TS-KS-W1266-4

To: _____

# Specification Document

## Point Sensor
## AD-PA-N

Date : (  )

<Manufacturer >
System Equipment Division
Electronic Materials & System Equipment Group
TATSUTA Electric Wire & Cable Co., Ltd.

| System Equipment Division | | |
|---|---|---|
| Approved by: | Checked by: | Prepared by: |
| | | |

# <<<Important safety instructions>>>

## ⚠Warning

Improper handling of the sensor in non-compliance to any of the following warning precautions or instructions given on a WARNING label can result in death, serious injury, fire, electric shock, and/or sensor failure.

## ⚠ Warning Precautions

### ⚠ Strictly Prohibited！

□Never use the sensor as electric cable.

### ⚠ Confirm！

□One sensor is used for one circuit.
□If stained, the sensor will not function normally. Please pay attention to it during installation.
□Never wet it during installation.

### ⚠ Caution on Installation！

□Avoid direct installation of this sensor in the locations easy to dew.
□Install the sensor and mounting surface as tightly as possible. Partial clearance is controlled to be 2mm or below on the horizontal plane of the floor and the like.
□f the sensor is across wired to the power cable with a voltage of 300V or above, tightly mount the interval insulant (plastic parts, etc.) on the sensor.
□After the sensor detects water leakage, it will be automatically reset upon the evaporation or removal of water. However, if conductive substances dissolve in the original water, the resetting phenomenon will not occur.
In addition, if water-repellent pollutants (wax, oil contents, etc.) dissolve in the water, the sensor will also fail to detect water leakage.
In such case, the sensor is needed to be washed. Therefore, please adopt the construction method that is easy for replacement and installation.
□Install the sensor so that it can be easily replaced. After detection of water leakage, the sensor is reset when the water has evaporated. However, if the sensor absorbs water that contains conductive or water-repellent material, it possibly cannot be reset and needs to be replaced.
□To prevent the electrical erosion of the sensor, make sure to use an AC water leakage detector.
□Note: If the sensor sticks to the tax and other substances, the water is flicked and always fails to be detected.

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## 1. Scope

The specification document is applicable to the point sensor (AD-PA-N sensor) for rapid detection

## 2. Construction

Fig. 1 shows the construction of the AD-PA-N sensor.
Electrode: SUS304 (1mm thick)
Enclosure: Soft PVC resin mold

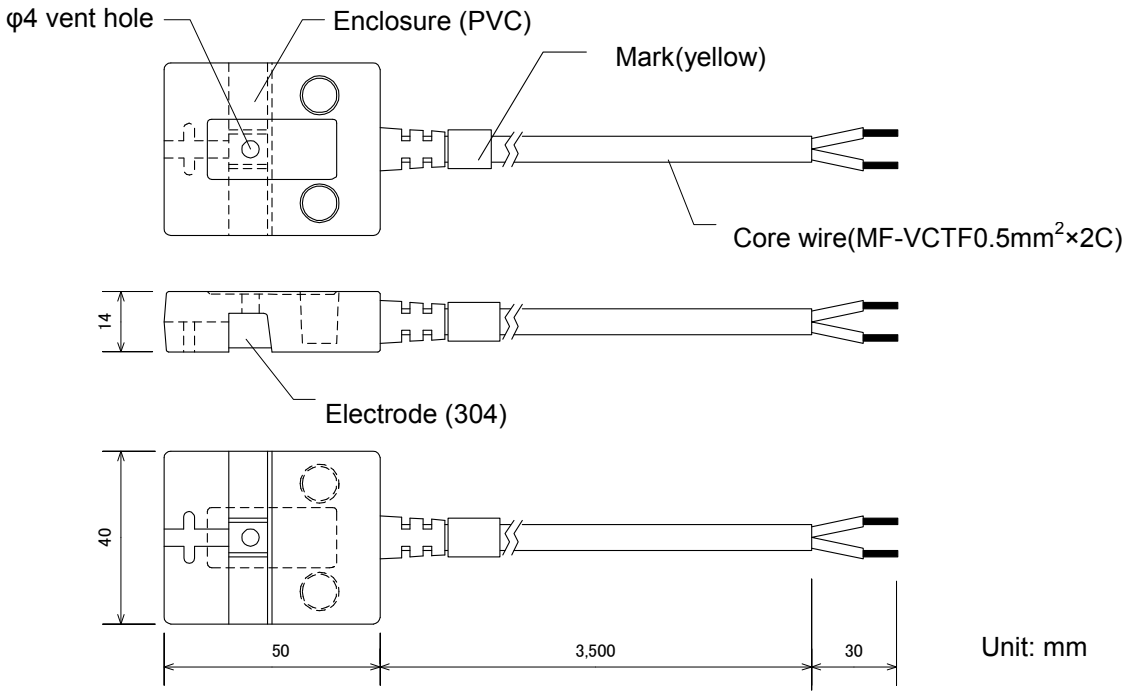



Fig. 1: Schematic Diagram of the AD-PA-N Sensor

## 3. Specifications

Table 1 shows the specifications of AD-PA-N sensor.

