

LIQUID LEAKAGE SENSOR

OPERATION MANUAL

for
RS-3000FAP-BZ
Detection Unit with Buzzer Alarm

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Introduction

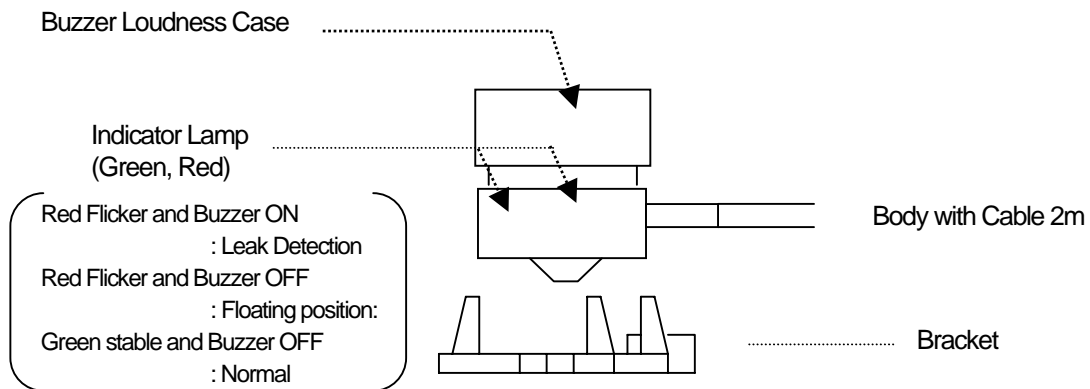
We appreciate that you have purchased our Liquid Leakage Sensor. Before you install or operate it, please read this operation manual thoroughly, and follow the instruction in order to avoid any accidents, malfunction, defects and hazards. Please keep this manual with good care as long as the sensor is being operated.

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1.Designation of Sensor

RS-3000FAP-BZ



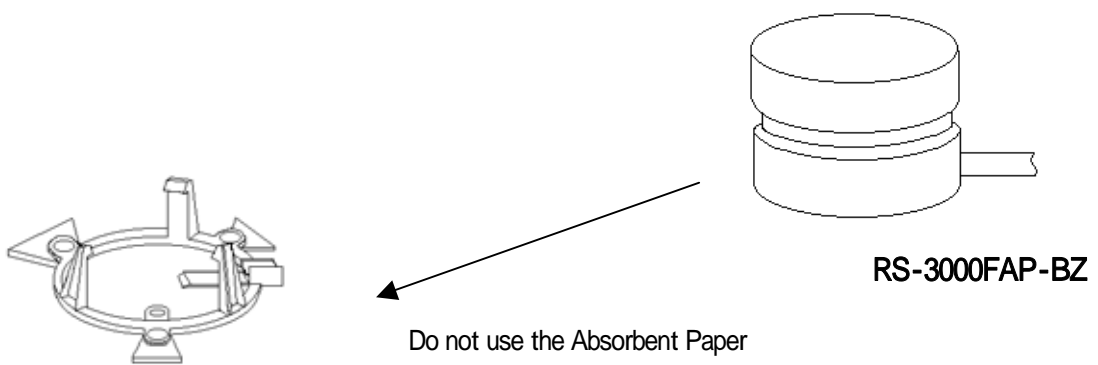
2. Installation

(1) Place the Bracket of the Detection Unit on the surface where you want to detect the leakage, and fix it firmly.

* Use the correct Bracket for the detection Unit.

(2) To mount the Sensor Body, push it into the Bracket completely.

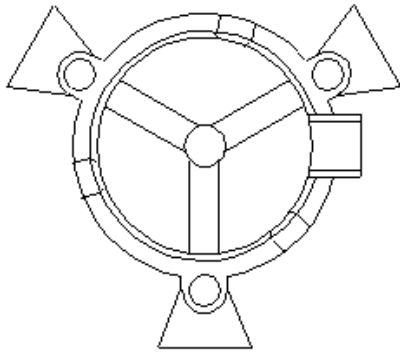
NOTE: Verify that the Body has fixed entirely and it does not hook up at intermediate height in the Bracket.



