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Cable Float Level Switch

FineTek

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PRODUCT INTRODUCTION

DESCRIPTION

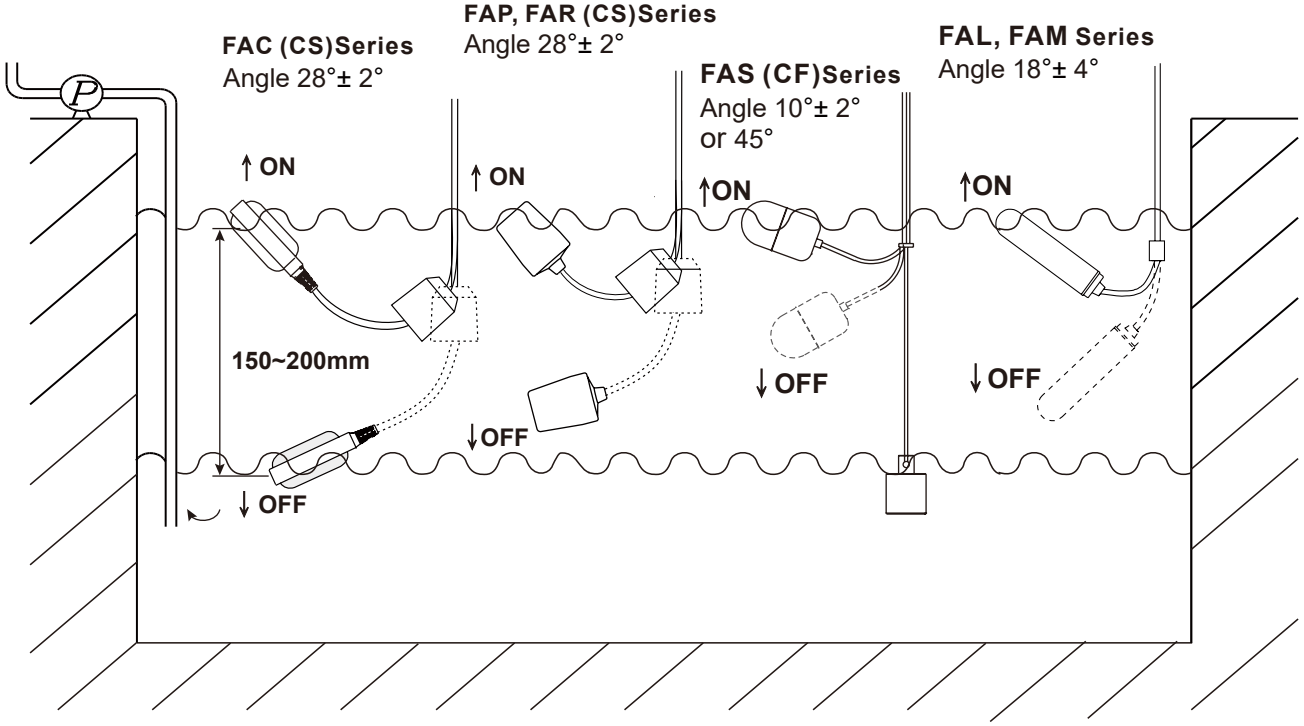
The Float Level Switch is made from chemical resistant polypropylene. It is durable, low-cost,and specially designed to assist with long range and multiple point level detection in liquids. It is also suitable for tanks containing pumps and granular solutions.

APPLICATION

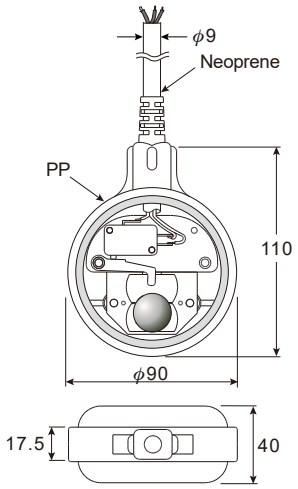
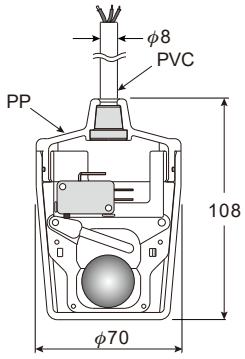
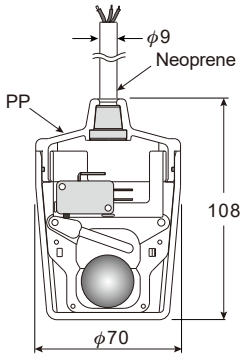
FAC: Suitable for pump controlled systems
FAR/ P / D/ E: Suitable for pump controlled waste water with a low Specific Gravity (SG level).
FAS: High temperature solutions
FAL/ J: Cleaner water, and installation with smaller process connections.
It is suggested to apply Reed Switch contact models in PLC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

WORKING PRINCIPLE

The Cable Float Level Switch is a structured by using either micro switches proximity switches or reed switches to control the contact. It's 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 can 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.