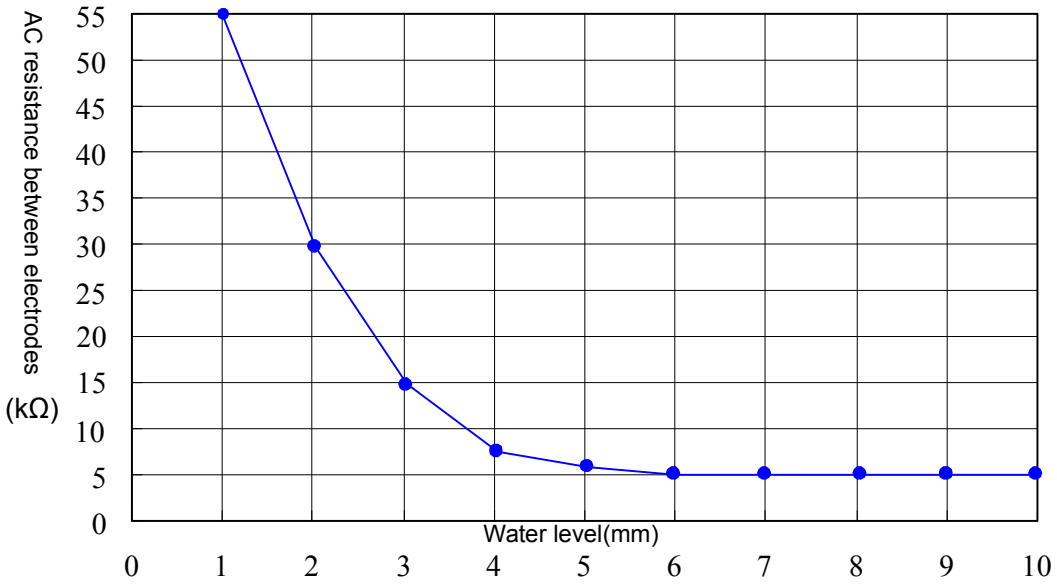
Table 1. Specifications

| Item | Specifications |
|---|---|
| Electrode construction | Material: SUS304 (1mm thick) |
| Resistance between electrodes (AC) | 1MΩ min. |
| Detection characteristic | The resistance between electrodes is below 15 kΩ when the water level is above 10mm.<br>(The sensor is laid inside the water tank, to which 1mm unit water, i.e. local tap water, is added) |
| Humidity resistance | In the high humid condition, the resistance between electrodes is 20kΩ or above provided that there is no moisture condensation. |
| Resetting characteristic | After water leakage detection, the sensor is instantly reset if the moisture is dried. However, if there are conductive and water-repellent pollutants in the penetrating water, wash the electrode first so that it can be reused. |
| Heat resistance | 60℃ max. for continuous operation |
| Weight | Approx. 300g |

## 4. Sensitivity Characteristic

Fig. 2 and Fig. 3 respectively show the sensitivity characteristic and humidity characteristic.

### 4-1 Sensitivity Characteristic (Reference Value)




### 4-2 Humidity Characteristic (Reference Value)

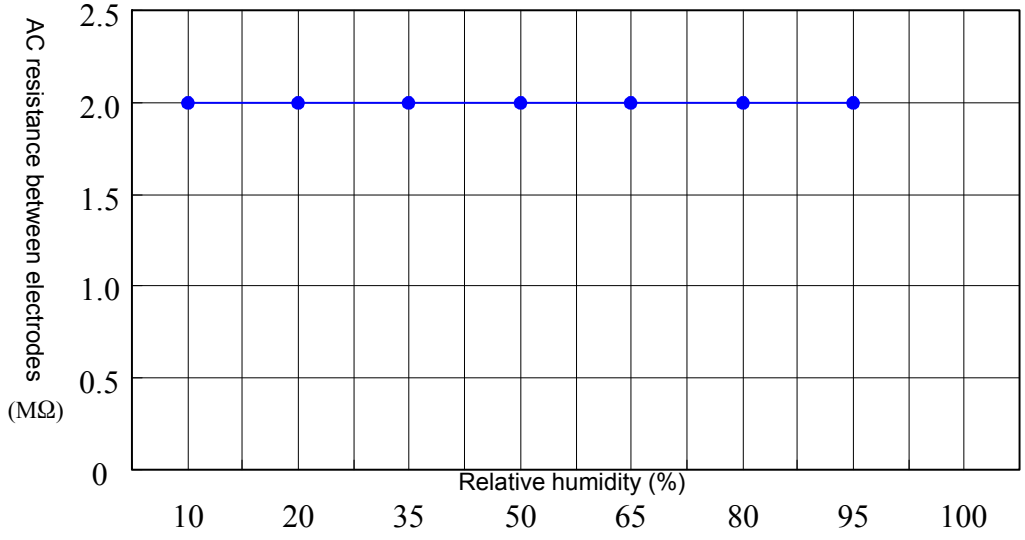



Fig. 3 Humidity Characteristic