

# FINE AUTOMATION

## Cable Float Switch

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### DESCRIPTION

The Float Switches are made of molded, chemical resistant polypropylene, that it was serviceable, low-cost, and specially designed to solve the long distance, multi-points level detection, liquid with pump or granule instances. Certainly, it's suitable for common liquid also.

### PRINCIPLE

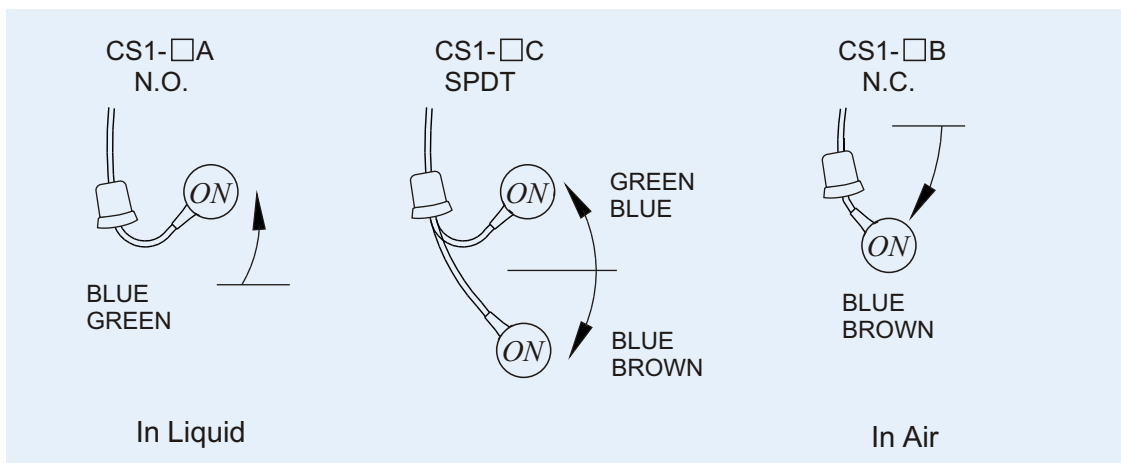
CS1 Type float switch make use of micro switch as contact component. The switch will have ON or OFF contact signal output when the angle is larger than 28

CF Type float switch make use of mercury switch as contact component. When liquid lift up to contact float, the float will have variable angles. The switch will have ON or OFF contact signal output when the angle is larger than 10

### SPECIFICATION

Type	CS1-R/CS2-R A/B/C	CS2-P A/B/C	CF-S A/B/C
Float Material	Polypropylene	Polypropylene	SUS304
Cable Specification	Neoprene Cable 1mm <sup>2</sup> x3C or 2C	PVC(VCT) Cable 1mm <sup>2</sup> x3C or 2C	Silicon Cable 0.75mm <sup>2</sup> x3C or 2C
Contact Rating	10A/250VAC, 15A/250VAC		2A/250VAC
Contact Form	1A, 1B or 1C		
Operating Temp.	-10 C~80 C	0 C~60 C	0 C~170 C
Suitable S.G.	0.6		0.5
Weight Approx.	770g / 5M		480g / 5M