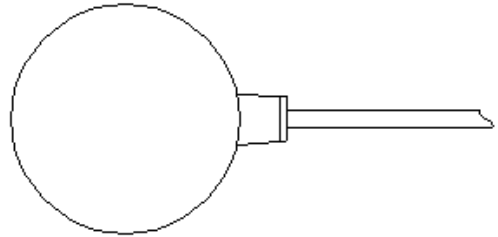
Bracket for Paperless P/N-6720B (Stainless steel Bracket is available with P/N-6716)

NOTE: When the sensor is located at the position, align the direction of the detection unit against the Bracket as described below.

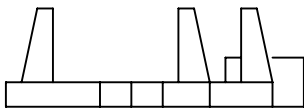
And make sure that the location of the sensor will not have any difficulties for maintenance job, or the direction of the cable heads for no obstructions where the cable may not be damaged by excessive bent or pressure.



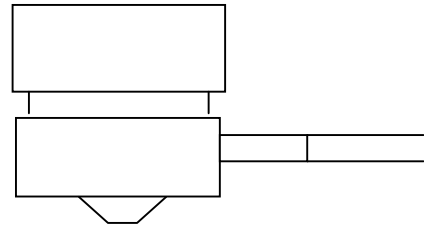
Top View



Side View



Bracket

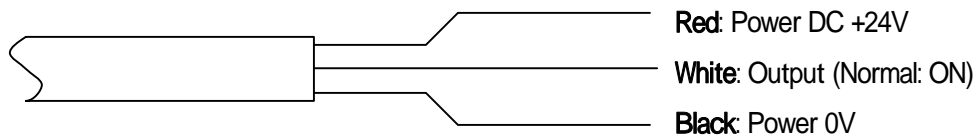


Detection Unit

3. Wiring Instruction

(1) The Detection Unit has a 3-wire sheath cable, 2 meters long.

Each wire will be connected as below.



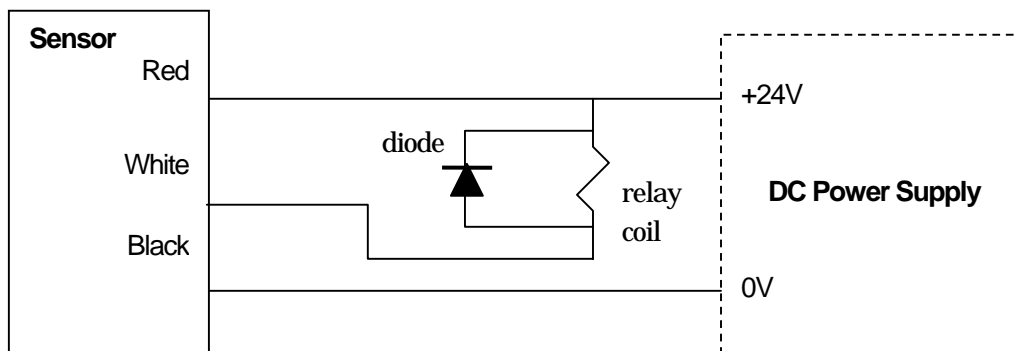
(2) Connect the red wire (Positive pole) and the black wire (Negative pole) to the power source correctly. White wire is for an open collector output.

NOTE: Do not miswire with DC power source each other.

NOTE: Use the sensor unit with the voltages of DC24V.

(3) The output capacity is limited up to 50mA maximum rating. Excessive rating may damage the output circuit.

NOTE: When an inductive load may be applied, the protective treatment for the back electromotive is recommended. The following sample chart shows a hint to add a protective diode (F14C equivalent) to a relay coil load



NOTE: To avoid short circuit between each wire after the power is supplied, otherwise undesirable damage may occur.

