Operation Manual of High Sensitivity Water Leakage Detector

AD-AS-1C-SR

First of all, thank you very much for purchasing the Water Leakage Detector AD-AS-1C-SR.

When using, please make confirmation according to the following items before carrying out various operations. .

Operation Method

■Setting for break detection function, connections with the power sensor and non-voltage contact output, and setting of the detection sensitivity

①Break detection function setting

The break detection function is possible to be set use or nonuse***Factory setting is "Activated" for use.***

※For safety, please set before the detector installation and wiring.

Setting methodthe small screwdriver such as the precision screwdriver is inserted into the horizontal side before (①)1C-SR housing, to open the housing.

・Small changeover switches are set near the break detection function on the lower left of the inner base board and near the printed words.

Use instruments with sharp top like precision screwdrivers to operate the switch according to the following requirements.

◆<u>When the break detection functions is activate: "Activated" side (the switch is at "1" …***the factory setting***</u>

◆When the break detection functions is ***not activated:*** "Not activated" side (the switch is at "ON")

※When the break detection function is activated, be sure to install the break detection terminal of the same package at the top of the sensor (Product name: ZT-SR).***When the break detection function is not used, installation is needless to be carried out.***

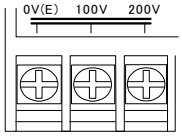
②Power

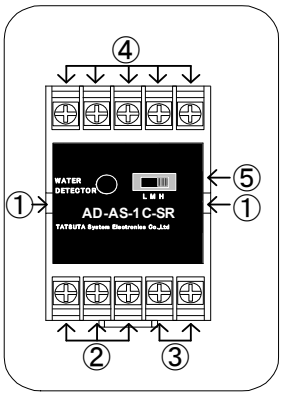
Be sure to connect any of AC100V or AC200V to the insulation transformer.

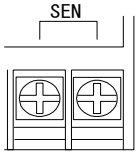
When connecting AC100V, connect it securely between 0V(E)-100V terminals,

When connect AC200V, connect it securely between 0V(E)-200V terminals.

To prevent the static electricity, be sure to connect the terminal of 0V(E) with the earth wire.







③Water leakage sensor

Please connect the water leakage sensor securely to the "SEN" terminal with wires.

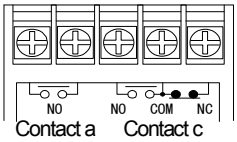
When the break detection function is activated,please make sure that the break detection terminal（ZT−SR） is installed at the top.

④Non-voltage contact output

It is output as the fault safety device.

When the detector is normal without alarm, the non-voltage contacts Contact 1a and Contact 1b are activated.

In the case of the detection of water leakage, break and power-off, Non-voltage contacts output Contact 1a and Contact 1c are output as below.Please operate it with care.



NO：during the detection of the leakage and break and power-off, the relay contact is Open"

NC： during the detection of leakage and break and power-off, the relay contact is "Closed"

⑤Detection sensitivity setting

The detection sensitivity can be set with respect to the installation environment, sensor length and the water quality detected accordingly.

Use the slide switch to select positions L, M and H for setting.

Slide switch

- ◆ L：standard sensitivity……2.0MΩ±20%
- ◆ M：standard sensitivity……1.0MΩ±20%
- ◆ L ：low sensitivity……0.5MΩ±20%

※The break detection is in common use for L,M,H, 3.3MΩ±20%.

■ Operation confirmation

The indicator LED will light up when the power is switched on.

The water leakage status can be simulated via short circuit among the "SEN" terminals.

At this moment, the indicator LED will light up, indicating that the water leakage has been detected, meanwhile, the no-voltage contact output will be activated.

When the setting of the break detection function is activated, for example, if the water leakage sensor is removed, it will be at the status of break, the indicator LED flashes fast intermittently, in the same status as the water leakage , the non-voltage contact output changes.

In addition, the water leakage status detected by the sensor can be confirmed by dripping the running water into the sensor.

Afterwards, the alarm can be reset by wiping the sensor with a dry cloth.

Use the detector in a working environment with a temperature range between -10~50˚C (no icing) and a humidity range between 35~85% (no condensation).

Avoid using the detector near sources close to sources of vibration and harmful gas, and strong electromagnetic induction.

For connection to the power supply, avoid using receptacles; use fixed wiring connection.

Select and use different fixators to fix the sensor according to the installation locations and environment.

The sensor is easy to be affected by the electromagnetic induction concerning the structure; in case that you are worried about the electromagnetic interference, please consult us.

Be sure to perform operation confirmation after the installing has been carried out.

When there is dirt on the shell and the case body, please use soft rag such as the gauze with neutral detergent diluted by water to wipe them gently.

Specifications

Item	Specifications	
Power source	AC100V/200V ±10% (common to 50Hz/60Hz)	
Sensor electrode voltage	AC5.5V (maximum value)	
Water leakage detection level	Switched to three sections: L: 0.5MΩ,M : 1.0MΩ ,H : 2.0MΩ, respectively ±20%	
Power/contact delay	Power ON/ change of non-voltage output: 120mS or less Power OFF/change of non-voltage contact output: 300mS±20%	
Power consumption	2VA or less	
Indicator LED	Dual purpose for power source/water leakage and break alarming (lighting up once during water leakage detection and lighting up twice during break detection)	
No-voltage contact	1 group of 1a and 1c respectively	
	Rated load	Resistive load
		AC125V 0.5A
		DC30V 2A

Important Safety Instructions!

⚠ Cautions

■To avoid the occurrence of fault !

＊Do not touch the detector with wet hands

＊Do not insert foreign substances inside the detector from the gap

＊Carry out the maintenance and regular check under the instructions of operators or instructiona manual.

Caution Label

About Caution Mark

Erroneous operation of this water leakage detector not complying with the caution mark or the following cautions may not only lead to possible fatality or serious injury, but also fire, electric shock or detector failure may occur.

Be sure to read the cautions and this instruction manual carefully.

⚠ Precautions

□Carry out installation or wiring following the method instructed in the operation manual.

□Conduct maintenance and periodic inspection following the method instructed in the operation manual.

□Confirm the rated voltage and supply voltage before installing the detector.

□Never soak it in water!

□Do not install the detector in places with high temperature and high humidity.

□When assembling to the machine for use, don't install in any locations easily accessible to the general public.

□Avoid using the detector in any location subject to excessively dusty environment.

□Avoid using the detector in any location close to sources of vibration, organic gas or strong electromagnetic induction.

□When performing maintenance on this detector, don't use solvents such as alcohol, toluene and diluents, etc. □ Never modify or disassemble the detector.

□Do not use the sensor as the electric wire!

□Please contact us in case of any failure.

Customer Consultation

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