

### 3 Technical data

Applicable medium	Liquids
Measuring range	300~6000mm
Medium density	≥0.5g/cm <sup>3</sup>
Process pressure	≤25bar
Process temperature	-20~120℃
Ambient temperature	-40~70℃
Process connection	Flange
Accuracy	±5mm/±10mm
Guide tube	φ21×2mm
	φ14×1mm
Housing	Aluminum alloy
Float/Guide tube/Process connection	ECTFE/304
	PTFE/316L
Ingress Protection	IP66/IP67
Signal output	4~20mA
Power supply	18~36V DC
Explosion-Proof	Flameproof Enclosure: Ex d IIC T6 Gb;
	Intrinsic Safety: Ex ia IIC T6 Ga

#### Ex certificate

This instrument fulfills the legal requirements of the applicable Ex guidelines. You can find the Ex conformity declaration in the certification area of “www.jiweimeter.cn”.

### 4 Electrical connection

#### 4.1 Safety noted

- (1) In consideration of safety, wiring is only allowed in the complete absence of line voltage.
- (2) You must follow the corresponding installation regulations with Ex applications.

#### 4.2 Connection cable

In general, Ring-11 uses general cable with round cross-section. To ensure its sealing effect, the outer diameter is 5-9mm.

If you are using cable with a different diameter or cross-section, please use a matched cable bolt, and be aware of new cable’s sealing ability.

### 4.3 Wiring diagram

Please wiring safely according to the following diagrams (Fig. 2).

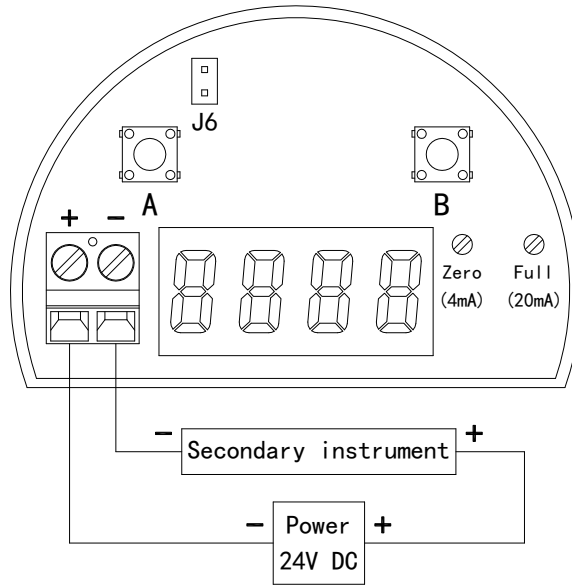


Fig.2 Wiring diagram

### 5 Setup Notice

- (1) The specific gravity of measured liquid must be greater than that of the float;
- (2) Float level indicator should be installed at the position where the float can rise and fall smoothly;
- (3) Measured medium should not contain ferromagnetic impurities;
- (4) No magnet is allowed near the instrument, otherwise malfunction may occur.
- (5) To prevent false signals, do not install instruments near the inlet.

