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## Technical Data Sheet

### Photoelectric Liquid-level Sensor

**FS-IR32A**

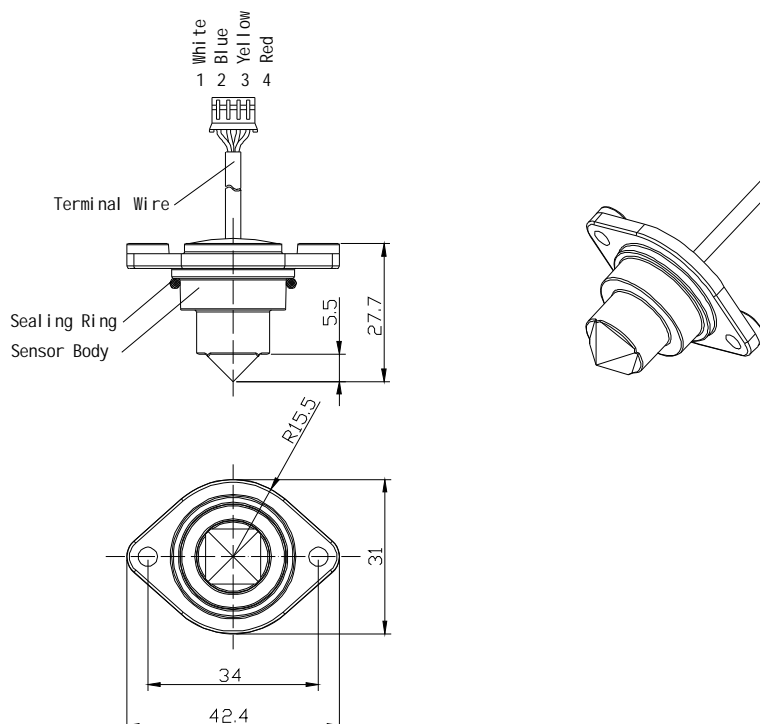
#### Characteristics

- 1 No mechanical moving components and with high reliability
- 1 Small in size and low in cost
- 1 High liquid level control precision and can be installed from any direction
- 1 Satisfying the requirements in Safety Standards
- 1 The sensor itself satisfies RoHS requirements

#### Applications

- 1 Electrical appliances and equipments etc. requiring liquid-level control

#### Dimensions



- Notes:**
1. The unit for each dimension is mm.
  2. The tolerance for unindicted dimensions is  $\pm 0.20$  mm.

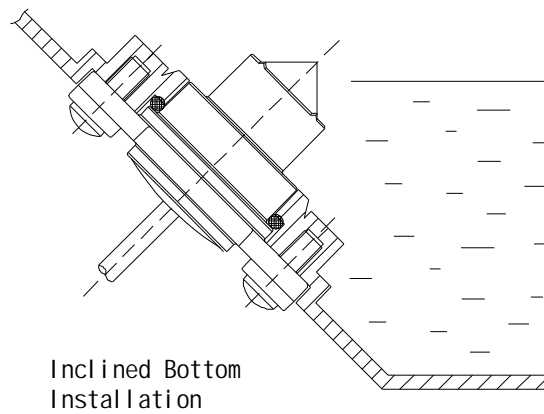
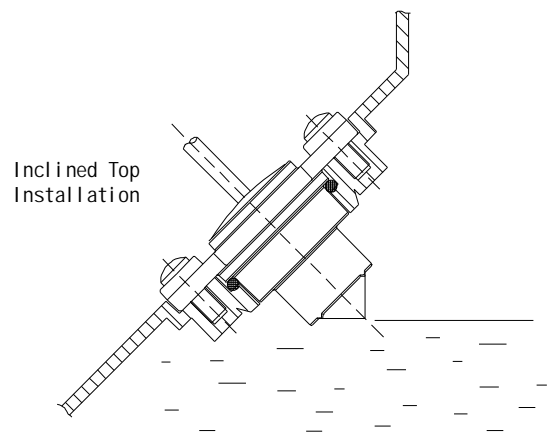
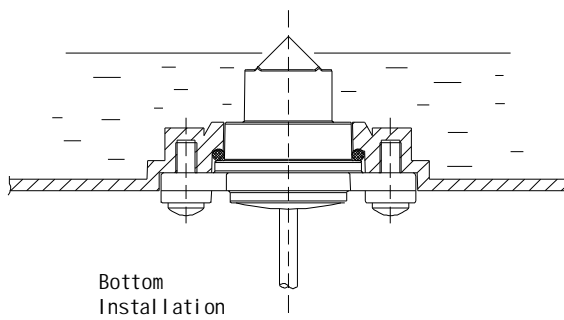
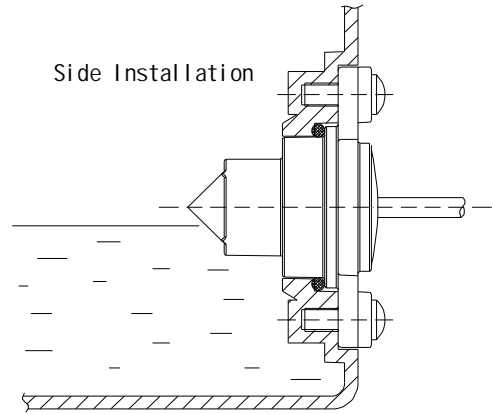
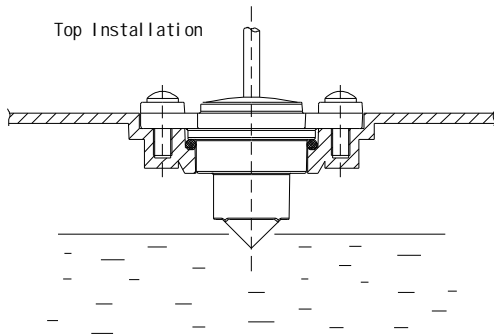
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### Installation & Liquid-level Control