### CONTACT FORM



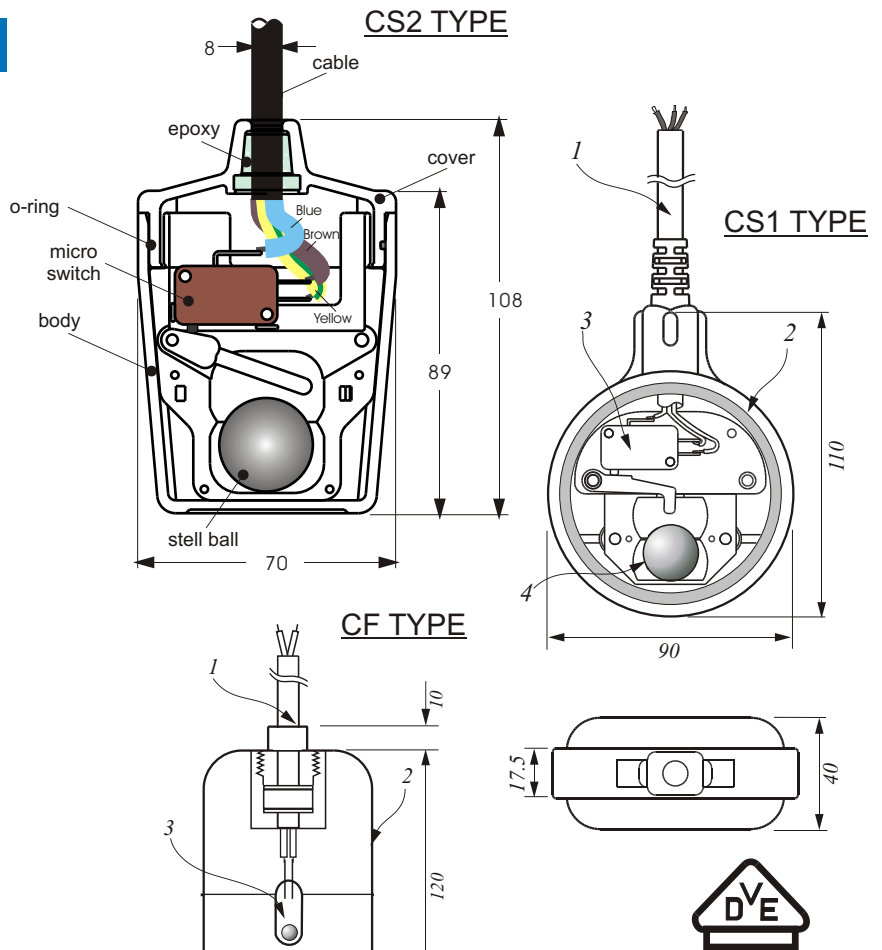
## STRUCTURE & DIMENSION

### CF TYPE

1. Silicon Cable
2. Material: SUS304  
Enclosure IP68
3. Mercury Switch: 2A/250VAC

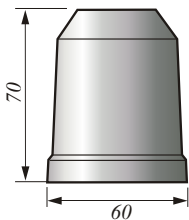
### CS1 TYPE

1. Neoprene Cable or PVC(VCT) Cable
2. Material: PP  
Enclosure IP68
3. Micro Switch:  
10A/250VAC or 15A/250VAC
4. Steel Ball