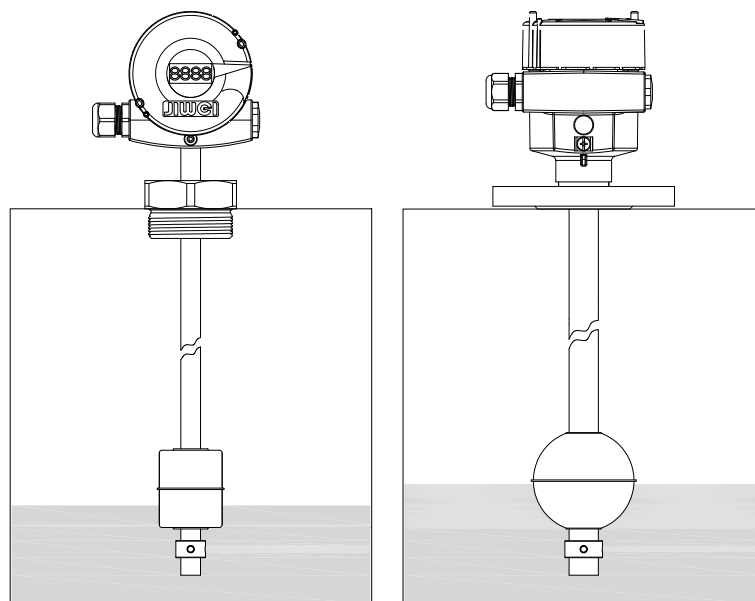


Fig.3 Installation diagram

## 6. Instrument repair

We offer our customers service including technical consulting, user training, on-site installation and commissioning, product replacement and maintenance as well as on-site technical support, etc. Jiwei product quality warranty period is one year, the warranty period for your free maintenance, long-term technical support, if you need advice in use, please call the service hotline: +86-0755-28407683, you can find the relevant services on our website “www.jiweimeter.cn”.

## 7 Storage and transport

### 7.1 Packaging

Your instrument was protected by packaging during transport.

The packaging of standard instruments consists of environment friendly, recyclable carton cover material .The probe is additionally protected with a cardboard cover. For special versions, PE foam or PE foil is also used. Please dispose of the packaging material through specialized recycling companies.

### 7.2 Transport

Transport must be carried out in due consideration of the notes on the transport packaging. Nonobservance of these instructions can cause damage to the instrument. The delivery must be checked for completeness and possible transit damage immediately at receipt .Ascertained transit damage or concealed defects must be appropriately dealt with.

### 7.3 Storage

The packages must be stored under the following conditions:

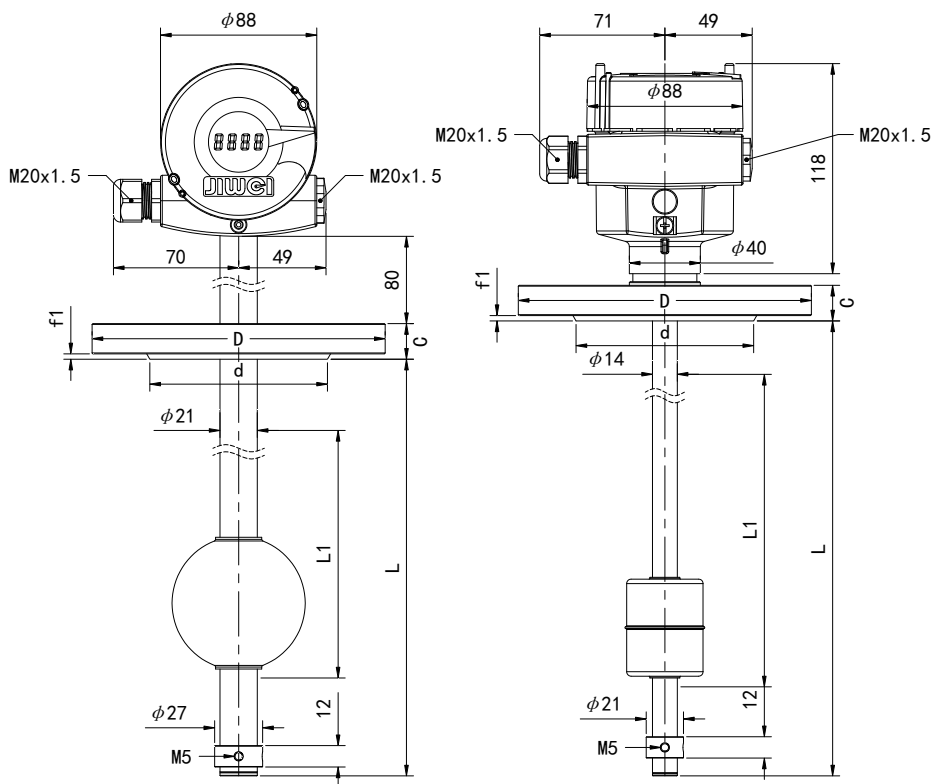
- (1) Not in the open
- (2) Dry and dust free
- (3) Not exposed to corrosive media
- (4) Protected against solar radiation
- (5) Avoiding mechanical shock and vibration
- (6) Storage environment

Relative humidity: 20~85%

Storage temperature: -40~80℃



### Float-11P



Horizontal display

Upright display

**Note:** L is the total length of the guide tube, L1 is measurement range.