



# Electrode Type Level Switch

Model : SEC/SH



**SeoJin Instech Co., Ltd.**

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# SEC/SH

## Electrode Type Level Switch

### Introduction

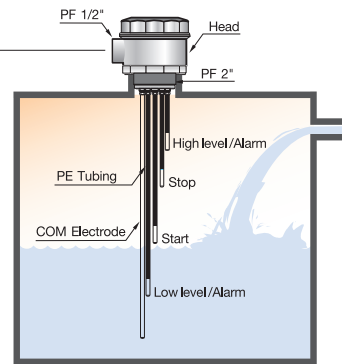
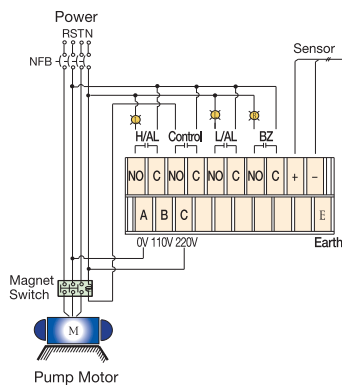
This level sensor and controller is designed to detect the liquid level by electrical conductivity.

### Operation

Low voltage is applied across the electrodes of different lengths. When the liquid level rises, electricity flows through the liquid and the controller is activated.

### Features

- Applicable to municipal water and storage water tanks.
- It is designed to keep the water vapor out of the holder to prevent corrosion and malfunction.
- The single-chip CPU design enables selection of highly reliable multiple programs possible.
- The PCB can be removed from the terminal block without disconnecting the wires.(2-wire type)



### Specifications

#### ► Switch

DESCRIPTION	Type	Multi - Wire	2 - Wire
Wire Connection		3 - Wire ~ 8 - Wire	2 - Wire
Loop Impedance		500Ω(15V DC)	700Ω(20V AC)
Application Temperature Limits		Head : -10 ~ +80°C, Electrode : -10 ~ +80°C	
Operation Pressure		2kgf /cm <sup>2</sup>	
Measuring Range		5m Max. (20m for Wire -Type)	
Material		Head : ABS Resin, ADC Electrode : 304SS , 316LSS, Teflon Wire	

#### ► Level Controller

DESCRIPTION	Type	Multi-Wire	2 - Wire
Switch(Output Voltage)	SEC-3U 12V AC	15V DC	20V AC
	SQ-2U 12V DC		
Contact Rating		250V AC, 5A	
Power Supply	110 or 220V AC±10%, 50/60Hz	110/220V AC±10%, 50/60Hz	
Ambient Temperature		-10 ~ +60°C	
Control Output	SEC-3U : Control (Supply) SQ- 2U : Control (Drain)	SEC- 5U -5W : L / AL, Control, H/ AL SMA-4P-5W : L L , L , H , HH (A L 1 , A L 2 , A L 3 , A L 4)	SEC- 5U - 2W : Bz, L / AL, Control, H/ AL SLA -4P -E : LL, L, H, HH (Bz, C1, C2, H/ AL)
Fuse Rating		250V AC, 0.25A	
Material	Base Plate : ABS+Glass Cover : ABS	Unburnable ABS	
Mounting Method	Rack / Wall Mount	Wall Mount	
Dimensions (mm)	49(W)×60(H)×69(D)	87(W)×156(H)×68.2(D)	

## Overall Dimensions

SH - 1	SH - 3	SH - 4
<p><b>A, B TYPE</b></p> <p><b>C, (D) TYPE</b></p>		
SH - 5	SH - 7	SH - 6**E

## Precaution

- Use a wire-type where the ceiling level is low.
- Do not install the switch close to the water inlet.  
The position of High Alarm /Stop must be set lower than that of overflow.
- Do not use this model for high temperature and/or high pressure tanks.
- This model is not intended for use in non-conducting or high viscosity liquids. It should not be used for oils and chemicals.
- Do not apply it to condensing water tanks or vapor generating water tanks.
- When the electrodes are assembled at the job site, remove the tubing completely from common electrode E1.  
Peel back at least 2cm from the end for the other electrodes.
- Electrodes must be cleaned periodically.

## Ordering Information

### ■ Electrode Type Level Switch

SH- 5 B 1 A 2 A 1

#### HEAD & POLES

2 = ABS & 2 Poles  
 3 = ABS & 3 Poles  
 4 = ABS & 4 Poles  
 5 = ABS & 5 Poles  
 6 = ADC & 4 Poles  
 7 = ADC & 5 Poles  
 8 = ADC & 6 Poles  
 9 = ADC & 7 Poles  
 10 = ADC & 8 Poles  
 OP = etc.

#### TYPE OF WIRE CONNECTION

A = Multi Wire  
 B = 2 Wire (SH-5S)

#### HEAD TYPE

1 = ABS Standard Holder  
 2 = ADC Special Holder  
 ※ ADC Head (Multi wire type only)

#### CONDUIT CONNECTION

A = PF 1/2" (Std.)      E = NPT1/2"  
 B = PT 1/2"              F = NPT3/4"  
 C = PF 3/4"              OP = etc.  
 D = PT 3/4"

#### ELECTRODE CONNECTORS

1 = None  
 2 = Brass/Ni plated  
 3 = 304SS  
 4 = 316LSS

#### WET PART MATERIAL

A = 304SS P.E Tubing 2M (Std.)  
 B = 316LSS P.E Tubing 2M  
 C = 304SS P.T.F.E Tubing 2M  
 D = 316LSS P.T.F.E Tubing 2M  
 E = Wire Electrode Teflon 3.5 SQ (With weight)  
 OP = etc.

#### MOUNTING SIZE

1 = PF 2" ABS (Std.)  
 2 = PF 2" ABS with JIS 10K 80A FF HDPE Flange  
 3 = PF 2" ABS with JIS 10K 80A FF PVC Flange  
 4 = PF 2" ABS with JIS 10K 100A FF HDPE Flange  
 5 = PF 2" ABS with JIS 10K 100A FF PVC Flange  
 OP = etc.

### ■ Special Ass'y Model (Overflow Detector)

SH-1S A 1 A 1 A

#### OPERATING TEMP' & PRESSURE

A = Max. 60°C / Max. 2 kgf/cm<sup>2</sup>  
 B = Max. 80°C / Max. 10 kgf/cm<sup>2</sup>  
 C = Max. 260°C / Max. 50 kgf/cm<sup>2</sup>  
 D = Max. 560°C / Max. 300 kgf/cm<sup>2</sup>

#### MOUNTING SIZE

1 = PT 1" (Std.)  
 OP = etc.

#### INSERTION LENGTH

A = 50 ~ 200mm (A, B Type)  
 B = 200 ~ 500mm (A, B Type)  
 C = 47.5mm (C Type Only)  
 D = 70mm (D Type Only)

#### CONDUIT CONNECTION

A = PF 1/2" (Std.)  
 B = PT 1/2"  
 C = PF 3/4"  
 D = PT 3/4"  
 E = NPT1/2"  
 F = NPT3/4"  
 OP = etc.

#### ENCLOSURE

1 = Weather Proof (ADC-12)

### ■ Special Ass'y Model : SH-1S (Applicable to over flow detection type)

**Wet Part Material** : 304SS, 316LSS & UHMW-PE (Min.50mm)

■ When placing an order, selected ordering number should be indicated on the purchase order sheet.

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■ Specifications subject to change without notice