

## CABLE FLOAT LEVEL SWITCH



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# PRODUCT INTRODUCTION

## DESCRIPTION

The Float Level Switch is made from chemical resistant polypropylene. It is durable, low-cost, and specially designed to assist with long range and multiple point level detection in liquids. It is also suitable for tanks containing pumps and granular solutions.

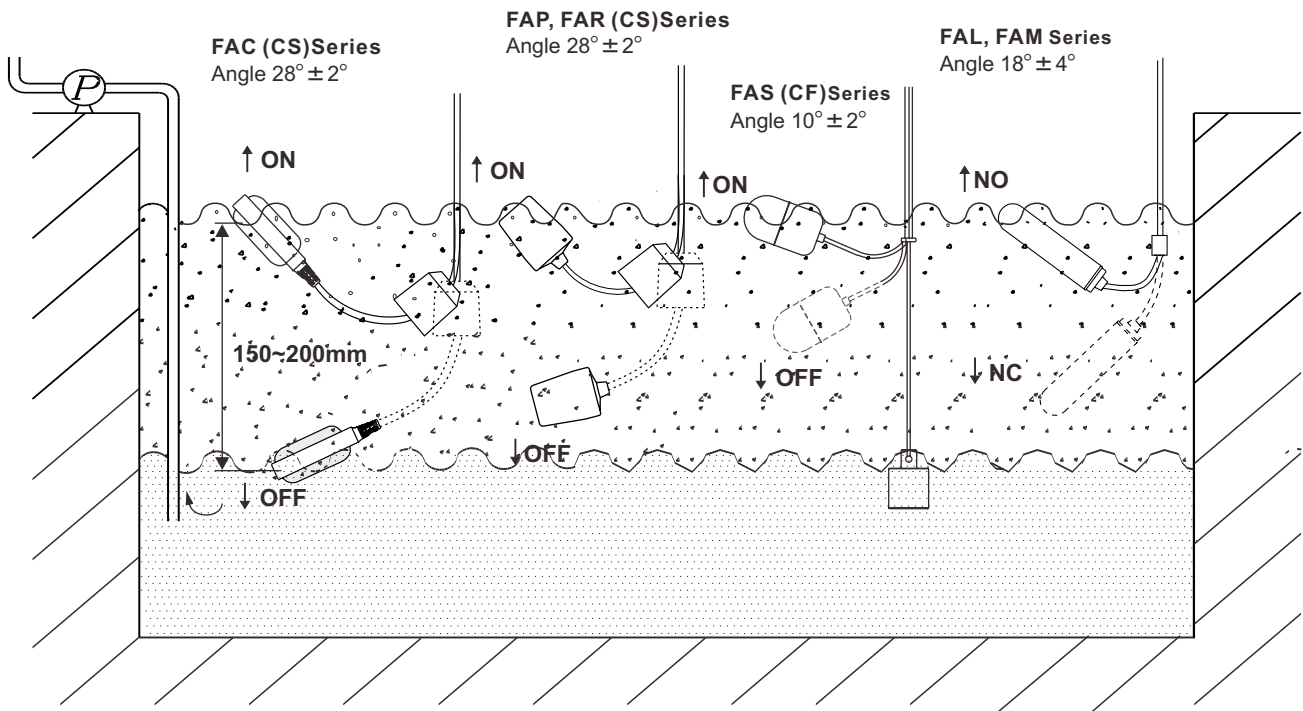
## APPLICATION

FAC: Suitable for pump controlled systems  
 FAR/ P / D/ E: Suitable for pump controlled waste water with a low Specific Gravity (SG level).  
 FAS: High temperature solutions  
 FAL/ J: Cleaner water, and installation with smaller process connections.  
 It is suggested to apply Reed Switch contact models in PLC or DCS control.

## WORKING PRINCIPLE

The Cable Float Level Switch is structured by using either micro switches proximity switches or reed switches to control the contact. Its user-friendly design is ideal for level measurement. The switches will transmit an ON or OFF contact signal output when the float rises and turns upwards. The switch contains a metal ball that can slide as the float position changes. For different water or solution temperatures, different float materials are available for selection. Plastic and stainless steel switches are the most common. The cable float level switch can not only be used in clear liquids but also can be used in granular liquids. Long distance detection points and multi-point contacts are also available. Cable float level switches can be applied in all water management, petrochemical, chemical industries. Other uses include: air-conditioner systems, drainage systems, most tanks or containers with level switch requirements.

