



## SMART ENGINEERING SOLUTION

### GENERAL CATALOG

**Model: LS-L-71 Series**

**Quick Float Type**

**Level Switch**

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## Introduction

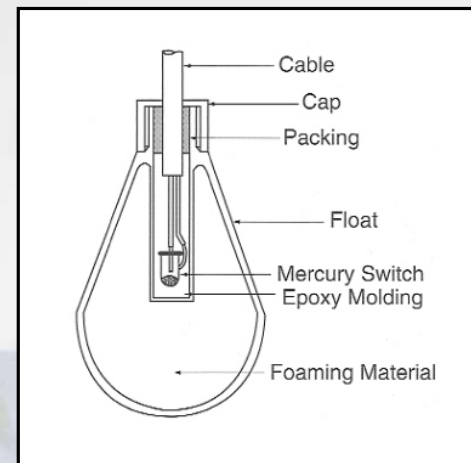
This is the quick float type level switch which is designed for being used to control liquid level in the industrial fields as well as in the water treatment plant. Especially in the waste water treatment plant, it's used not only to control liquid level but also to obtain the automatic working of a pump.

## Features

- Since there is no metal exposure, corrosion-resistant and usable for a long time.
- Simple construction and usable in waste water or high viscosity liquids.
- Simple design.

## Operating principle

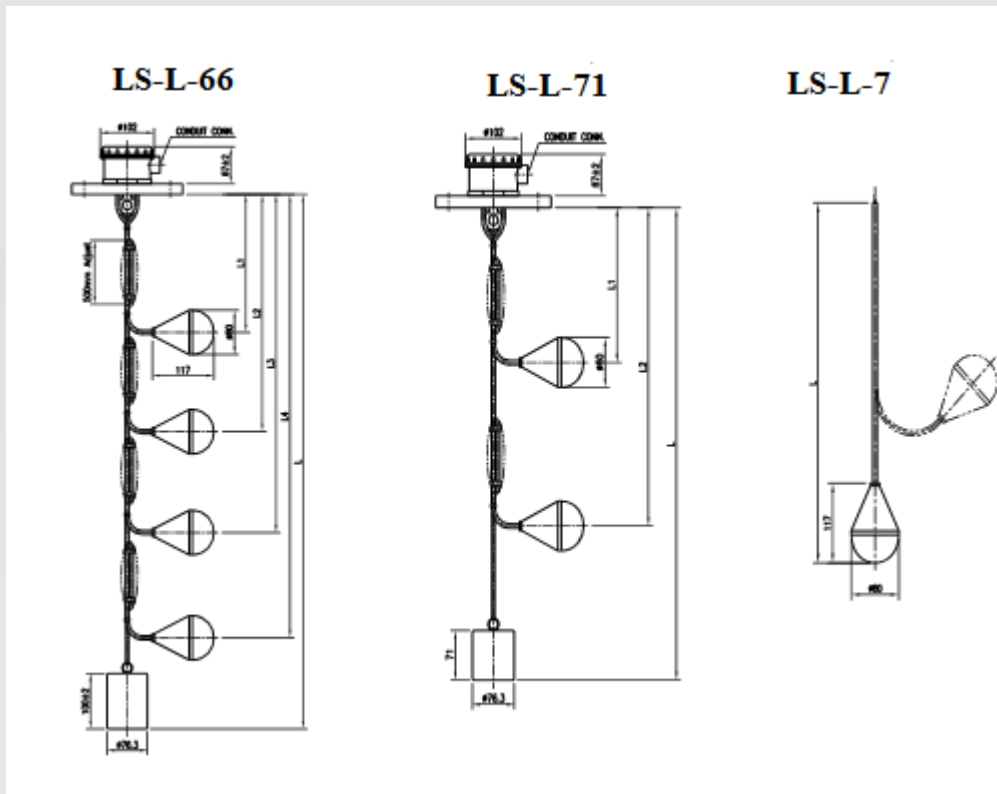
Float rises by the buoyancy is occurred as liquid level increases. If the built-in mercury switch is at specific operating point, contact becomes on (in case of contact A) or off (in case of contact B). If the liquid level gets down, contact moves contrary to above-mentioned movements



