

To: _____

Specification Document

Single-circuit Embedded Water Leakage Detector
AD-AS-1BM
(RoHS-directive-compatible)

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**

Erroneous operation of this water leakage detector not complying with the warning labels or the following warnings may lead to fatal accident, serious injury, electric shock, fire, or detector failure.

**Warnings****Strict Prohibitions**

- Never modify or disassemble the detector.
- Allow only persons responsible for handling this product to perform installation work on it or to adjust or inspect it with the outer cover opened.
- Observe ratings of power supply voltage and contact capacity.
* Application of AC 200 V to the AC 100 V terminal will destroy the detector.
- After the detector is installed, do not leave it with the cover open, except for inspection and maintenance purposes.
- Do not touch any internal component with wet hands.
- When performing maintenance on the product, avoid using organic solvent. Use dry wiping rags or a small amount of diluted neutral detergent.

**Checkpoints**

- Check detector supply voltage and rated voltage before installing.
- When installing and electrically connecting the detector, follow the instructions in the instruction manual.
- When inspecting and maintaining the detector, follow the instructions in the instruction manual.
- When using control output contacts, check the contact rated load in the instruction manual.

**Do not install the detector in the following locations!**

- Locations easily accessible to the general public
- Locations close to sources of vibration, organic gas or strong electromagnetic induction.
- Locations with much waste and dust
- Locations where there is possibility of water leakage and temperature and humidity are high

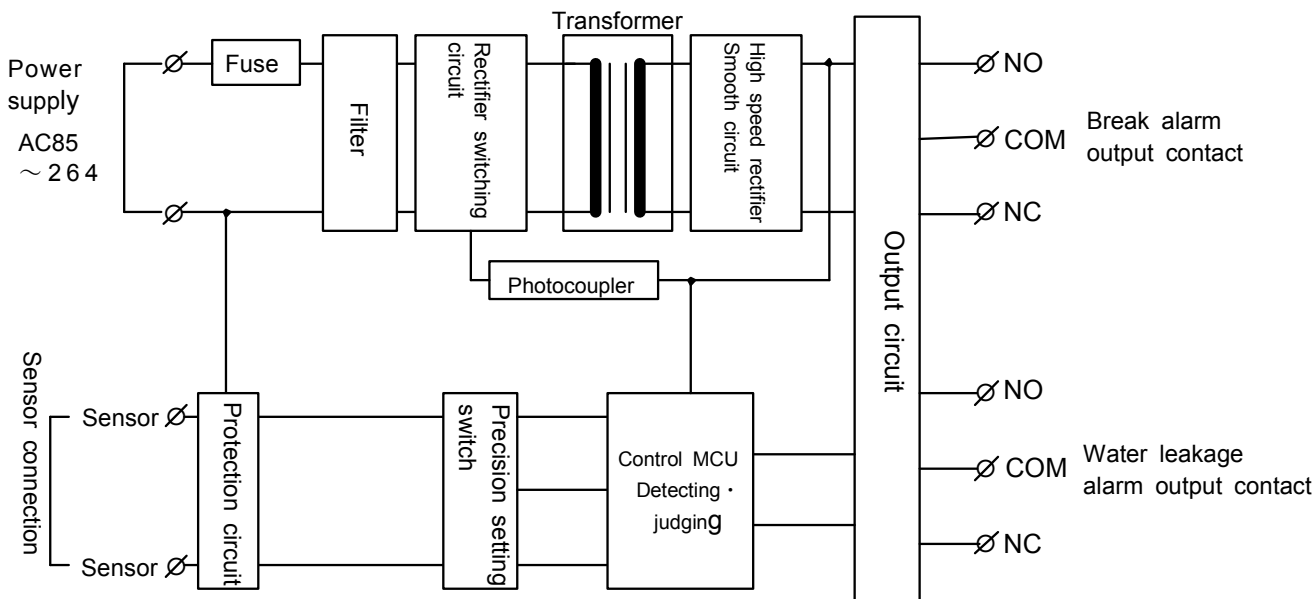
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1. Scope

This specification document is applicable to the single-circuit embedded water-leakage detector, model AD-AS-1BM (RoHS-directive-compatible), developed to protect computer rooms, important facilities, warehouses, valuable documents, and similar objects from unforeseeable water leakage.