## APPLICATION

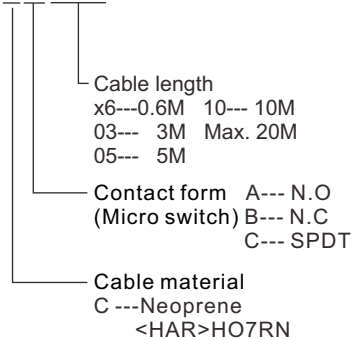


# SPECIFICATIONS

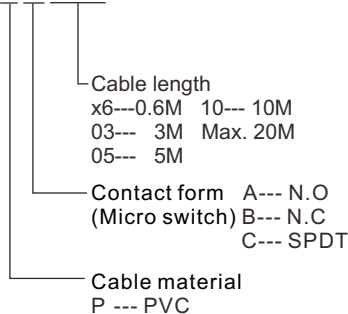
Dimensions (Unit:mm)			
	<b>Model</b>	<b>FAC A/B/C Round type</b>	<b>FAP A/B/C Cup type</b>
<b>Switch</b>	Micro switch	Micro switch	Micro switch
<b>Float Material</b>	P.P.		
<b>Cable Spec</b>	Neoprene Cable 1mm <sup>2</sup> x3C or 2C	PVC Cable 1.25mm <sup>2</sup> x3C or 2C	Neoprene Cable 1mm <sup>2</sup> x3C or 2C
<b>Contact Rating</b>	10A/ 250Vac (std.) or 15A/ 250Vac		
<b>Contact Form</b>	N.O or N.C or SPDT		
<b>Operating Temp.</b>	-10°C~80°C	0°C~60°C	-10°C~80°C
<b>Specific Gravity</b>	0.6	0.6	0.6
<b>Weight Approx.</b>	770g/5M	290g/1M	290g/1M
<b>Pressure</b>	2 kg/cm <sup>2</sup>	2 kg/cm <sup>2</sup>	2 kg/cm <sup>2</sup>
<b>Wire Voltage</b>	600 Vac	600 Vac	600 Vac
<b>Isolation Resistance</b>	Min 100 MΩ	Min 100 MΩ	Min 100 MΩ
<b>Contact Resistance</b>	Max. 100mΩ	Max. 100mΩ	Max. 100mΩ
<b>Actuation Angle</b>	28° ± 2°	28° ± 2°	28° ± 2°
<b>Protection</b>	IP68	IP68	IP68

## Float Type Code

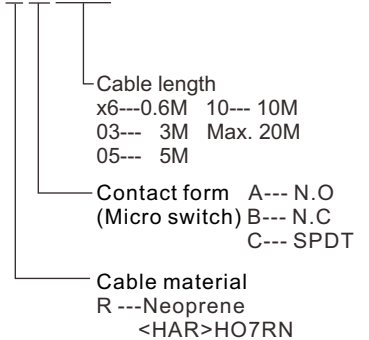
FACA□□...PP Float



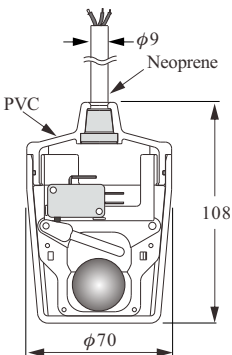
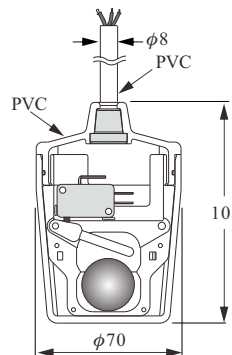
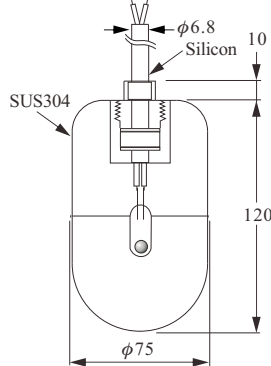
FAPA□□...PP Float



FARA□□...PP Float



# SPECIFICATIONS

Dimensions (Unit:mm)			
	<b>Model</b>	<b>FAD A/B/C Round type</b>	<b>FAE A/B/C Cup type</b>
<b>Switch</b>	Micro switch	Micro switch	Mercury switch
<b>Float Material</b>	PVC		SUS304
<b>Cable Spec</b>	Neoprene Cable 1mm <sup>2</sup> x3C or 2C	PVC Cable 1.25mm <sup>2</sup> x3C or 2C	Silicon Cable 0.75mm <sup>2</sup> x3C or 2C
<b>Contact Rating</b>	10A/ 250Vac (std.) or 15A/ 250Vac		1A/ 230Vac
<b>Contact Form</b>	N.O or N.C or SPDT		N.O or N.C or SPDT
<b>Operating Temp.</b>	-10°C~80°C	0°C~60°C	0°C~170°C
<b>Specific Gravity</b>	0.6	0.6	0.5
<b>Weight Approx.</b>	290g/1M	290g/1M	480g/5M
<b>Pressure</b>	2 kg/cm <sup>2</sup>	2 kg/cm <sup>2</sup>	2 kg/cm <sup>2</sup>
<b>Wire Voltage</b>	600 Vac	600 Vac	300 Vac
<b>Isolation Resistance</b>	Min 100 MΩ	Min 100 MΩ	—————
<b>Contact Resistance</b>	Max. 100mΩ	Max. 100mΩ	Max. 1Ω
<b>Actuation Angle</b>	28° ± 2°	28° ± 2°	10° ± 2°
<b>Protection</b>	IP68	IP68	IP68