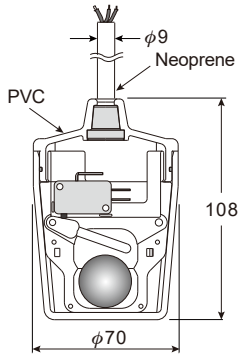
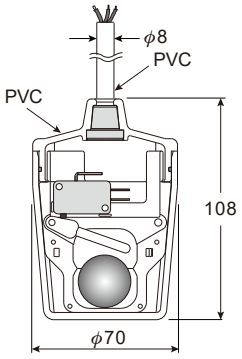
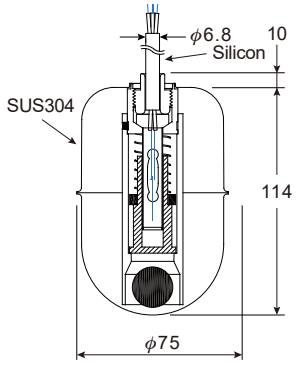


SPECIFICATIONS

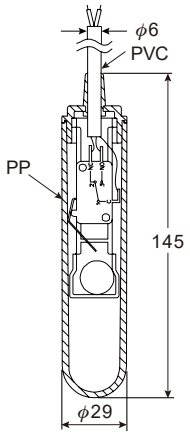
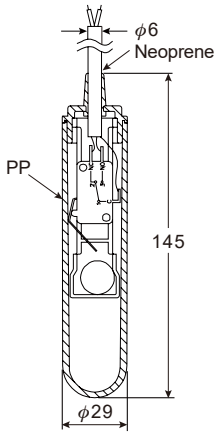
Dimensions (Unit:mm)			
Model	**FAC A/B/C Round type**	**FAP A/B/C Cup type**	**FAR A/B/C Cup type**
Switch	Micro switch	Micro switch	Micro switch
Float material	P.P.		
Cable spec	Neoprene Cable 1mm^{2}x3C or 2C	PVC Cable 1.25mm^{2}x3C or 2C	Neoprene Cable 1mm^{2}x3C or 2C
Contact rating	10A/ 250Vac (std.) or 15A/ 250Vac		
Contact form	N.O or N.C or SPDT		
Operating temp.	-10°C~80°C	0°C~60°C	-10°C~80°C
Specific gravity	0.6	0.6	0.6
Weight approx.	770g/5M	290g/1M	290g/1M
Pressure	2 kg/cm^2	2 kg/cm^2	2 kg/cm^2
Wire voltage	600 Vac	600 Vac	600 Vac
Isolation resistance	Min 100 MΩ		
Contact resistance	Max. 100mΩ+(70mΩ/m)		
Actuation angle	28°± 2°	28°± 2°	28°± 2°
Protection	IP68	IP68	IP68

Note: Max. probe length for FAC round type is 10000mm.

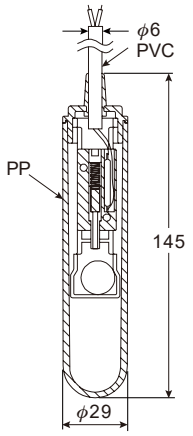
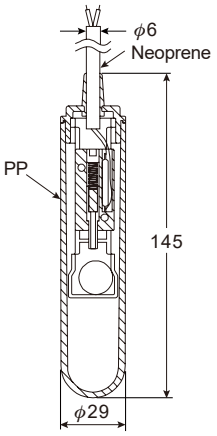
SPECIFICATIONS

Dimensions (Unit:mm)			
Model	**FAD A/B/C Cup type**	**FAE A/B/C Cup type**	**FAS A/B/C Metal type**
Switch	Micro switch	Micro switch	Reed switch
Float material	PVC		SUS304
Cable spec	Neoprene Cable 1mm²x3C or 2C	PVC Cable 1.25mm²x3C or 2C	Silicon Cable 0.75mm²x3C or 2C
Contact rating	10A/ 250Vac (std.) or 15A/ 250Vac		1A/ 240Vac or 200Vdc 30W
Contact form	N.O or N.C or SPDT		N.O or N.C or SPDT
Operating temp.	0°C~60°C	0°C~60°C	0°C~125°C
Specific gravity	0.6	0.6	0.5
Weight approx.	290g/1M	290g/1M	660g/5M
Pressure	2 kg/cm²	2 kg/cm²	2 kg/cm²
Wire voltage	600 Vac	600 Vac	300 Vac
Isolation resistance	Min 100 MΩ		————
Contact resistance	Max. 100mΩ+(70mΩ/m)		Max.1Ω+(70mΩ/m)
Actuation angle	28°± 2°	28°± 2°	UP 45°/Down 30°
Protection	IP68	IP68	IP68

