Tilt Switch
TC-1
TC-3

Leak Type Level Switch

KEL-2



Level measurement with reliable operation!

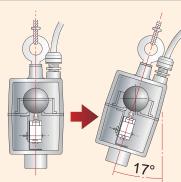




# **■** Principle of Operation

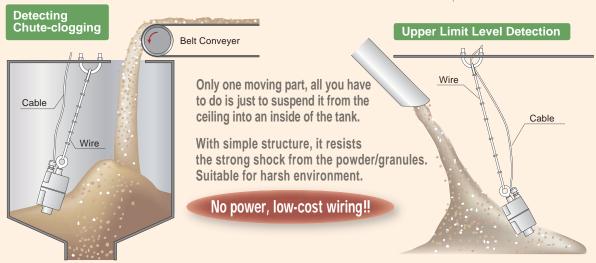
When the unit suspended from the ceiling of a tank tilts due to the repose angle of the measured material, the switch detects its tilt, by which the contact is switched.

When there is no material, the output contact gets back to the original state.



It houses steel ball inside and when the body gets upright, the steel ball centers itself on a microswitch.

When the body is tilted at 17° or more, the steel ball rolls off to deactivate the microswitch and switch the contact.



# ■ TC-1 Specifications

Weight: About 11 kg (Cast-iron)

Output Contact : SPDT x1 Contact Capacity : 250VAC 10A

Allowable Temperature: -10 to +120°C (No Condensation or Freez required)

**Enclosure Rating**: IP56

**Conduit Connection**: 1/4 - 3/8 inch cable, 1/2 inch screw

## **■**TC-3 Specifications

Weight: About 1.3 kg (Aluminum casting)

Output Contact : SPDT x1 Contact Capacity : 250VAC 10A

Allowable Temperature : -10 to +80°C (No Condensation or Freez required)

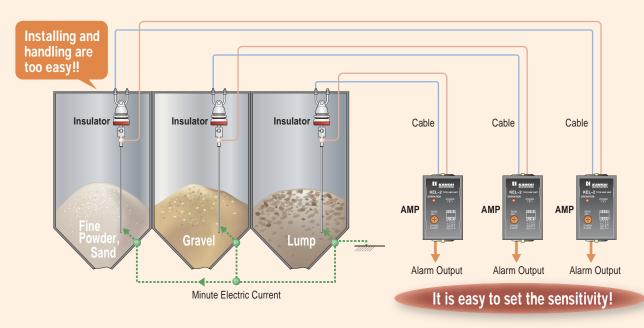
**Enclosure Rating**: IP56

**Conduit Connection**: 1/4 – 3/8 inch cable, 1/2 inch screw



# **■**Principle of Operation

When the material, which always contains some moisture, touches the electrode, then the resistance decreases between the electrode and wall of the metal tank. It detects the change of resistance and provide the output. When there is no material, the output contact gets back to the original state.



# **■KEL-2 Specifications**

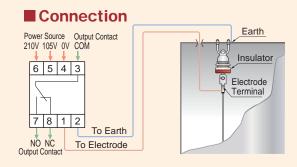
Power Source: 105/210VAC±10% 50/60Hz

Output Contact: SPDT x1

Contact Capacity: AC250V 5A, DC30V 5A (Resistance load)

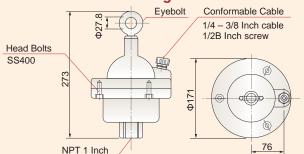
Allowable Temperature: 0 to +50°C (No Condensation or Freez required)

Sensitivity: Max.about  $10M\Omega$  – Min.about  $30k\Omega$ Sensitivity Setting: 16 Steps adjustable between Max. & Min. Indication Light: Operation Indicating Light (Light on detection)

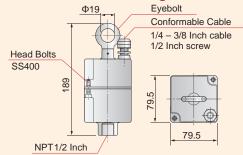


#### **Tilt Switch**

#### ■ TC-1 Outline Drawing



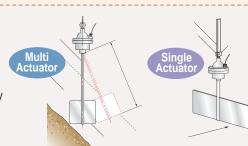
# ■ TC-3 Outline Drawing



# Option

#### Sensitivity upgrade by actuator

You can upgrade the sensitivity of the tilt switch by mounting 2 or 4 paddle actuators.

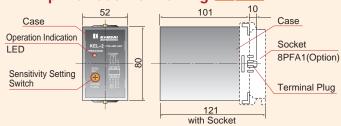


The actuators are fixed on the tilt switch body with by NPT1/2 or NPT1.

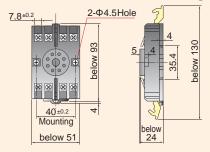
The dimensions of the actuators and the paddle forms are varied by the nature of materials, the mounting position and so on.

### Leak Type Level Switch

### ■ Amplifier Outline Drawing Amplifier



## ■ Socket (8PFA1) Outline Drawing



Float Switch

• Float Type Level Indicator

Zirconia Oxygen Analyzer

Laser Type Level Indicator

• RADAR Type Level Indicator

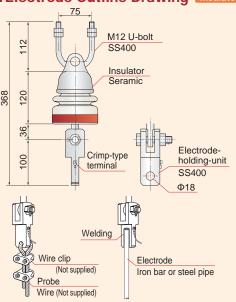
• Dust Monitor System

• Ultrasonic Flow meter

• Ultrasonic Type Level Indicator

• Equipments For Conveyor Lines

# **■ Electrode Outline Drawing Insulator**



#### Line of business

- Vibration Type Level Switch Swing Type Level Switch
- Acoustic Level Switch
- Capacitance Type Level Switch
- Capacitive Proximity Sensor
- Capacitance Type Level Indicator
- Diaphragm Type Level Switch
- Tilt Switch
- Leak Type Level Switch
- · Microwave Switch
- Sounding Bob Type Level Indicator
- Flow Switch
- \*Please be sure to read USER'S GUIDE, Installation & Operation Instructions before using the instrument
- \*The specifications herein may be subject to change without advance notice

General Manufacturer of Level Controllers for Powder, Granules, and Liquid

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