4. Operation

WARNING: The following procedure must be implemented after the wiring work has done and prior to the operation. Each specific name of the Product will be referred in the previous section of "1. Designation of Sensor".

- (1) After required installation and the wiring have been completed, turn on the power. At this moment, Green LED on the Sensor will light while the other LED is off. (The output comes to ON status.)
- (2) Then, pour a drip of water into the close area of the Sensor for the test. Upon the water penetrates into the detection area of the Sensor, the Red LED of the Sensor will start to flick hence Green LED comes out. At the same time, you can assure that the buzzer start to sound. The output of the Sensor will become OFF simultaneously.
- (3) After these functions are verified, wipe off the water from the Sensor and the Bracket completely, and place the Sensor in the Bracket again.

Distinction of the abnormal status

- (1) If both of Green and Red LED of the Sensor will not put on, wrong wiring or the damage of the unit by the short circuit of the output that causes the overload may be possible. Stop to use the unit, and check with the wiring and the load status.
- (2) If Green LED may light though the test water penetrates into the detecting area, the Sensor may be supposed it has been damaged. Stop using the unit immediately, and consult the supplying vendor or the factory.
- (3) If the incorrect output may be observed though the LED functions correctly, the unit may be damaged by wrong wiring or overloaded output at the output transistor inside. Check the wiring and the load.
- (4) When the Detecting Unit is not placed far into the Bracket as its position, the Red LED will flicker and output turns OFF status. Check the location of the Detecting unit with its Bracket again, and adjust it if placement is wrong. At this placement error, the Buzzer will not sound.

NOTE: The RS-3000 series sensors utilize the optical devices, and the highly intensive light from outwards (over 1,000 luxes) may disable the function of the Sensor. The normal intensity like the room light may not affects critically; however for safety, you are recommended to avoid any devices which emit the intensive light from the Detection Unit neighborhood, or to shade the light by means of anything applicable.

5. Reset Procedure after Alarm Clearance

WARNING : *The liquid may contain hazardous acids, alkalis, or chemical substances. The following procedure has to be done by a well-trained person who is knowledgeable for that liquid.*

NOTE: *The protection gloves must be worn.*

NOTE: *In case of handling any chemicals that are obliged to wear the protection goggles, masks, etc. by regulation, must follow the regulation.*

- (1) Turn off the power..
- (2) Remove the Detection Unit from the Bracket, and wipe the liquid off.
- (3) Remove the wet Absorbent Paper and wipe the Bracket and surroundings. Replace with a new paper then reset to follow the process of Installation of the Detection Unit.
- (4) If the absorbent paper is not applied, wipe the unit, the Bracket and the surroundings. Then reset to follow the process of installation section in this manual.
- (5) Turn on the power again then the reset is completed..
- (6) Check the function of the sensors with the steps of the Section 4.1 to 4.2. Operation
- (7) Achieve periodical maintenance check of the sensor.

NOTE: *The periodical check is recommended at least annually, in accordance with your factory direction.*

WARNING: *This sensor is not explosion proof. Do not use in the area where explosion proof is specified.*

6. Specification

Model		RS-3000FAP-BZ
Supply Voltage		DC 24V \pm 10%
Current		30mA below
Indication of LED Buzzer Alarm		Leakage : Red Flicker, Buzzer ON Floating position: Red Flicker, Buzzer OFF, Normal : Green Stable, Buzzer OFF
Output		NPN open collector, 50mA max 1 Output Line Normal Status: ON,
Ambient Temp.		- 10 ~ 60
Material	Case	PFA
	Cable	FEP, 3-wire sheath
	Lamp	Epoxy (embedded)
Water Protect		Sealed, IP 67 equivalent (IEC)
Weight		Approx 55g
Absorbent Paper		Not Required
Bracket		P/N-6720B (PVC) P/N-6716 (S.S.)