SPECIFICATIONS

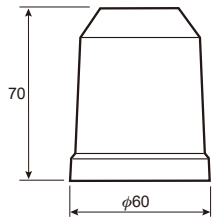
Dimensions (Unit:mm)		
Model	**FAL A/B/C Bar type**	**FAM A/B/C Bar type**
Switch	Micro switch	
Float material	P.P.	
Cable spec	PVC Cable 0.75mm^{2}x3C	Neoprene Cable 0.75mm^{2}x3C
Contact rating	3A/ 125/250Vac	
Contact mode	N.O or N.C or SPDT	
Operating temp.	-0°C~60°C	-10°C~80°C
Specific gravity	0.8	
Weight approx.	113A2g/1M Cable	
Pressure	4.5 kg/cm^2	
Wire voltage	600 Vac	
Isolation resistance	Min 100 MΩ	
Contact resistance	Max. 100mΩ+(70mΩ/m)	
Actuation angle	Up 18°± 4°/ Down 3°± 3°	
Protection	IP68	

SPECIFICATIONS

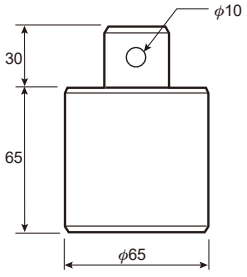
Dimensions (Unit:mm)		
Model	**FAJ A/B/C Bar type**	**FAK A/B/C Bar type**
Switch	Reed Switch	
Float material	P.P.	
Cable spec	PVC Cable 0.75mm^{2}x3C	Neoprene Cable 0.75mm^{2}x3C
Contact rating	AC70 VA / DC50 W(N.O), 20W(N.C, SPDT)	
Contact mode	N.O or N.C or SPDT	
Operating temp.	-0°C~60°C	-10°C~80°C
Specific gravity	0.8	
Weight approx.	115A2g/1M Cable	
Pressure	4.5 kg/cm^2	
Wire voltage	300 Vac/ 350Vdc(N.O), 150 Vac/ 200Vdc(N.C, SPDT)	
Isolation resistance	Min 100MΩ	
Contact resistance	(N.O) Max.100mΩ+(70mΩ/m),(N.C,SPDT) Max.150mΩ+(70mΩ/m)	
Actuation angle	Up 18°± 4°/ Down 3°± 3°	
Protection	IP68	

WEIGHTS DIMENSIONS

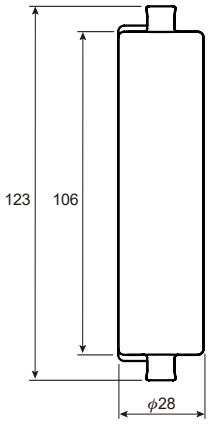
FAPW-03
FAPW-05



FASW



FAB-0010

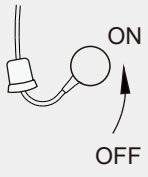


Model	Material	Weight
FAPW-03 **FAPW-05**	PP	0.3kg 0.5kg
FASW	SUS304	1.8kg
FAB-0010	PP	0.15kg

CONTACT MODE

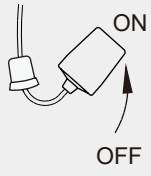
1. SPST (N.O)

FACA
(N.O.) Brown
(COM) Blue

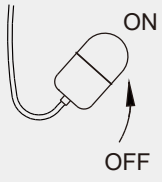


FAPA/FAEA
(N.O.) White
(COM) Black

FARA/FADA
(N.O.) Brown
(COM) Blue

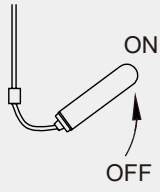


FASA
(N.O.) Blue
(COM) Yellow



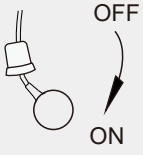
FALA/FAJA
(N.O.) White
(COM) Black

FAMA/FAKA
(N.O.) Brown
(COM) Black



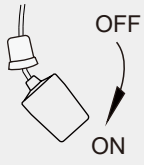
2. SPST (N.C)

FACB
(N.C.) Yellow
(COM) Blue



FAPB/FAEB
(N.C.) Red
(COM) Black

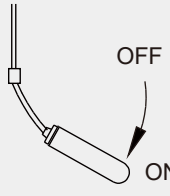
FARB/FADB
(N.C.) Yellow
(COM) Blue



FASB
(N.C.) Brown
(COM) Yellow

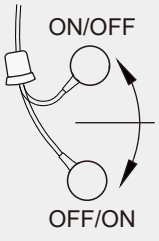
FALB/ FAJB
(N.C.) Red
(COM) Black

FAMB/ FAKB
(N.C.) Blue
(COM) Black



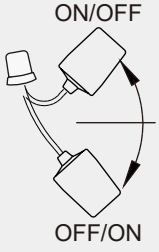
3. SPDT (1C)