Typical installation modes

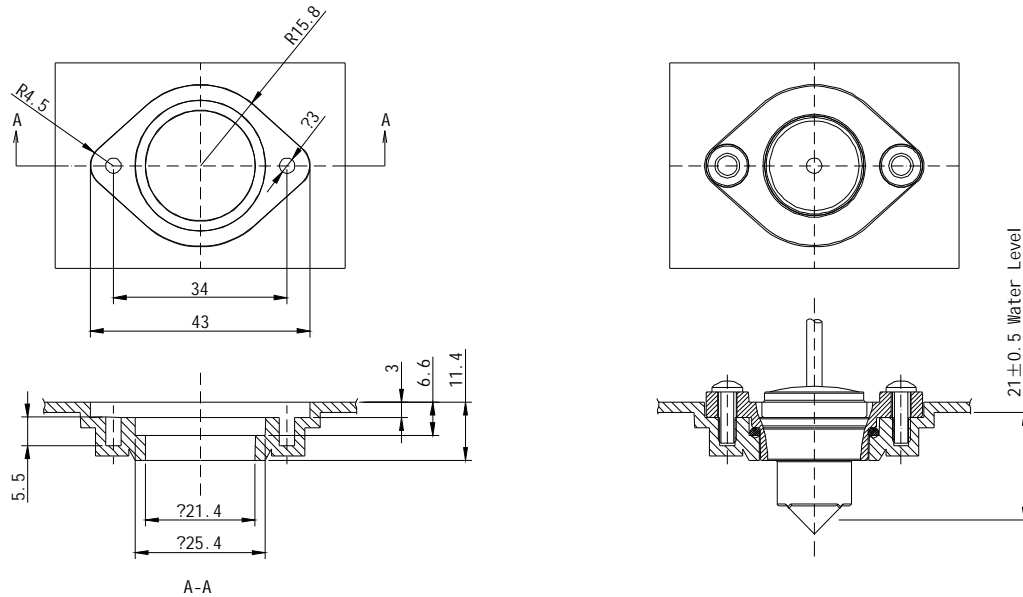


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## Photoelectric Liquid-level Sensor

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### Dimensions of bottom installation



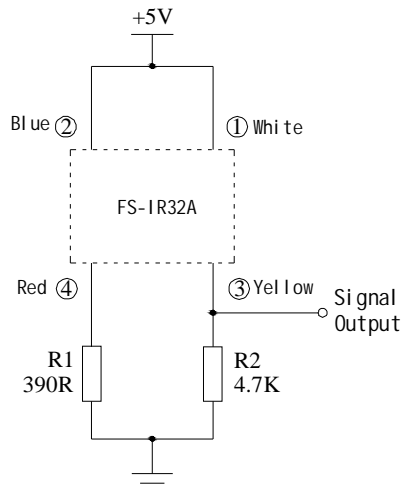
**Note:** 1. The unit for each dimension is mm.

2. The tolerance for unindicted dimensions is  $\pm 0.20$  mm.

3. According to this drawing, the residual water level is to be controlled within  $2.8 \pm 0.5$  mm.

### Application & Detection

Install the liquid-level sensor according to one of the typical modes mentioned above, and connect it according to the following circuit; the signal end will output a level signal corresponding to the water level, which is accessed to the MCU A/D port or other control circuits as liquid-level control signal. In case of liquid level above the critical liquid level and submerging the sensor body, the signal output is in low voltage; In case of liquid level below the critical liquid level and exposing the sensor body, the signal output is in high voltage. Specific parameters refer to the following table.



DC 5V application typical circuit

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Working Parameters (Ta=25°C)

Liquid level	Output voltage of signal Output (V)	True value	Total current (mA)	power dissipation (mW)
Above critical liquid level	< 0.1	0	< 12	< 60
Below critical liquid level	> 4.6	1	< 12	< 60

### Water Level Detection Function:

In practical application, taking into consideration of the influence of steam and dirt, the liquid level threshold voltage is set as  $V_T$ , that is, if the output voltage of signal end is higher than  $V_T$ , the liquid level is decided to be lower than the critical liquid level; and if the output voltage of signal end is lower than  $V_T$ , the liquid level is decided to be higher than the critical liquid level.  $V_T$  is set between 0.25 and 0.5 V, and the specific value is determined by the generation speed of dirt.

### Limit Parameters (Ta=25°C)

Parameter	Symbol	Specification
Working temperature	$T_{opr}$	-25°C-120°C (Head)
Storage temperature	$T_{stg}$	-40°C-85°C
Life	T	50,000 h

### Packaging Specification

20 sensors for each bag; and 50 bags for each container.

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