2. Overview of the Detector



□When using the water leakage detector manufactured by our company, the end of the sensor is equipped with break detection terminal “ZT-2”.

Fig.1 Detector Configuration

3. Specifications

3-1. Ratings

See Table 1 for the ratings.

Table 1 Ratings

Item	Specifications
Rated voltage	AC 100 V to 240V (for 50 Hz and 60 Hz) Fluctuation range of supply voltage: -15% & +10% of the rated voltage
Power consumption	3VA or less
Control output contact	*Check Subsection 3-3, Control Output Contact Specifications.
Sensor applied voltage	AC 5.3V or less
Working ambient temperature	-10°C to 50°C (no icing)
Working ambient humidity	35%RH to 85%RH (no condensation)

3-2 Performance, Dimensions and Weight

See Table 2 for the parameters of the performance, dimensions and weight.

Table 2 Performance

Item	Specifications
Number of sensor circuits	One
Set sensitivity	L (5k Ω) M (10k Ω) H (14k Ω)
Water leakage detection level	5.0 k Ω ±30% 10.0.0 k Ω ±30% 14.0.0 k Ω ±30%
Water leakage recovery level	5.8 k Ω ±30% 11.5 k Ω ±30% 16.0 k Ω ±30%
Break detection level	30 k Ω ±30%
Break recovery level	25 k Ω ±30%
Surface operator panel LED indication	Power indicator lamp: ON Water leakage alarm indicator: Flash-1, way of flash: Alternating between ON for 0.4s and OFF for 0.1s. Break alarm indicator: Flash-2, way of flash: Alternating between ON for 0.2s and OFF for 0.1s as well as between ON for 0.2s and OFF for 0.5s. (Note) The power indicator and alarm (water leakage/break) indicator adopt LED (orange).
Control output contacts	Contact configuration Water leakage: 1c Break: 1c (*Check Subsection 3-3, Control Output Contact Specifications.)
Withstand voltage	Power supply terminals ~ control output grounding terminals: AC 1,000 V (50/60 Hz) for 1 min
Insulation resistance	Power supply terminals ~ control output grounding terminals: 10M Ω or more (with a DC 500V megameter) for 1 min
Noise-proof property	Power supply noise: ±1000V with a pulse width of 1 μ SEC (with noise simulator) for 1 min (between each phase and the ground terminal) Static charge: ±10 kV applied through a series combination of a 150PF capacitor and a 330 Ω resistor, with results of no break down and no malfunction (Contact discharge to sensor terminals)
Outside dimensions	W 45 x H 72 x D 67 with the deviation of ±1mm (see Attached Drawing 1)
Weight and color	About 115 ±10g, grey

3-3 Control Output Contact Specifications

Refer to Table 3 for control output contacts.

Table 3 Control Output Contact Specifications

Item	Resistive load	Inductive load
Rated load	AC250V 1.5A (max. 6.0A) DC24V 1.5A (max. 6.0A)	AC250V 1.5A (max. 3.0A) DC24V 1.5A (max. 3.0A)

4. Operation Chart

Refer to Fig. 2 for the operation chart.