FACC
(N.O.) Brown
(N.C.) Yellow
(COM) Blue

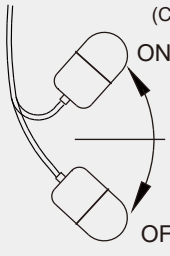


FAPC/FAEC
(N.O.) White
(N.C.) Red
(COM) Black

FARC/FADC
(N.O.) Brown
(N.C.) Yellow
(COM) Blue

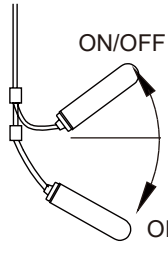


FASC
(N.O.) Blue
(N.C.) Brown
(COM) Yellow



FALC/ FAJC
(N.O.) White
(N.C.) Red
(COM) Black

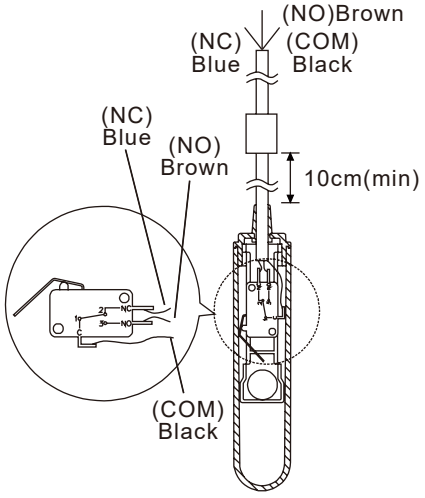
FAMC/ FAKC
(N.O.) Brown
(N.C.) Blue
(COM) Black



WIRING

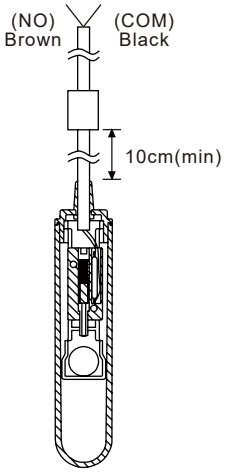
Micro Switch

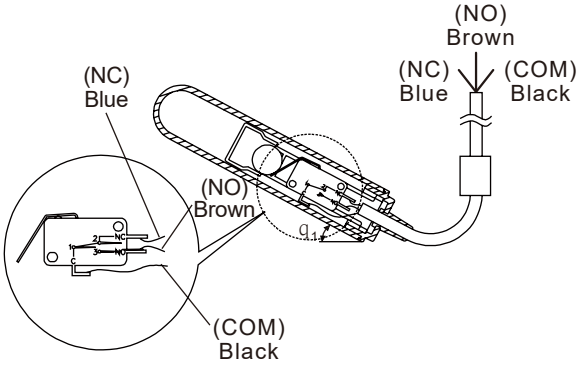
When the float hasn't contacted the liquid, the blue and black wires are in an open state and the contact mode will be NC. When the liquid level rises and lifts the float until it reaches the actuation angle, the brown and black wires will be in an open state and the contact mode will be NO.

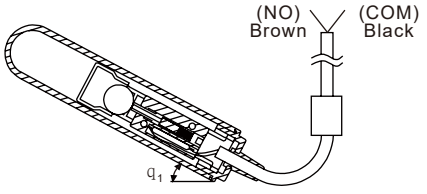


Reed Switch

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).





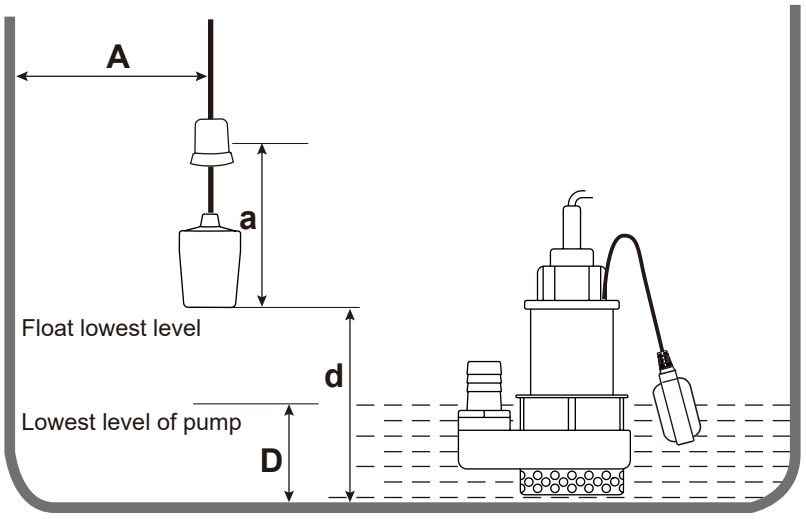


INSTALLATION GUIDE

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.