## Float Type Code

FADA□□...PVC Float

- Cable length  
x6---0.6M 10--- 10M  
03--- 3M Max. 20M  
05--- 5M
- Contact form A--- N.O  
(Micro switch) B--- N.C  
C--- SPDT
- Cable material  
D --- Neoprene

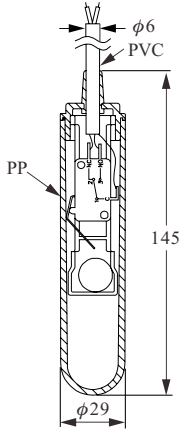
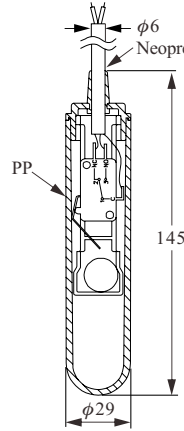
FAEA□□...PVC Float

- Cable length  
x6---0.6M 10--- 10M  
03--- 3M Max. 20M  
05--- 5M
- Contact form A--- N.O  
(Micro switch) B--- N.C  
C--- SPDT
- Cable material  
E --- PVC

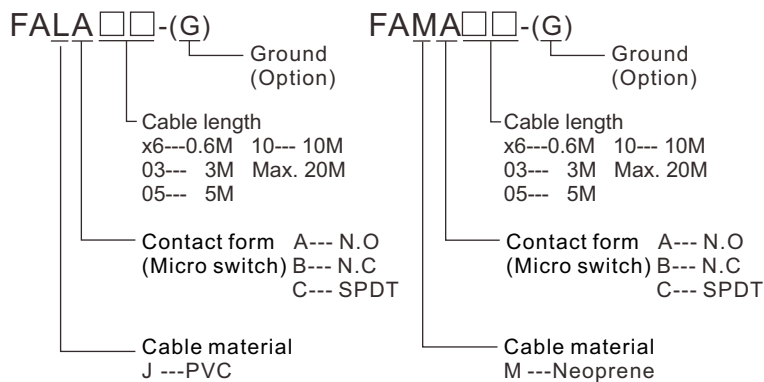
FASA□□...SUS Float

- Cable length  
x6---0.6M 10--- 10M  
03--- 3M Max. 20M  
05--- 5M
- Contact form A--- N.O  
(Micro switch) B--- N.C  
C--- SPDT
- Cable material  
S --- Silicon

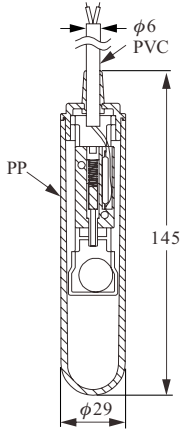
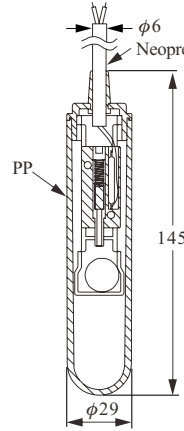
# SPECIFICATIONS

Dimensions (Unit:mm)		
	<b>Model</b>	<b>FAL A/B/C Bar type</b>
<b>Switch</b>	Micro switch	
<b>Float Material</b>	P.P.	
<b>Cable Spec</b>	PVC Cable 0.75mm <sup>2</sup> x3C	Neoprene Cable 0.75mm <sup>2</sup> x3C
<b>Contact Rating</b>	3A/ 125/250Vac	
<b>Contact Mode</b>	N.O or N.C or SPDT	
<b>Operating Temp.</b>	-0°C~60°C	-10°C~80°C
<b>Specific Gravity</b>	0.8	
<b>Weight Approx.</b>	113 ± 2g/1M Cable	
<b>Pressure</b>	4.5 kg/cm <sup>2</sup>	
<b>Wire Voltage</b>	600 Vac	
<b>Isolation Resistance</b>	Min 100 MΩ	
<b>Contact Resistance</b>	Max. 100mΩ	
<b>Actuation Angle</b>	Up 18° ± 4°/ Down 3° ± 3°	
<b>Protection</b>	IP68	