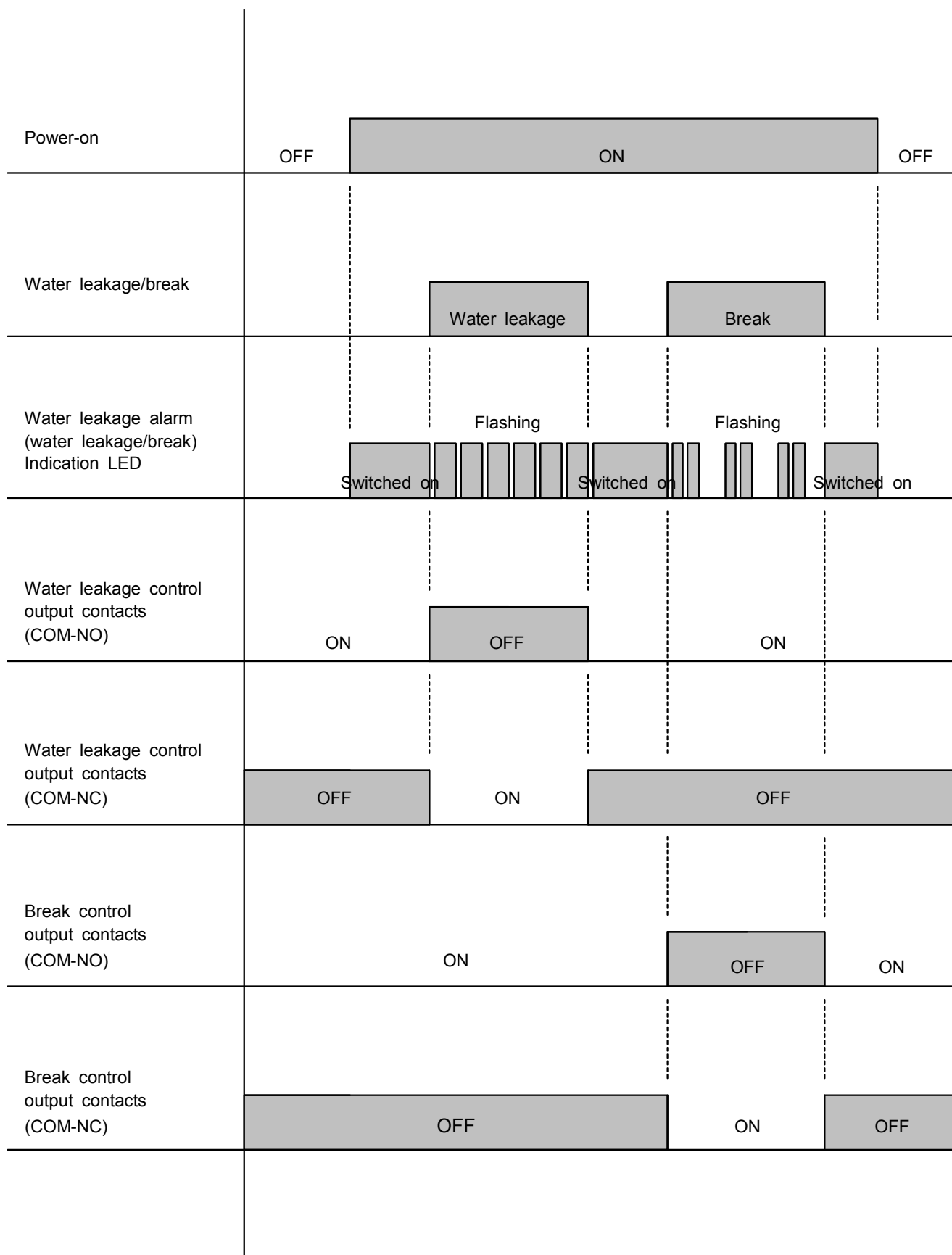
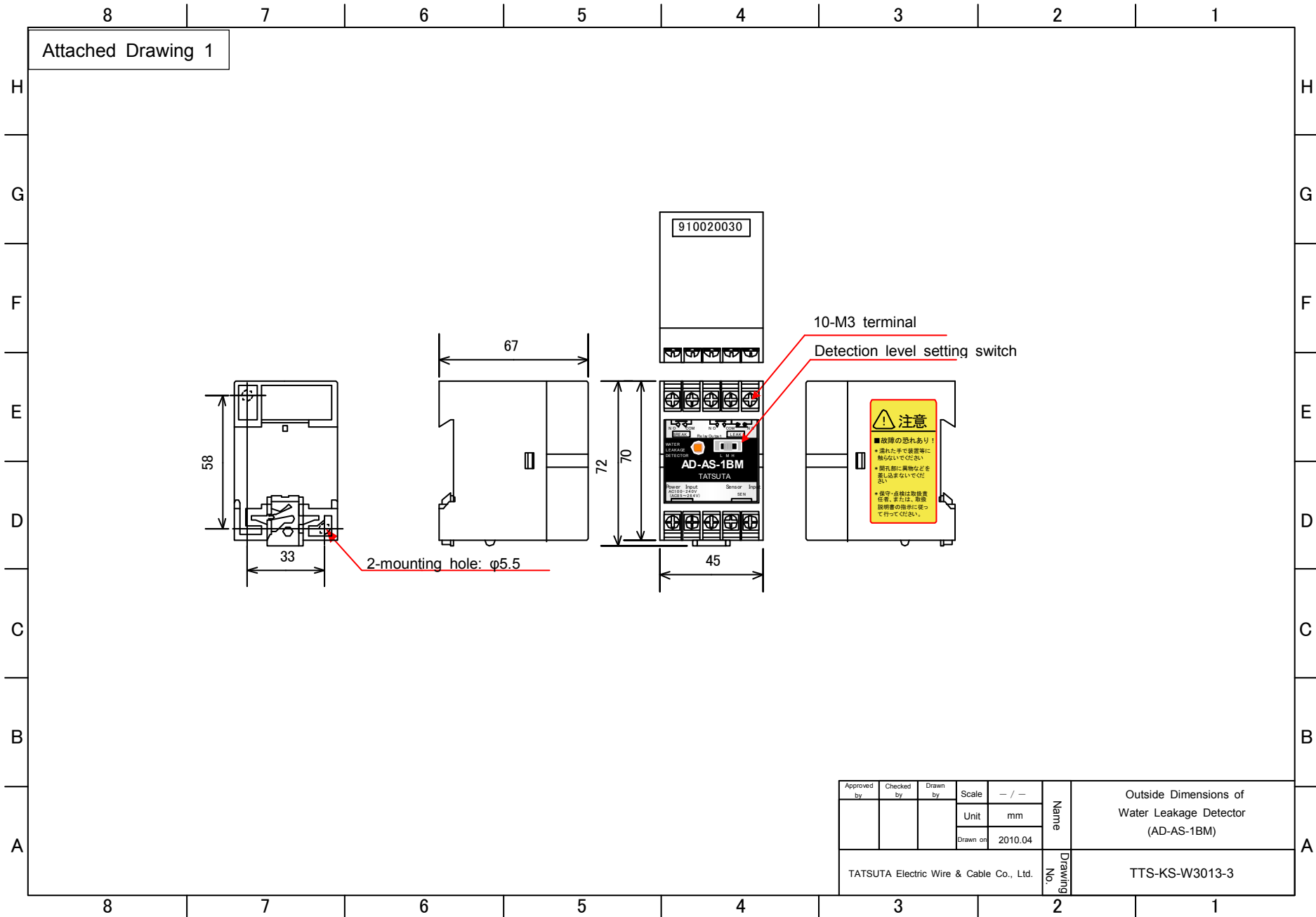


Fig. 2 Operation Chart



Approved by	Checked by	Drawn by	Scale	— / —	Name	Outside Dimensions of Water Leakage Detector (AD-AS-1BM)
			Unit	mm		
			Drawn on	2010.04		
TATSUTA Electric Wire & Cable Co., Ltd.					Drawing No.	TTS-KS-W3013-3