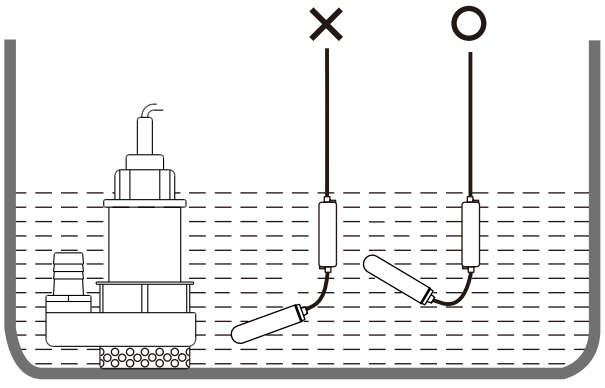
The lowest float level (d) must be higher than the lowest water level of the pump (D).

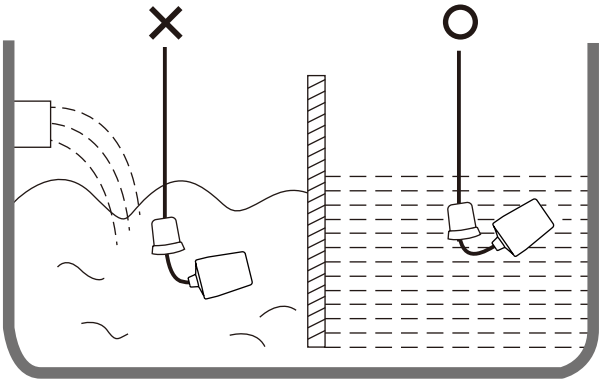


PRECAUTIONS

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.

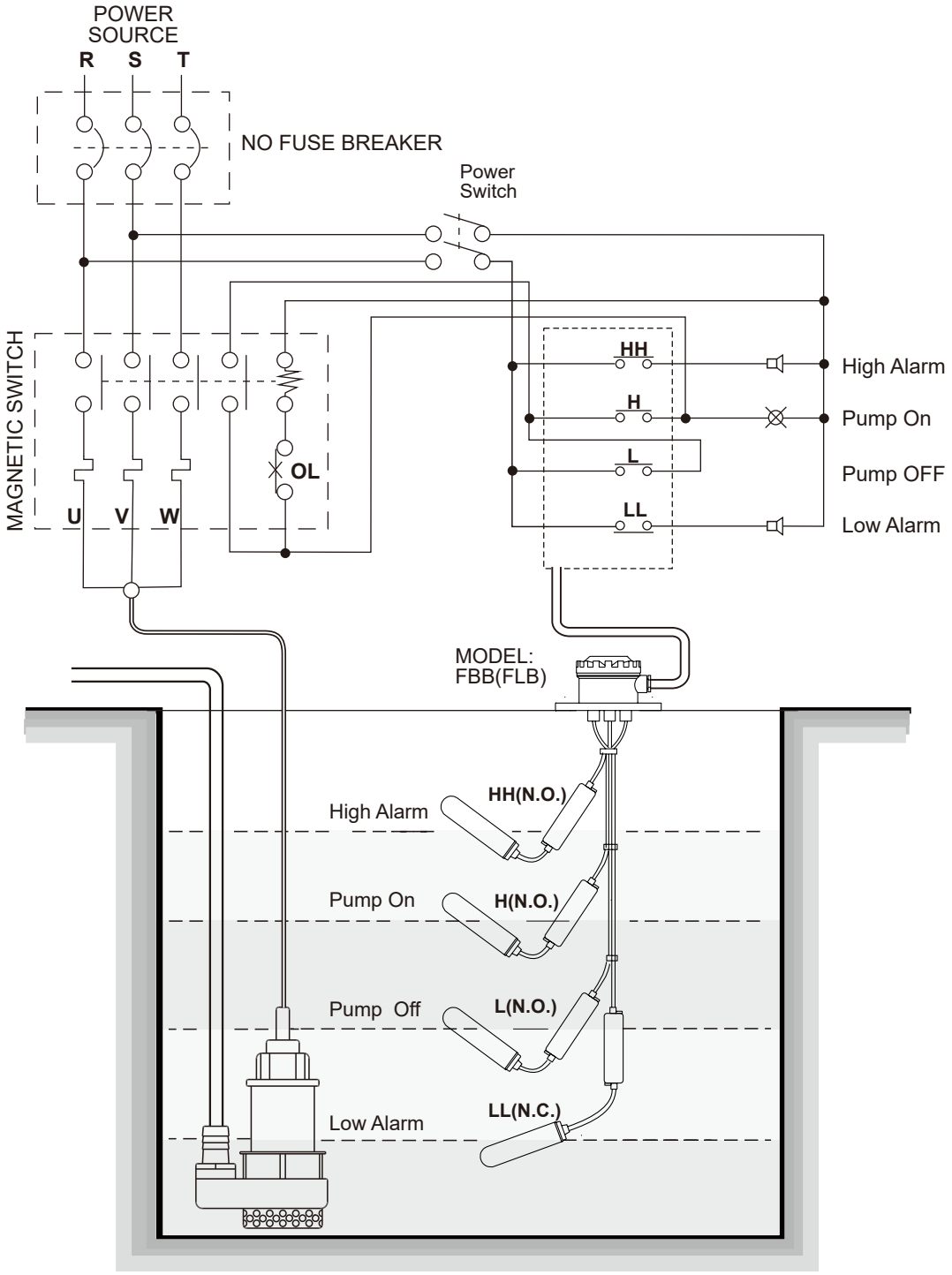
There should be a proper distance between the installation position and water inlet to prevent any direct water impact. If it can't be avoided, please install a pipe-shield or plate that lowers the turbulence.