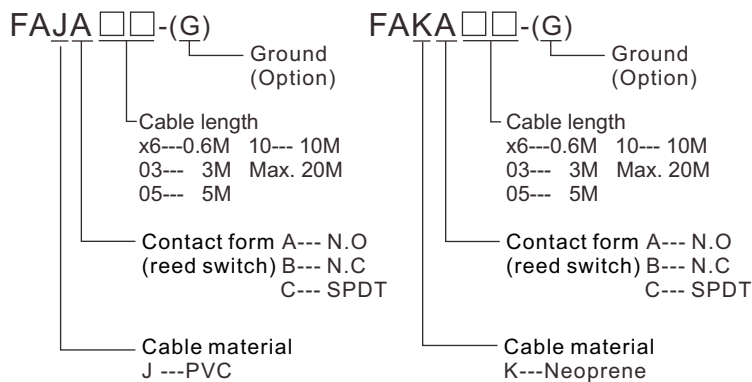
## Float Type Code



# SPECIFICATIONS

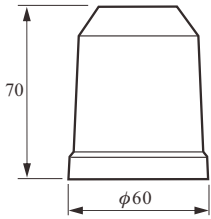
Dimensions (Unit:mm)		
	<b>Model</b>	<b>FAJ A/B/C Bar type</b>
<b>Switch</b>	Reed Switch	
<b>Float Material</b>	P.P.	
<b>Cable Spec</b>	PVC Cable 0.75mm <sup>2</sup> x3C	Neoprene Cable 0.75mm <sup>2</sup> x3C
<b>Contact Rating</b>	AC70 VA / DC50 W(N.O), 20W(N.C, SPDT)	
<b>Contact Mode</b>	N.O or N.C or SPDT	
<b>Operating Temp.</b>	-0°C~60°C	-10°C~80°C
<b>Specific Gravity</b>	0.8	
<b>Weight Approx.</b>	115 ± 2g/1M Cable	
<b>Pressure</b>	4.5 kg/cm <sup>2</sup>	
<b>Wire Voltage</b>	300 Vac/ 350Vdc(N.O), 150 Vac/ 200Vdc(N.C, SPDT)	
<b>Isolation Resistance</b>	Min 100 MΩ	
<b>Contact Resistance</b>	Max. 100mΩ(N.O), Max. 150mΩ(N.C, SPDT)	
<b>Actuation Angle</b>	Up 18° ± 4° / Down 3° ± 3°	
<b>Protection</b>	IP68	

## Float Type Code

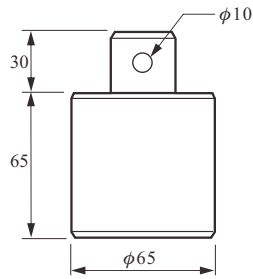


## WEIGHTS DIMENSIONS

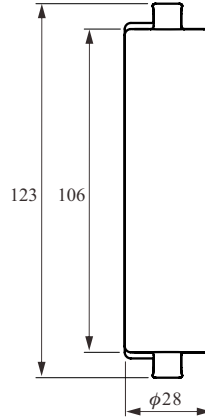
FAPW-03  
FAPW-05



FASW



FAB-0010

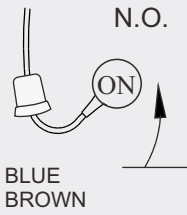


Type	Material	Weight
FAPW-03 FAPW-05	PP	0.3kg 0.5kg
FASW	SUS304	1.8kg
FAB-0010	PP	0.15kg