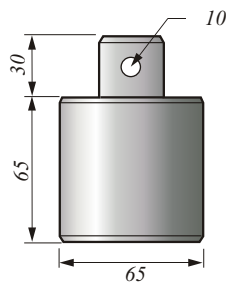


## DIMENSION OF WEIGHT

### CS1-PP-W



### CF-SUS-W



Type	Material	Weight
CS1-PP-W	P.P.	0.3kg
		0.2kg
		0.5kg
CF-SUS-W	SUS304	1.8kg

## FLOAT TYPE CODE

CF-SA-□□

Cable length  
 x6---0.6M 10--- 10M  
 03--- 3M 15--- 15M  
 05--- 5M Max. 20M

A --- N.O.  
 B --- N.C.  
 C --- SPDT

CS1  
 CS2-RA-□□

Cable length  
 x6---0.6M 10--- 10M  
 03--- 3M 15--- 15M  
 05--- 5M Max. 20M

A --- N.O.  
 B --- N.C.  
 C --- SPDT

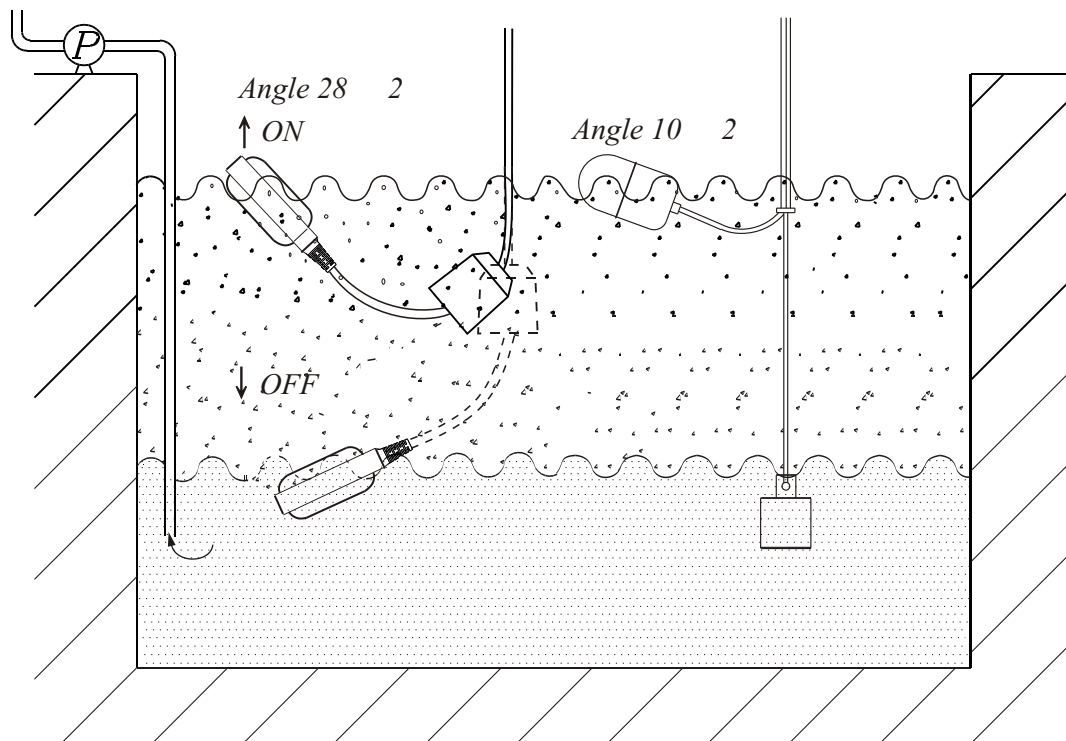
Cable material  
 P --- PVC (VCT CS2 only)  
 R --- Neoprene <HAR>H07RN

## RUBBER CABLE CHEMICAL RESISTANCE

Liquids	CS1-R	CS1-P	CF-S	Liquids	CS1-R	CS1-P	CF-S
Diesel	○	○	○	Acetic acid (less than 10%)	✓	✓	✓
Glycerine	○	○	○	Formaldehyde (less than 40%)	✓	✓	✓
Fuel-oil	○	○	○	Lactic acid (less than 10%)	✓	✓	✓
Washing agent	○	○	○	Nitric (less than 10%)	✓	✓	✓
Benzine	○	○	○	Hydrochloric acid (less than 10%)	✓	✓	✗
Formic acid (less than 10%)	✓	✓	✓	Sulfuric acid (less than 30%)	✓	✓	✗

