

**CAPACITANCE TYPE LEVEL SWITCH**  
**KEC-77P SERIES**



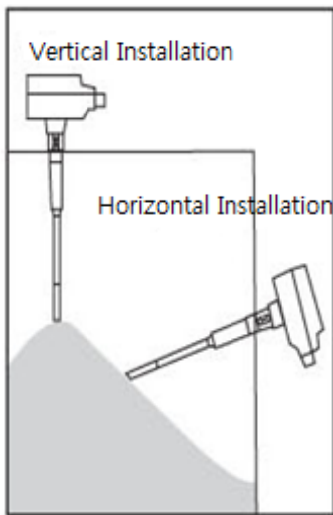
**LEADER OF CONTROL**

# Capacitance Type Level Switch KEC-77P Series

## General

KOSMO E&T KEC-77P Series Level is a capacitance type level switch which is used to measure a variety of liquids as well as solids. Level and alarm is output as a relay contact by AC power supply AC 110V or 220V. KEC-77P Series Level is possible to use in various industrial fields as well as food industry field using the cement, glass, limestone, etc.

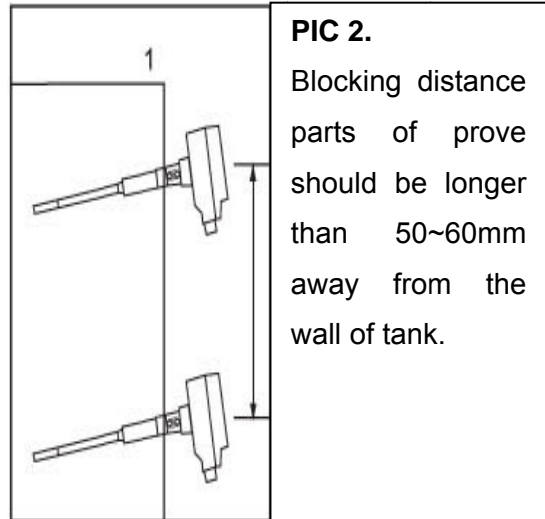
## Installation Direction (Important matter considered when installing)



**PIC 1.**

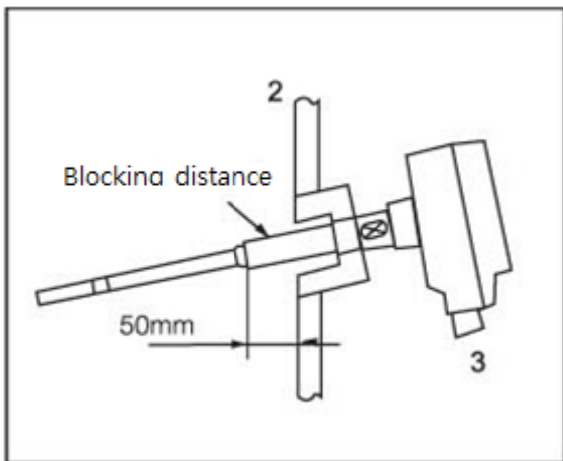
Refer to following distances, in case of installing two or more probes in one tank.

(More than  
400~500mm)



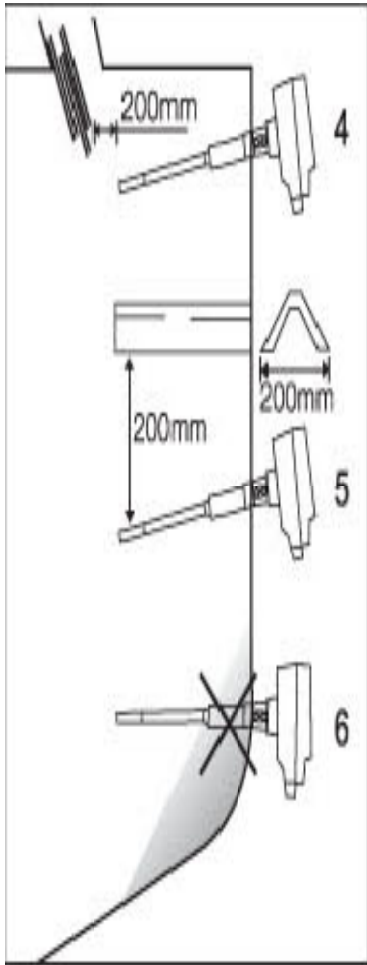
**PIC 2.**

Blocking distance parts of probe should be longer than 50~60mm away from the wall of tank.



**PIC 3.**

When KEC-77P Series Level is installed in the side of the tank, cable gland must be pointed downwards not to touch water.



**PIC 4.**

When KEC-77P Series Level is installed at the inlet of the materials, measurement probe should be separated over 200mm from the flow.

**PIC 5.**

Especially when KEC-77P Series Level is installed in the lower part of tank, Cover must be installed to protect the probe from the falling fluids shock.

**PIC 6.**

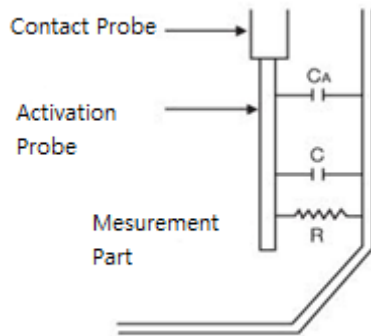
KEC-77P Series Level should not be installed not to cover blocking distance part of the probe.