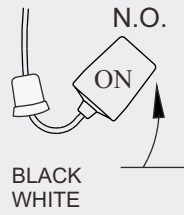
## CONTACT MODE

### 1. SPDT (N.O)

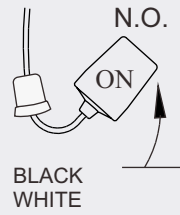
FACA



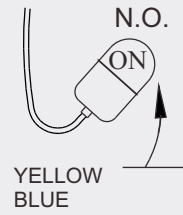
FAPA/FAEA



FARA/FADA

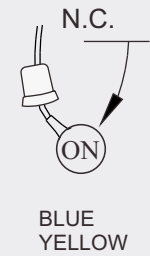


FASA

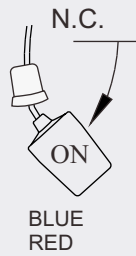


### 2. SPDT (N.C)

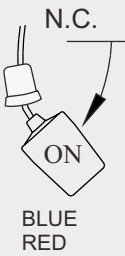
FACB



FAPB/FAEB



FARB/FADB

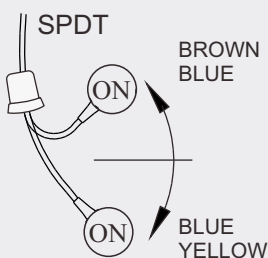


FASB

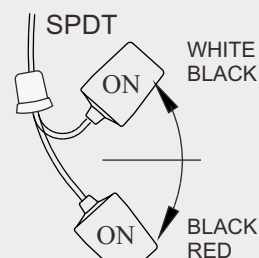


### 3. SPDT (1C)

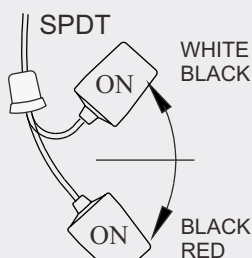
FACC



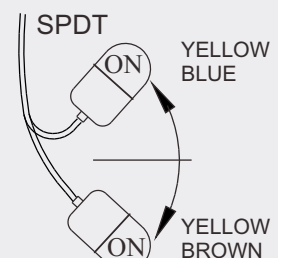
FAPC/FAEC



FARC/FADC



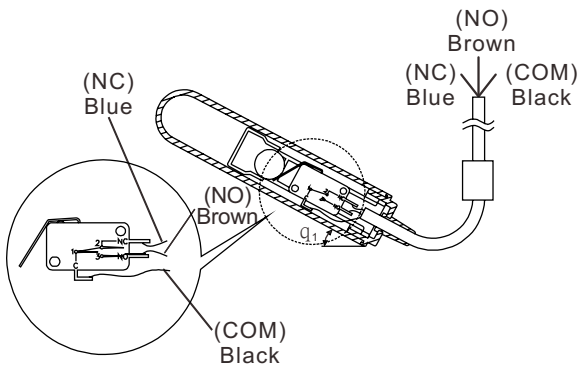
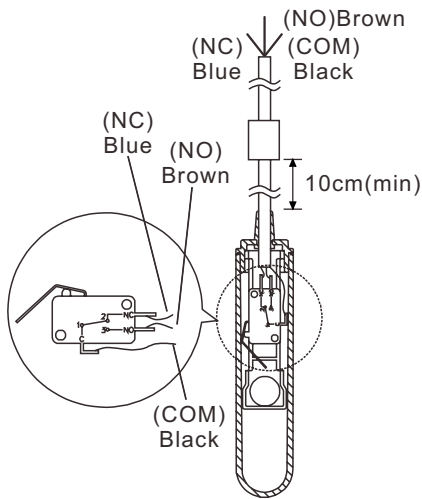
FASC



# WIRING

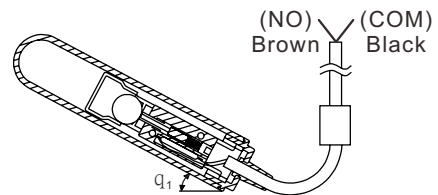
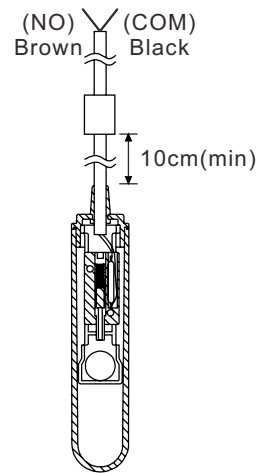
## Micro Switch

When the float hasn't contacted the liquid, the blue and black wires are in an open state and the contact mode will be NC. When the liquid level rises and lifts the float until it reaches the actuation angle, the brown and black wires will be in an open state and the contact mode will be NO.



## Reed Switch

When the liquid level is low, the metal ball remains away from the sensing range and the brown and black wires are in an open state (NC mode). When the liquid level rises and lifts the float until it reaches the actuation angle, the brown and black wires will be in an open state (NO mode).



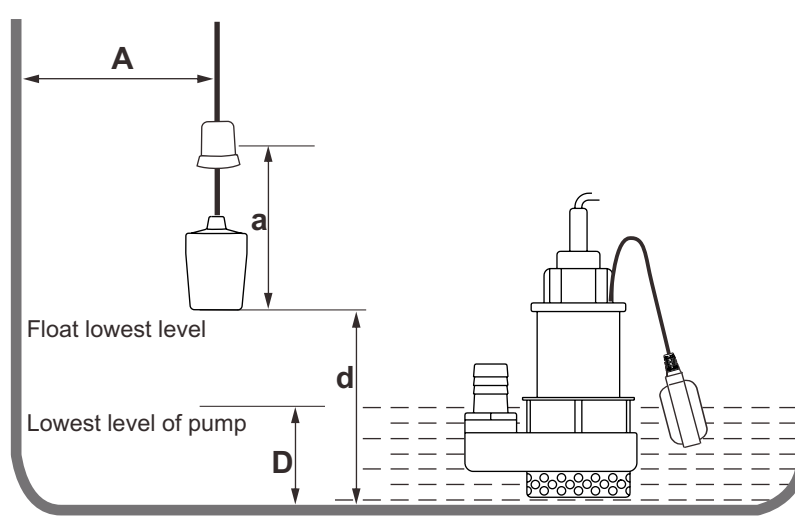


# Installation guide

## DIMENSIONS

The float's action length (a) must be shorter than the distance between the wall and the cable (A) ; if not, it will not function accurately.