○ Excellent    ✓ Acceptable    ✗ Not good

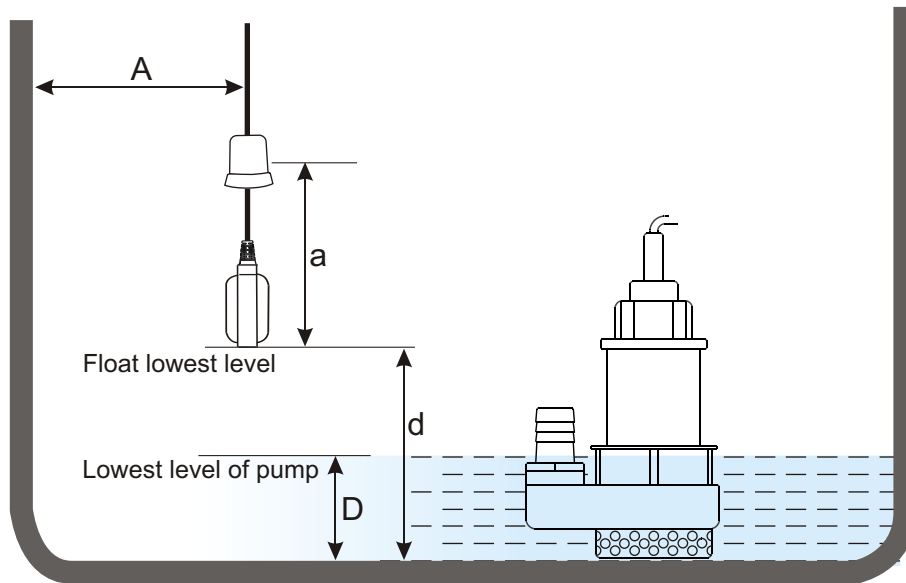
## APPLICATION



## RELATIVE DIMENSION FOR INSTALLATION

The float action length ( $a$ ) must be less than the distance between wall and cable ( $A$ ); if not will cause wrong action.

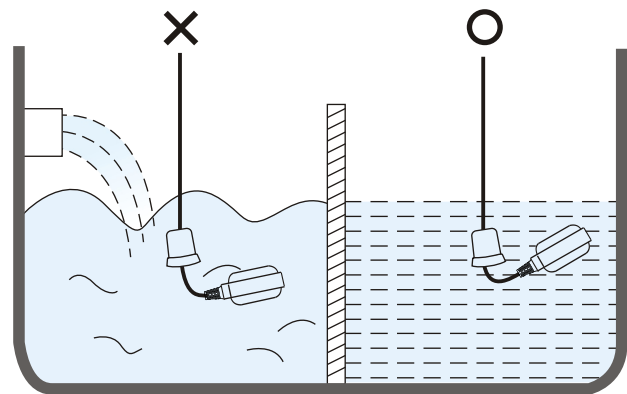
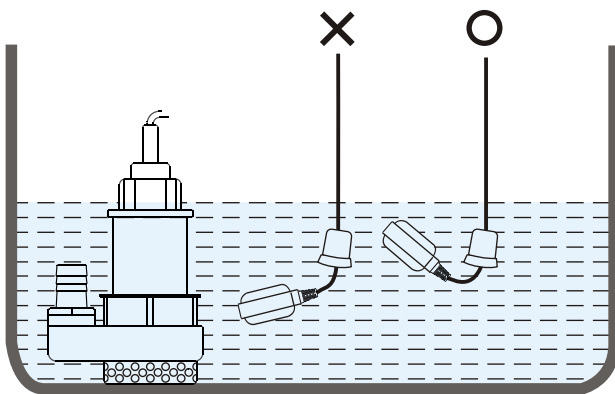
Keep inlet of pump ( $D$ ) lower than the float ( $d$ ), to prevent damage from lack of water.



## ATTENTION TO INSTALL

Keep a proper distance between installation position and inlet of water pump, to prevent float switch sucked by inlet of water pump.

Between installation position and inlet of water should keep a proper distance to prevent impacting water and cause wrong action. If it can't be avoided, to install wave-resistance pipe or wave-resistance plate for improvement.



## HOW TO ORDER FL TYPE

Various types of multi-point products can be selected depends on user's requirement.

For examples:

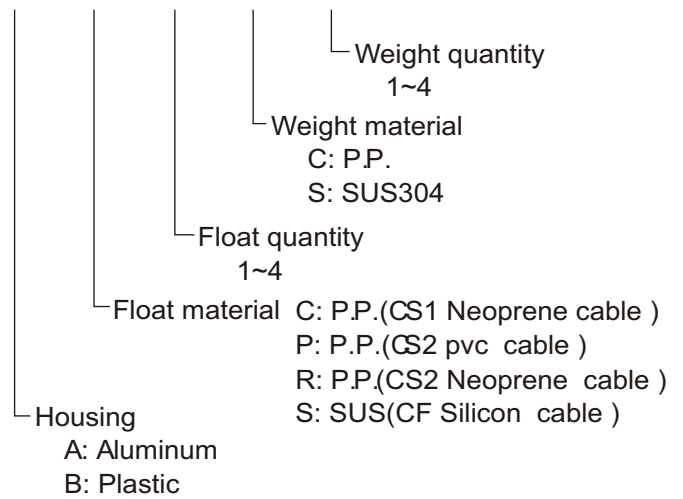
FL-B type is suitable for Corrosive liquid.