APPLICATION

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



MODEL NUMBER / ORDER CODE COMPARISON TABLE

Model Number	Order Code
FAC	FAX10100-AD□P1
FACA	FAX10100-ADAP1
FACB	FAX10100-ADBP1
FACC	FAX10100-ADCP1

FAP	FAX10100-BD□P2
FAPA	FAX10100-BDAP2
FAPB	FAX10100-BDBP2
FAPC	FAX10100-BDCP2
FAR	FAX10100-BD□P1
FARA	FAX10100-BDAP1
FARB	FAX10100-BDBP1
FARC	FAX10100-BDCP1
FAD	FAX10100-BD□C1
FADA	FAX10100-BDAC1
FADB	FAX10100-BDBC1
FADC	FAX10100-BDCC1
FAE	FAX10100-BD□C2
FAEA	FAX10100-BDAC2
FAEB	FAX10100-BDBC2
FAEC	FAX10100-BDCC2

FAS	FAX10100-DA□M3
FASA	FAX10100-DAAM3
FASB	FAX10100-DABM3
FASC	FAX10100-DACM3

FAL	FAX10100-CB□P2
FAM	FAX10100-CB□P1
FAJ	FAX10100-CF□P2
FAK	FAX10100-CF□P1

FAPW-03	FAX□M1P-1806007002
FAPW-05	FAX□M1P-1806007003
FASW	FAX□M1P-MA06509501
FAB-0010	FAX□M1P-1802810601

ORDER INFORMATION

FAX 1 0 1 0 0 - ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰

⑨⑩ Float type and switch

AD: ϕ90*110 Micro switch(10A)
AE: ϕ90*110 Micro switch(15A)
BD: ϕ70*108 Micro switch(10A)
BE: ϕ70*108 Micro switch(15A)
CB: ϕ29*145 Micro switch(3A)
CC: ϕ29*145 Micro switch(3A)+Ground
CF: ϕ29*145 Reed Switch
CG: ϕ29*145 Reed Switch+Ground
DB: ϕ75*120 Reed Switch
※ It is suggested to apply Reed Switch contact models in PLC or DCS control.

⑪ Contact mote

A: N.O.
B: N.C.
C: SPDT

⑫⑬ Float and cable material

P1: Float PP Neoprene cable
P2: Float PP PVC cable
C1: Float PVC Neoprene cable
C2: Float PVC PVC cable
M3: Float SUS304 Silicon cable

⑭⑮⑯⑰ Length

Code	Length
0600	600mm (Min imum order length)
3000	3000mm
5000	5000mm
A100	10000mm ("A" Multiply 100 times)[Note]
A150	15000mm ("A" Multiply 100 times)
A450	45000mm (Maximam order length)

Note: Max. probe length for ϕ90x110 type is 10000mm.

HOW TO ORDER CABLE FLOATS (FB TYPE)

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

For example:

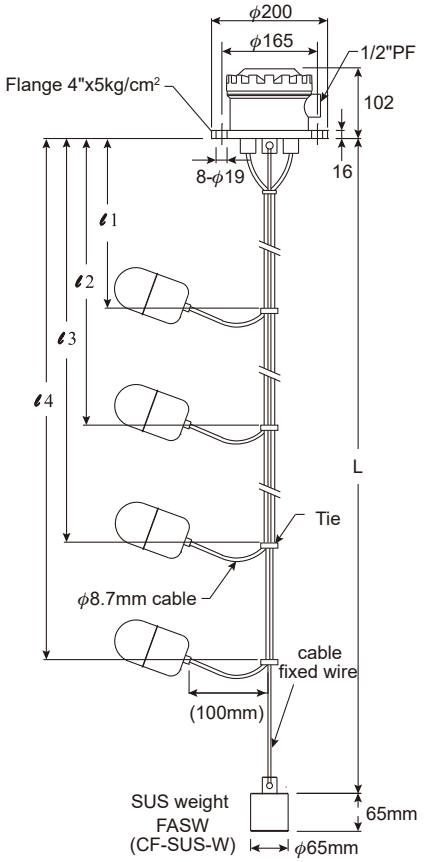
FBX10000-□□□□□C type is suitable for corrosive solutions.