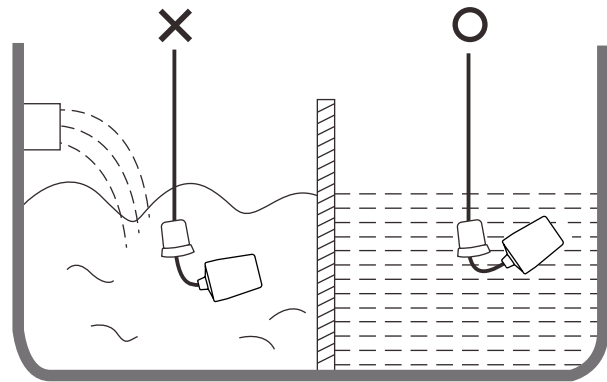
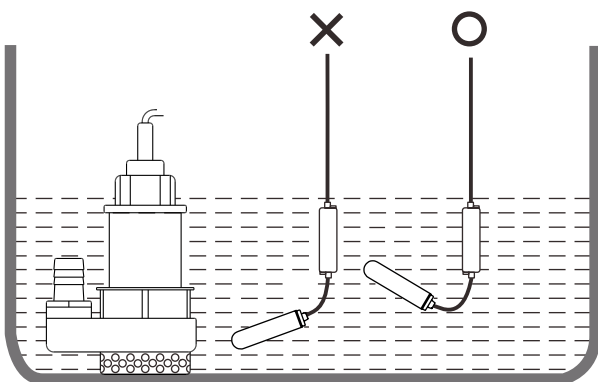
The lowest float level (d) must be higher than the lowest water level of the pump (D).



## PRECAUTIONS

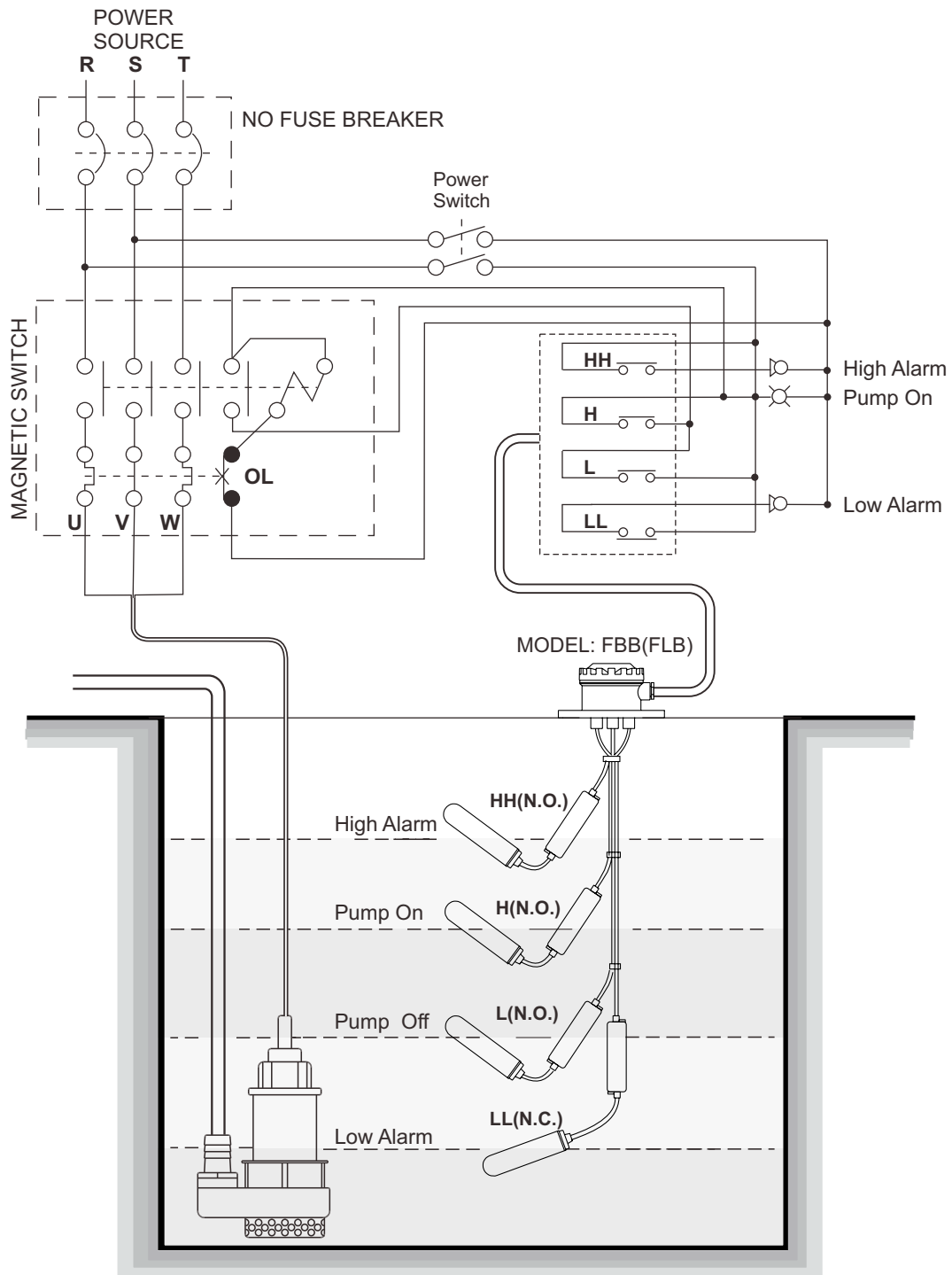
Keep a proper distance between the installation position and the water pump inlet to prevent the float switch from being sucked in towards the pump.