FL-A type is suitable for high temp liquid.(170°C)

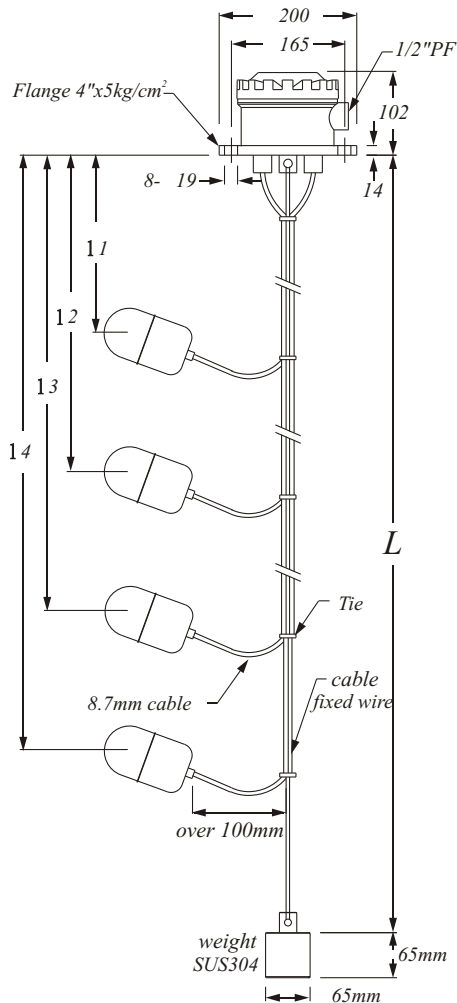
### DISTANCES OF CONTROL POINT

	NO	NC
l 1: _____ mm	<input type="checkbox"/>	<input type="checkbox"/>
l 2: _____ mm	<input type="checkbox"/>	<input type="checkbox"/>
l 3: _____ mm	<input type="checkbox"/>	<input type="checkbox"/>
l 4: _____ mm	<input type="checkbox"/>	<input type="checkbox"/>
L: _____ mm		