## Specification

Model		LS-L-66	LS-L-71	LS-L-7
Installation		Top Flange		Top
Flange Size		KS(JIS) 100A 10K FF		
Enclosure		Weather Proof (IP54)		None
Switch		Mercury S/W		
Contact Type & Rating		SPST & AC 110V 1A Max.		
Material	Housing	ABS		None
	Flange	PVC / SUS		None
	Guide Wire	PP		None
	<sup>*1</sup> Cable	NBR	NBR / Silicone / Polyurethane	
	<sup>*2</sup> Float	ABS	ABS / SUS	
Float Size		Ø60 mm	Ø80(ABS) Ø94(SUS)	Ø80 Ø94(SUS)
Length		STD. 6 m		
<b>Remark</b>				
<sup>*1</sup> Cable    Silicone (Temp. : 60 ℃~180 ℃) Polyurethane (Resistance for Acid)				
<sup>*2</sup> Float    SUS 316 (Temp. : 60 ℃~180 ℃)				

## Dimensions



## Installation steps

- Let the WEIGHT loosen by inserting from the upper part of tank.
- Insert FLOAT with GUIDE WIRE .
- Insert volts in the hole of FLANGE and tighten them properly by using spanner.

## Connection

- Loosen the screw to open the case.
- Bring out the Electrical Spring Connector which is inside and keep it.
- Pull in the Single Cable from the outside of cable gland to inside.
- Twist it several times after connecting the cable of required contact, put the Electrical Spring Connector on it, and press it by using tools. (On the bottom of flange and inside, there are stamped in order like E1, E2, E3 etc., up to the number of floats.)
- After connection, put the lid on and tighten screws on the upper part.

### Change of the operating position

- Loosen screws on flange to pull the fluids from the tank.
- Open the case.
- Loosen cable gland tightened in cable.
- Carefully cut the cable tie tied up in cable not to damage cable or nylon wire.
- Pull up the cable remaining required length under the flange.
- Tighten the cable gland to be sealed with the inside of the tank.
- Cut the extra cable in proper length and connect it. (Not to connect the Electrical Spring Connector additionally.)
- Tie the cable tie with nylon wire of the Weight. (If tied up too close to the Float, the Float will not operate. So tie it about 100 mm away from the Float.)

### Check the movement

- Check the movement under the condition that the Float is loosened vertically.
- Open the lid to select the cable to be checked. (There are stamped in order like E1, E2, E3 ... etc., from the upper part up to the number of Float.)
- Position the selector switch of tester in Q and assign each line to both terminals.
- If the vertically loosened float is inclined at about over  $90^\circ$  by hand, the arrow of tester indicates  $0\Omega$ : Contact is in normal condition (In case of contact A). In case of contact B, the normal condition is when  $\infty$  is indicated at  $0\Omega$ .

## Ordering Code

Model 66: Model LS-L-66

71: Model LS-L-71

7: Model LS-L-7

Wet Part Material 1: ABS (Float Size =  $\phi 80$  mm)

S1: SUS 304

S2: SUS 316

Enclosure O: Weather Proof

Pressure Temperature 0: atm, 60°C

S: Special version

### Mounting Size & Material

1. Flange Size JIS 80A 10K FF (6t)
  2. Flange Size JIS 80A 10K RF
  3. Flange Size JIS 80A 10K FF
  4. Flange Size 4"ANSI 150# RF
  5. Flange Size 4"ANSI 150# FF
- S : Special Version

Head Material A: ABS

S: Special Version

Cable material 1.NRB 2.Polyurethane 3.Silicone

Output Signal A: 1-SPST or 2-SPST

B: 3-SPST

C: 4-SPST

S: AC 110 V 1 A / 1-SPDT Contact

Conduit Conn. 1: PF 3/4"

S: Special

### Combination Unit

- A: HLC-200 (H/L Control)  
B: HLC-G1 (H/L Control, LL Alarm)  
C: HLC-G2 (H/L Control, HH Alarm)  
D : HLC-300 (H/L Control, HH/LLAlarm)

**LS- L-75 S1 E A0 1 A 2 A 1 A**

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