There should be a proper distance between the installation position and water inlet to prevent any direct water impact. If it can't be avoided, please install a pipe-shield or plate that lowers the turbulence.



# APPLICATION

The FBB type is suitable for installation from the tank's roof/top for level control and monitoring.



# HOW TO ORDER CABLE FLOATS (FB TYPE)

Various types of multi-point products can be selected to meet the user's needs.

For example:

FB-B type is suitable for corrosive solutions.

FB-A type is suitable for high-temperature waste water

## DISTANCE OF CONTROL POINTS

	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		

FB      (      )

### Cable Fixed Wire Length (unit: mm)

0500: 500mm up  
1000: 501~1000mm  
1500: 1001~1500mm  
※ 500mm per Unit

※ Use English letter as first code for probe length over 10m.  
A150 represents 15m, A200 represents 20m

### Cable Fixed Wire Material

S: Stainless N: Nylon

### Weight Quantity

1~4

### Weight Material

C: P.P. P: PPφ28x106  
S: SUS304

### Float Quantity

1~4

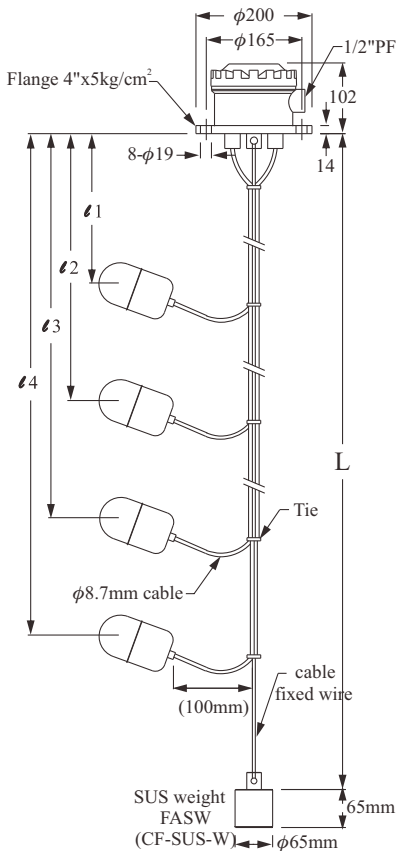
### Float material

C: P.P. (φ90x110 Neoprene cable) L: P.P. (φ29x145 PVC cable)  
P: P.P. (φ70x108 PVC cable) M: P.P. (φ29x145 Neoprene cable)  
R: P.P. (φ70x108 Neoprene cable) G: P.P. (φ29x145 PVC cable)  
S: SUS(φ75x120 Silicon cable) H: P.P. (φ29x145 Neoprene cable)  
D: PVC(φ70x108 Neoprene cable) J: P.P. (φ29x145 PVC cable)  
E: PVC(φ70x108 PVCcable) K: P.P. (φ29x145 Neoprene cable)