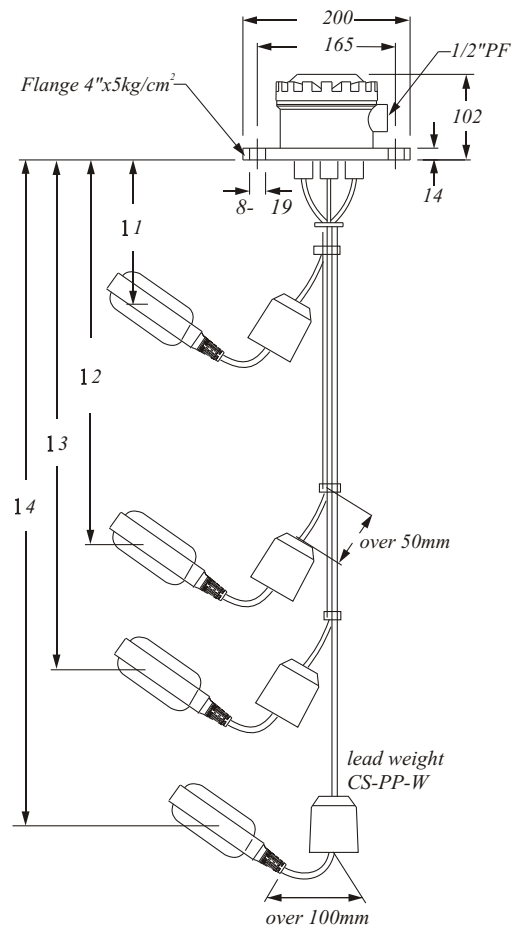
FL-□-□-□-□-□



### MODEL: FL-A

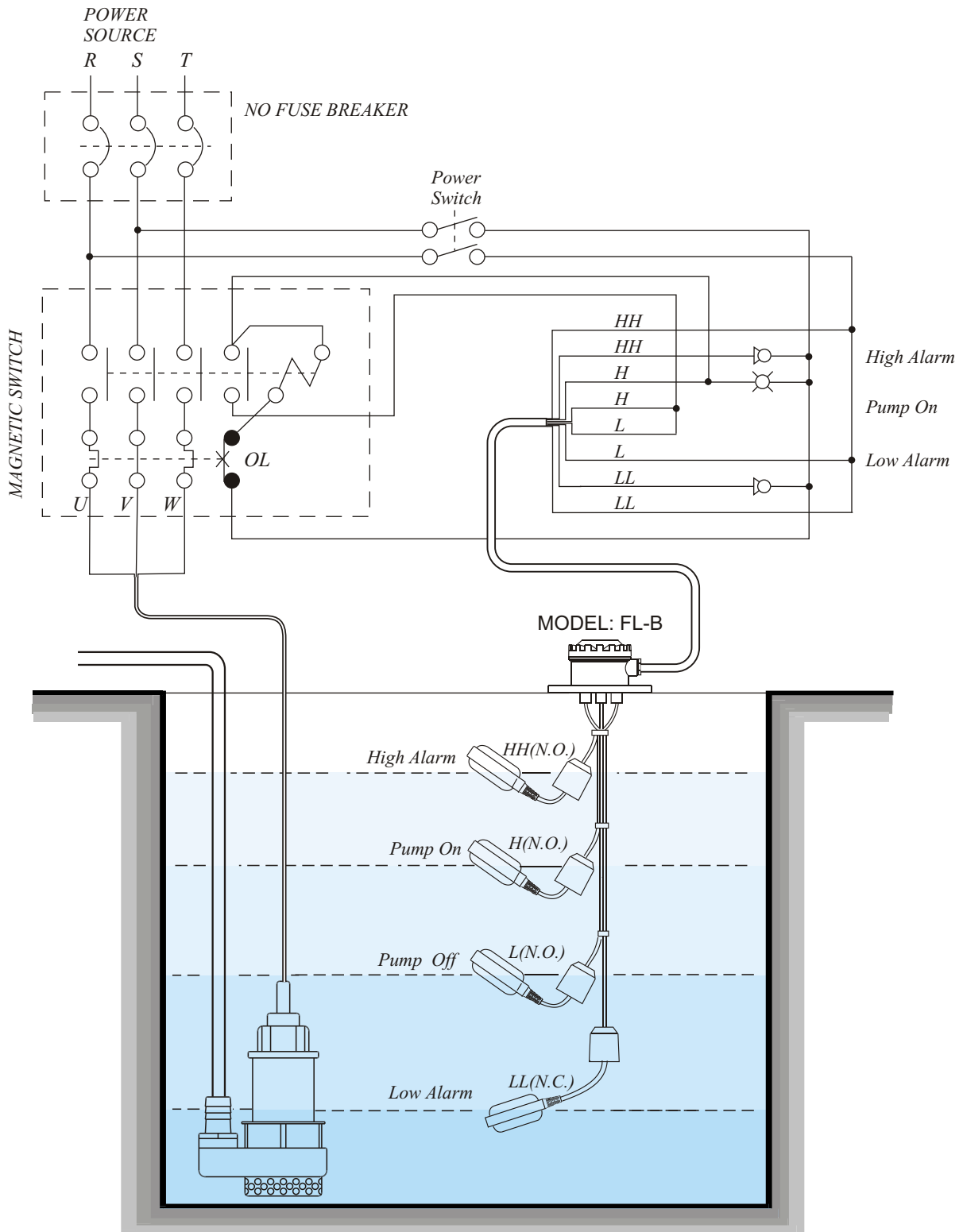


### MODEL: FL-B



## TYPE APPLICATION

The FL-B Type is suitable for install on the roof of tank and suspend floats in tank's inside for pumping control with level alarms.