FBX10000-□□□□□B type is suitable for high-temperature waste water

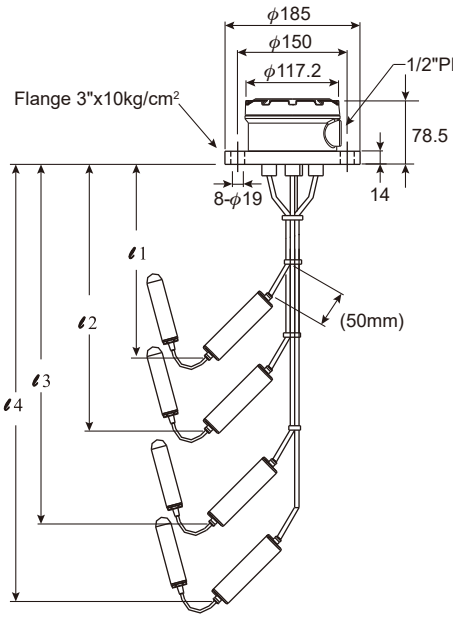
DISTANCE OF CONTROL POINTS

	NO	NC
ℓ1 : _____ mm	☐	☐
ℓ2 : _____ mm	☐	☐
ℓ3 : _____ mm	☐	☐
ℓ4 : _____ mm	☐	☐
L : _____ mm		

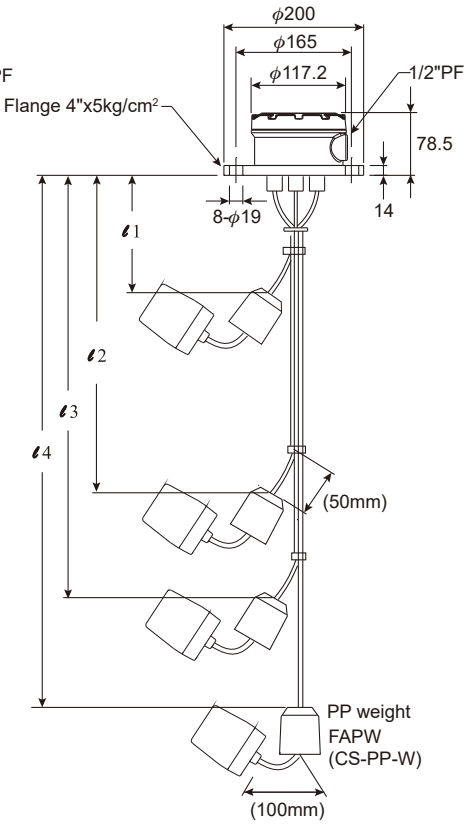
MODEL: FBX10000-□□□□B



MODEL: FBX10000-□□□□C



MODEL: FBX10000-□□□□C



ORDER INFORMATION

FBX 1 0 0 0 0 - ⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳ ㉑㉒㉓㉔㉕㉖㉗㉘㉙

⑨⑩ Float type and switch

AD: ϕ90*110 Micro switch(10A)
AE: ϕ90*110 Micro switch(15A)
BD: ϕ70*108 Micro switch(10A)
BE: ϕ70*108 Micro switch(15A)
CB: ϕ29*145 Micro switch(3A)
CC: ϕ29*145 Micro switch(3A)+Ground
CF: ϕ29*145 Reed Switch
CG: ϕ29*145 Reed Switch+Ground
DB: ϕ75*120 Reed Switch

※ It is suggested to apply Reed Switch contact models in PLC or DCS control.

(Next page)

⑪ Contact mote

A: N.O.
B: N.C.
C: SPDT

⑫⑬ Float and cable material

P1: PP Float Neoprene Neoprene cable
P2: PP Float PVC cable
C1: PVC Float Neoprene Neoprene cable
C2: PVC Float PVC cable
M3: SUS304 Float Silicon cable

⑭ Housing

B: B type Housing aluminum
C: C type Housing plastic (PP)
double into the line mouth 1/2"PF ϕ117.2X64.5

Connection

⑮⑯	⑰⑱	⑲⑳
AK: JIS-FF	B5: 3"	40: 5 kg/cm^2
AN: ANSI-RF	B6: 3-1/2"	42: 10 kg/cm^2
AS: DIN-FF	B7: 4"	48: 150 Lbs
	E4: DN80	49: 300 Lbs
	E5: DN100	57: PN10
		58: PN16

⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙

FBX 1 0 0 0 0- □□□□□□□□□□□□□□□□□□□□□

㉑㉒ Flange material

MA: SUS304
MB: SUS316
18 : PP

㉓㉔ Float with weight quantity

Code	Float with weight quantity × Quantity
P1	Float plastic with weight PP(0.3kg)×1
P2	Float plastic with weight PP(0.3kg)×2
P3	Float plastic with weight PP(0.3kg)×3
P4	Float plastic with weight PP(0.3kg)×4
P5	Float plastic with weight PP(0.3kg)×5
P6	Float plastic with weight PP(0.3kg)×6