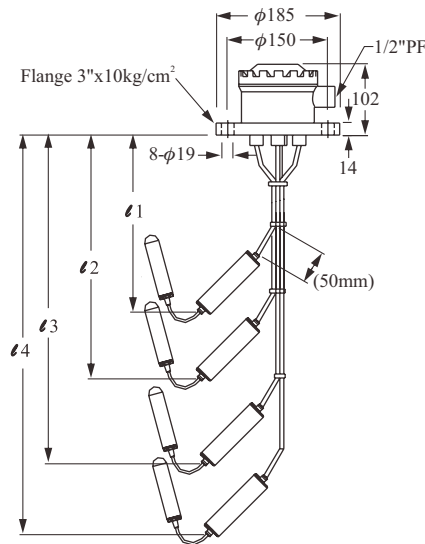
### Housing

A: Aluminum B: Plastic S: SUS304

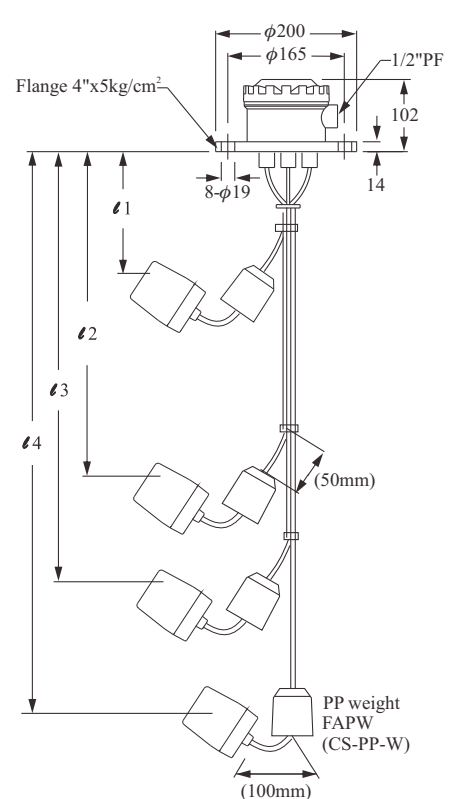
MODEL: FBA (FLA)



MODEL: FBB (FLB)

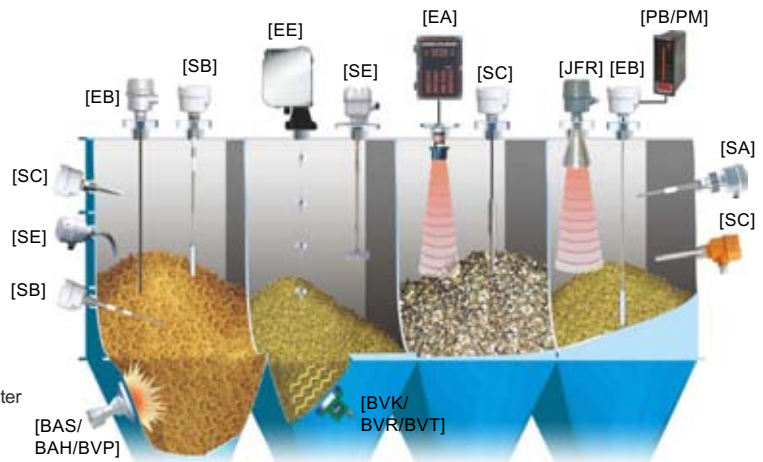
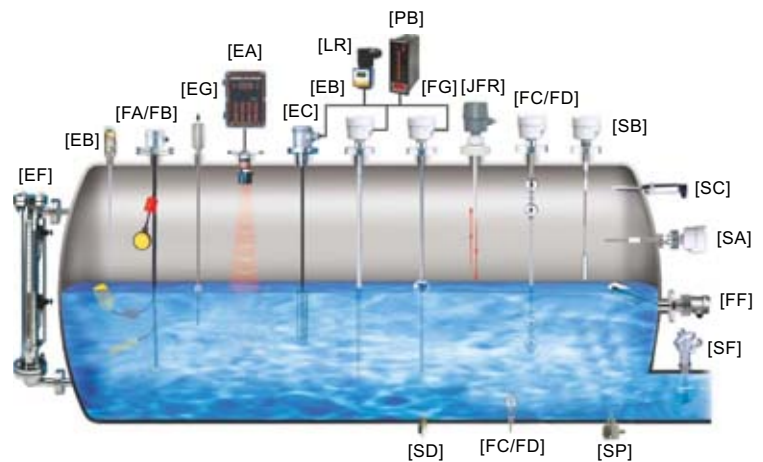


MODEL: FBS (FLB)



# EXAMPLES-OF-TANK-MOUNTING

- [FC/FD] Mini Float/Magnetic Float Level Switch
- [FG] Magnetic Float Level Transmitter
- [FF] Side Mounting Float Switch
- [FA/FB] Cable Float Level Switch
- [SP] Thermal Dispersion Flow Switch
- [SF] Paddle Flow Switch
- [SD] Optical Level Switch
- [SE] Rotary Paddle Level Switch
- [SA] Capacitance Level Switch
- [EC] Pressure Level Transmitter
- [LR] Loop Power Indicator
- [SC] Vibrating Probe Level Switch
- [SC] Tuning Fork Level Switch
- [EB] RF-Capacitance Level Transmitter
- [SB] RF-Capacitance / Admittance Level Switch
- [EG] Magnetostrictive Level Transmitter
- [EF] By-Pass Level Transmitter
- [MEF] Mini By-Pass Level Transmitter
- [EA] Ultrasonic Level Transmitter
- [JFR] FMCW Radar Level Transmitter
- [EE] Electromechanical Level Measuring System
- [ED] Speed Monitor
- [SRT/SRS] Conveyer Belt Misalignment Switch & Safety Cable Pull Switch
- [PB/PM] Microprocessor Based Bargraphic Display Scaling Meter
- [BRD/AE] Valve and Controller for Dust Collector System
- [BAS/BAH/BVP] Air Hammer
- [BVK/BVR/BVT] Pneumatic Vibrator



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