**NEW**

## MODEL: SK TYPE

Cable: Neoprene <HAR>H07RN

Float: Material---PP  
Enclosure---IP68

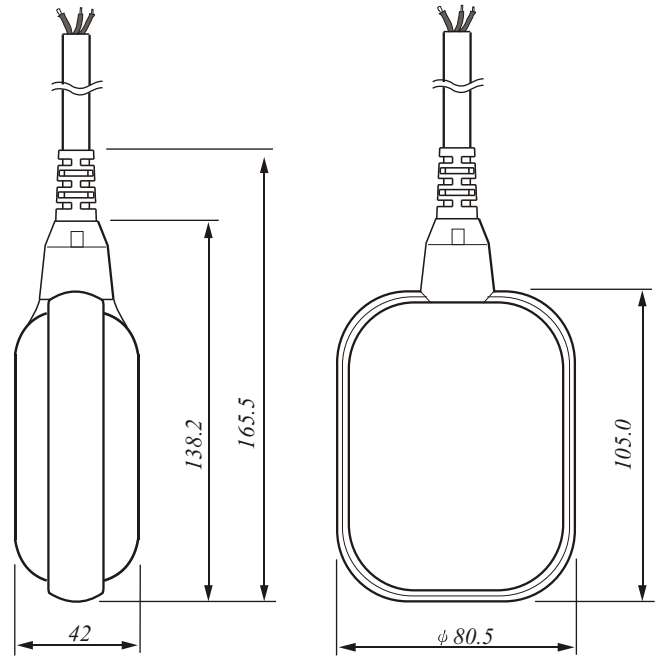
Micro Switch: 10A/250VAC

Steel Ball

SK-RA -

Cable length  
x6---0.6M  
06--- 6M

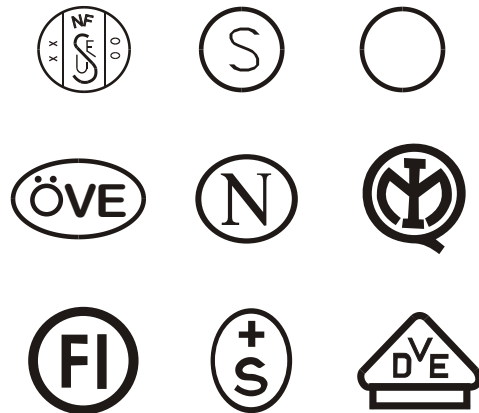
## DIMENSION



## SPECIFICATION

Float Material	<i>Polypropylene</i>
Cable Specification	<i>Neoprene Cable 1mm<sup>2</sup> 3C</i>
Contact Rating	<i>10A/250VAC</i>
Contact Form	<i>NC</i>
Operating Temp.	<i>85 C</i>
Operating Pressure	<i>1 Bar (max.)</i>
Action Angel	<i>45</i>
Weight Approx.	<i>221g/0.3M</i>

## APPROVALS



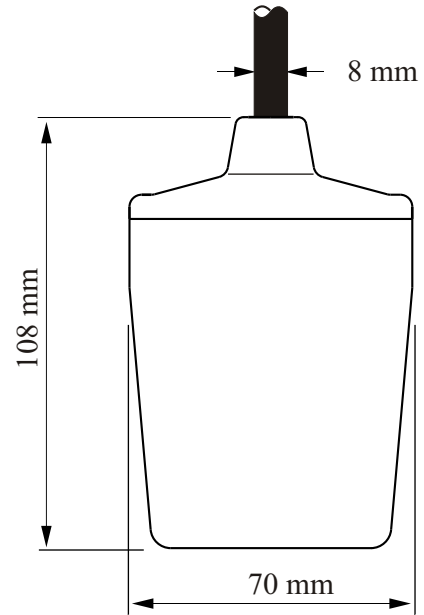
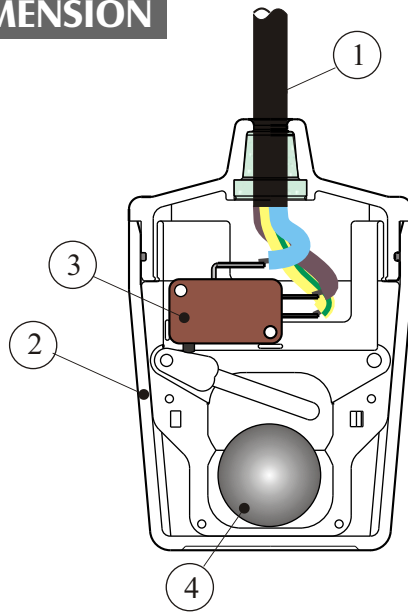
## STRUCTURE & DIMENSION