## Feature

- Even in power failure, KEC-77P Series Level operates always safely adopting fail-safe output.
- Contact capacity is **AC 250V 5A**.
- ON delay and OFF delay can be selected as an output and delay period can be set from 0 to 30 seconds.
- It is possible to check the operating status in the field from flashing LED.
- It is easy to install and operate.

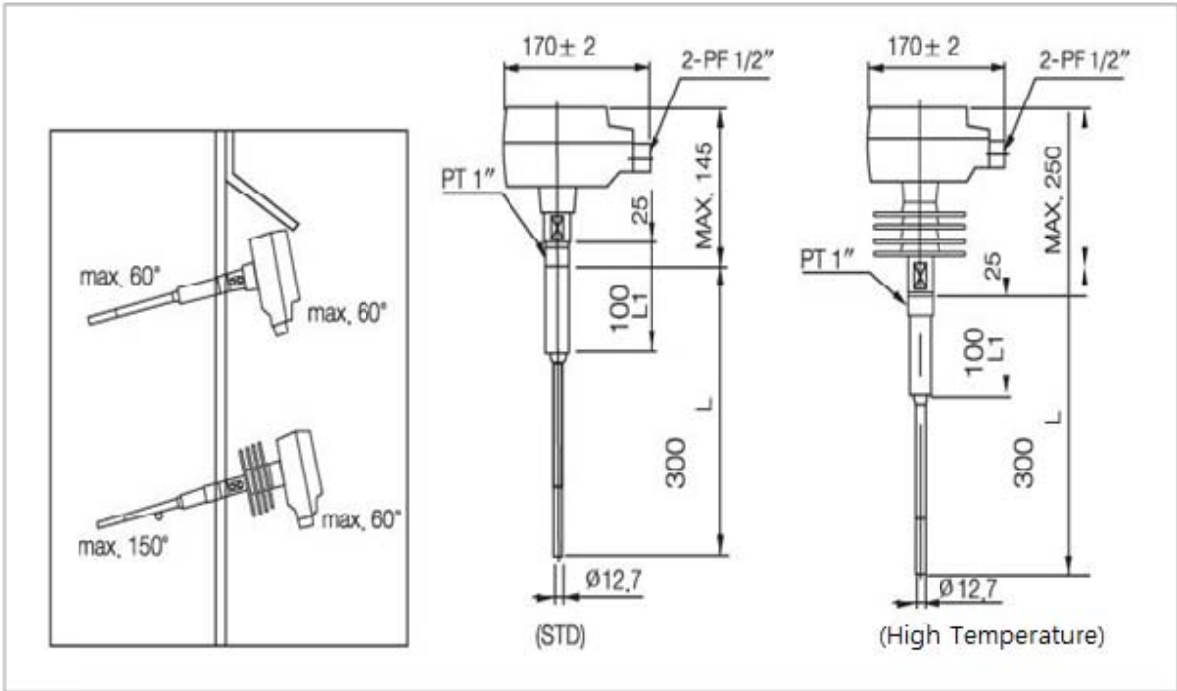
## Operation principle

As below picture, capacitance is proportional to the area and inversely proportional to the distance. Also, all of the materials have their own capacitance. Sensor is used in a variety of uses by detecting capacitance and converting into the electronic signal. In case of frequent change of ON, OFF to protect an electric contact, it must be needed for the slowdown of the sensitivity by using the time relay.



## Specifications

<b>Power supply</b>	AC 110V / 220V , 50/60 HZ
<b>Output</b>	1SPDT / 250V 5A
<b>Consumption Power</b>	Approx. 3VA
<b>Sensitivity</b>	Max, 1 pF
<b>Adjustable Range</b>	5~75pF
<b>Fail safe</b>	HIGH or LOW
<b>Response Velocity</b>	Approx. 5ms
<b>Measuring Frequency</b>	1.6 MHz
<b>Operating Resistance</b>	Less than 5
<b>Operation Pressure</b>	-0.6 ~ 10kg / (-0.058~0.98 MPa)
<b>Process Temperature</b>	-20 ~ +80 (STD) -20+150
<b>Ambient Temperature</b>	-20 ~ +60
<b>Permissible load</b>	30N m(3.04 kgf m)
<b>Enclosure</b>	Weather Proof



**\* Wet Part Material**

- S1 : SUS 304 (ROD + PTFE + Partial Insulation)
- S2 : SUS 316 (ROD + PTFE + Partial Insulation)
- S3 : ROD + PTFE + sensing electrode all-Coated  
(For incorrodible Liquid)
- S4 : ROD + PRFE + Sensing Electrode + Frange  
(For corrodible Liquid)

**\* Enclosure**

- 0: Weather Proof

**Order Codes**

**\* Pressure Temperature**

- 0 : 10kg/cm<sup>2</sup> , 80°C
- 1: 10kg/cm<sup>2</sup> , 180°C
- S : Special Version

**\* Mounting Size & Material**

- 1 : Screw Size PT 1" & SUS 304
- 2 : Screw Size PT 1" & SUS 316
- 3 : Flange Size JIS 25A 10K RF & SUS 304
- 4 : Flange Size JIS 50A 10K RF & SUS 304
- 5 : Special Version

**\* Head Material**

- A : ADC 12
- S : Special Version

**\* Measuring Lengh**

- 1: ROD Type Per Additional 100mm
- S : Special Version

**\* Output Signal**

- A: 1-SPDT

**\* Conduit Conn.**

- 1: PF 1/2
- S: Special Version

KEC - 77P