Code	Float with weight quantity × Quantity
Q1	Float plastic with weight PP(0.5kg)×1
Q2	Float plastic with weight PP(0.5kg)×2
Q3	Float plastic with weight PP(0.5kg)×3
Q4	Float plastic with weight PP(0.5kg)×4
Q5	Float plastic with weight PP(0.5kg)×5
Q6	Float plastic with weight PP(0.5kg)×6

R1	Float plastic with weight PP(0.15kg)×1
R2	Float plastic with weight PP(0.15kg)×2
R3	Float plastic with weight PP(0.15kg)×3
R4	Float plastic with weight PP(0.15kg)×4
R5	Float plastic with weight PP(0.15kg)×5
R6	Float plastic with weight PP(0.15kg)×6

S1	SUS304 Float(without weight)×1
S2	SUS304 Float(without weight)×2
S3	SUS304 Float(without weight)×3
S4	SUS304 Float(without weight)×4
S5	SUS304 Float(without weight)×5
S6	SUS304 Float(without weight)×6

㉕ Weight (bottom)

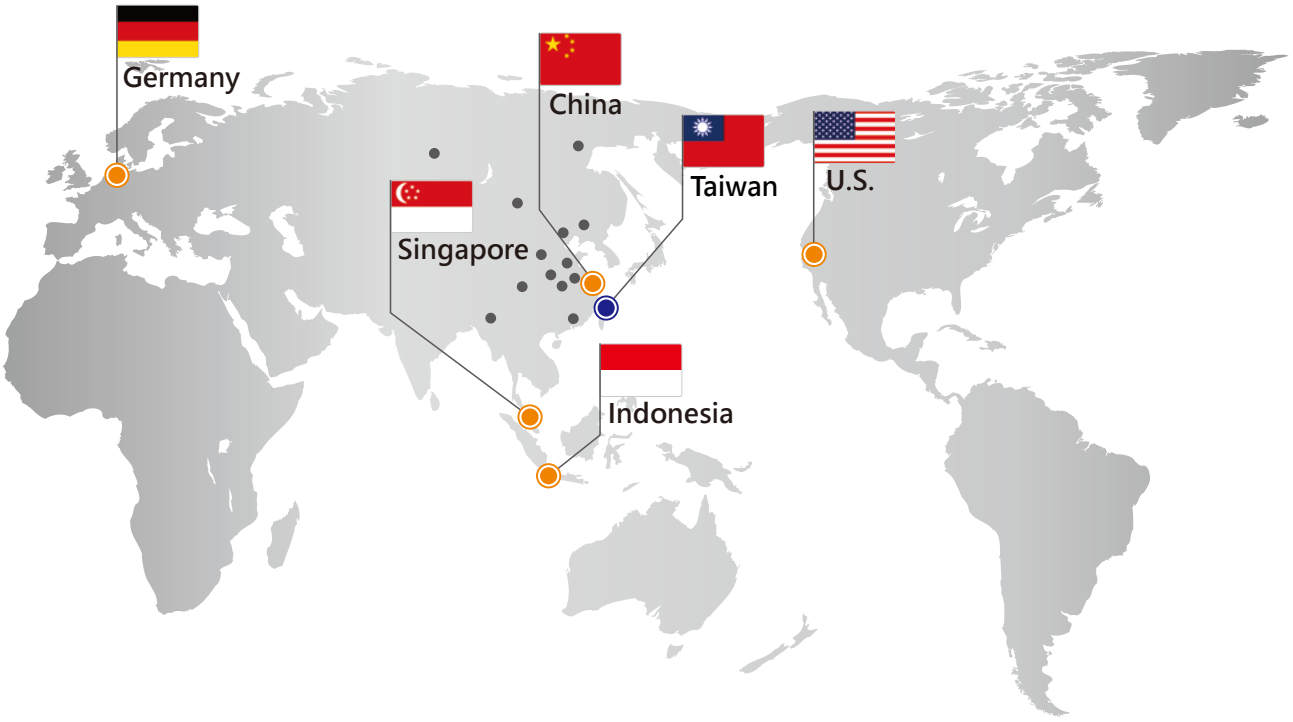
0☆ None
S☆ Weight SUS304 (1.8kg) with cable
N: Weight PP (0.3kg) with nylon cable
M: Weight PP (0.5kg) with nylon cable

㉖㉗㉘㉙ Length

Code	Length
0600	600mm (Min imum order length)
3000	3000mm
5000	5000mm
A100	10000mm ("A" Multiply 100 times)[Note]
A150	15000mm ("A" Multiply 100 times)
A450	45000mm (Maximam order length)

Note: Max. probe length for ϕ90x110 type is 10000mm.

Global Network



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