### CS2 TYPE

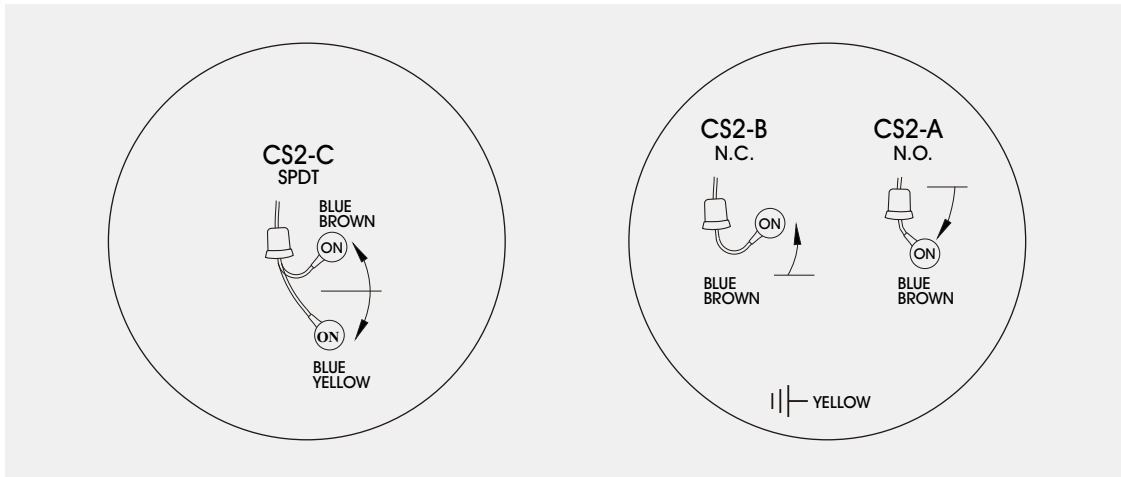
1. Neoprene Cable or PVC (VCT) Cable
2. Float  
Material: PP  
Enclosure IP68
3. Micro Switch
4. Steel Ball

CE

Pending



## CONTACT FORM

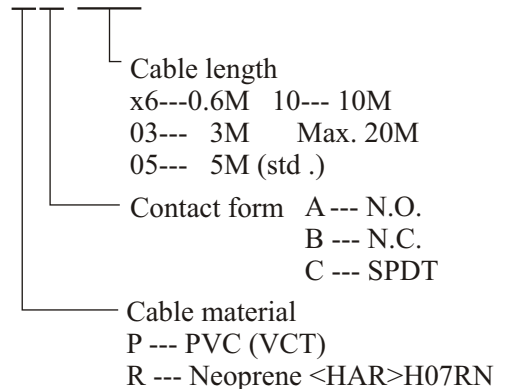


## SPECIFICATION

Model	CS2-P A/B/C	CS2-R A/B/C
Float Material	Polypropylene	
Cable Spec.	PVC(VCT) Cable 1.25mm <sup>2</sup> x3C 16AWG	Neoprene Cable 1mm <sup>2</sup> x3C
Contact Rating	250VAC 10A(std.) or 16A	
Contact Form	N.O. N.C. or SPDT	
Operating Temp.	0 C~60 C	0 C~80 C
Suitable S.G.	0.6	
Weight	Approx. 290g / 1M	

## FLOAT TYPE CODE

CS2-RA-□□



CS2-RA-□□-P

Certified