

ОПИСАНИЕ

Поплавковые датчики уровня сделаны из химически стойкого материала, который обеспечивает высокие потребительские свойства, низкую стоимость и долгий срок службы датчиков, позволяет создать многоуровневые датчики, использовать совместно с насосами, в жидкостях с примесями или в агрессивных средах.

ПРИНЦИП ДЕЙСТВИЯ

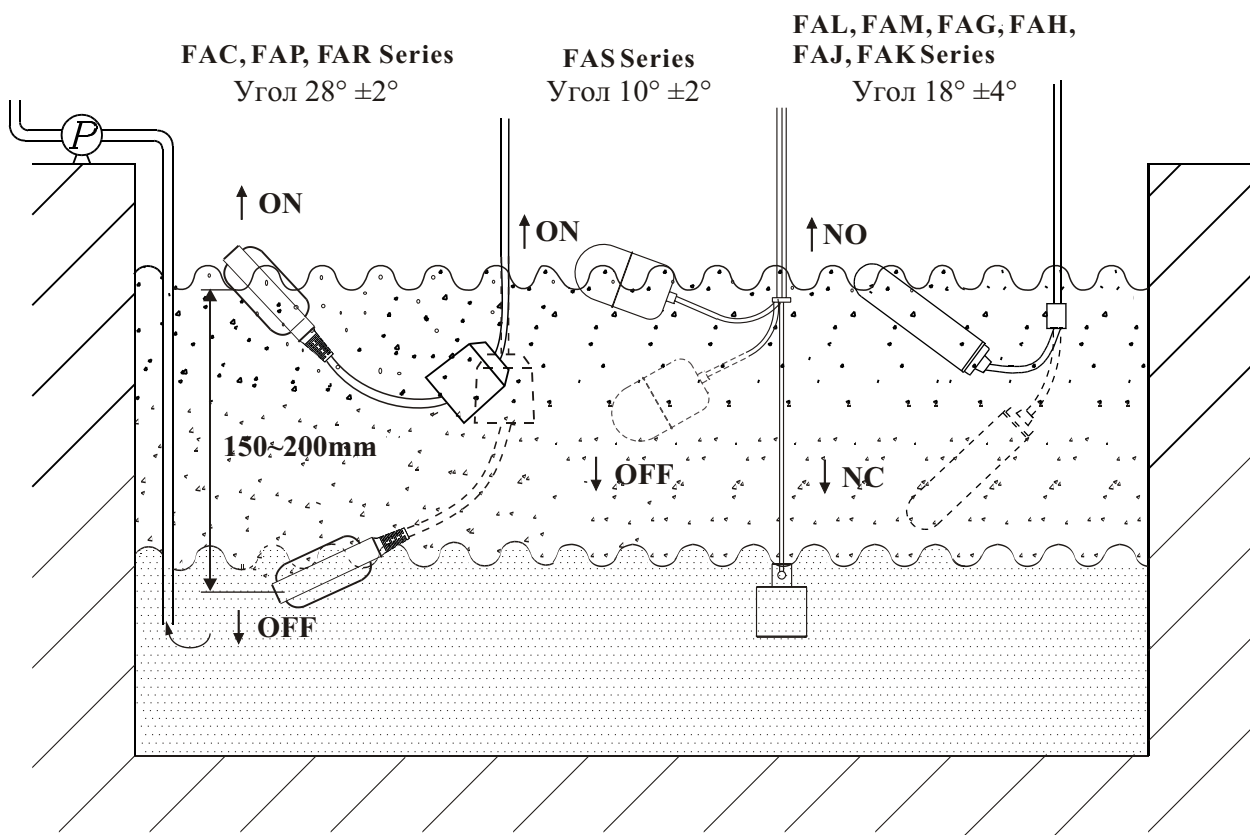
Датчики в качестве контактов имеют микропереключатели.

Переключение с замыканием контактов или размыканием происходит, когда угол наклона датчика достигает угла срабатывания.

Датчики типа FAS изготовлены с использованием в качестве контактов ртутных переключателей. При поднятии уровня контролируемой жидкости, происходит подъем и изменение угла наклона датчика.

Для контроля жидкостей различных температур и свойств датчик может быть изготовлен из пластика или нержавеющей стали.

ПРИМЕНЕНИЕ



SPECIFICATION

STRUCTURE & DIMENSION

1. Cable

The <HAR> approved cable is extremely flexible to ensure a long life-time.

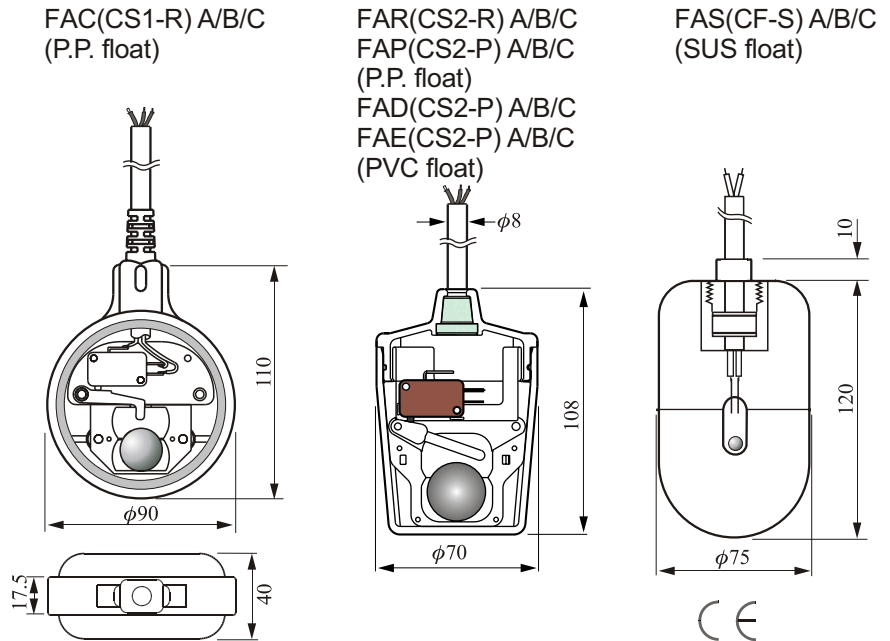
2. Enclosure

The rugged enclosure can prevent the damages from mechanical impact and chemical corrosion. The unit complies with the IP68 enclosure rating.

3. Micro switch

Contact system suitable for applications with high in-rush current.

4. Steel ball



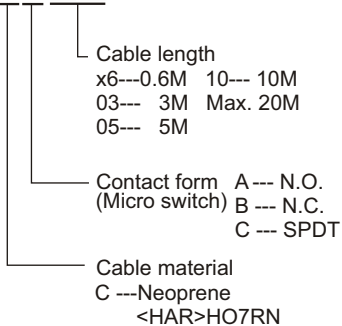
SPECIFICATION

Type	FAC(CS1-R) A/B/C	FAP(CS2-P) A/B/C	FAR(CS2-R) A/B/C	FAD A/B/C	FAE A/B/C	FAS(CF-S) A/B/C
Float Material	P.P.			PVC		SUS304
Cable Specification	Neoprene Cable 1mm ² x3C or 2C	PVC Cable 1.25mm ² x3C or 2C	Neoprene Cable 1mm ² x3C or 2C	Neoprene Cable 1mm ² x3C or 2C	PVC Cable 1.25mm ² x3C or 2C	Silicon Cable 0.75mm ² x3C or 2C
Contact Rating	10A/250Vac (std.) or 15A/250Vac			10A/250Vac (std.) or 15A/250Vac		2A/250Vac
Contact Form	N.O. N.C. or SPDT			N.O. N.C. or SPDT		N.O. N.C. or SPDT
Operating Temp.	-10°C~80°C	0°C~60°C	-10°C~80°C	-10°C~80°C	0°C~60°C	0°C~170°C
Suitable S.G.	0.6			0.6		0.5
Weight Approx.	770g/5M	290g/1M	290g/1M	290g/1M	290g/1M	480g/5M
Pressure(Max.)	2 kg/cm ²	2 kg/cm ²	2 kg/cm ²	2 kg/cm ²	2 kg/cm ²	2 kg/cm ²

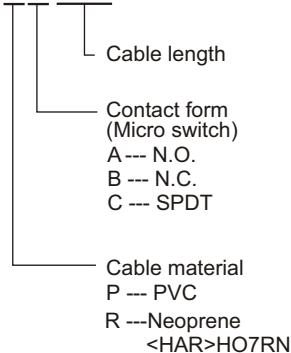
※ For PLC and DCS usage, we recommend to use the REED switch.

FLOAT TYPE CODE

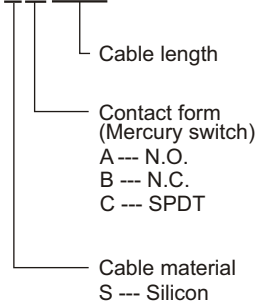
(CS1-R)
FACA□□...PP Float



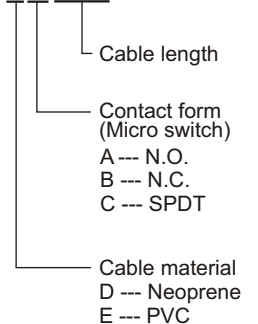
(CS2-P/R)
FAPA□□...PP Float



(CF-SA)
FASA□□...SUS Float



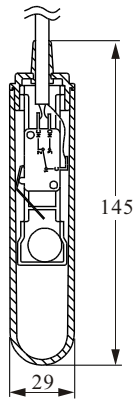
FADA□□...PVC Float



SPECIFICATION

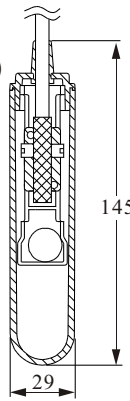
Micro Switch

Order No. FAL A/B/C
FAM A/B/C
(P.P. Float)



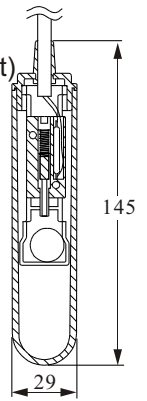
Proximity Switch

Order No. FAG N/P
FAH N/P
(P.P. float)



Reed Switch

Order No. FAJ A/B
FAK A/B
(P.P. Float)



Specification Of Float

Float Material	PP	Pressure	4.5 kg/cm ²
Specific Gravity	≤ 0.8	Protection	IP-68

Switch	Micro Switch	Proximity Switch	Reed Switch
Model	FAL A/B/C---PVC FAM A/B/C---Neoprene	FAG N/P---PVC FAH N/P---Neoprene	FAJ A/B---PVC FAK A/B---Neoprene
Contact Rating	3A 125/250 VAC	100 mA / 10~30 VDC	AC70(VA) / DC50(W)
Contact Form	NO · NC or SPDT	NPN or PNP	NO
Cable Spec	PVC(0.75mm ² × 3C) or Neoprene	PVC(0.75mm ² × 3C) or Neoprene	PVC(0.75mm ² × 3C) or Neoprene
Switch Voltage	600 VAC	500 VAC	300 VAC / 350 VDC
Isolation Resistance	Min 100 MΩ	Min 100 MΩ	Min 10 ¹⁰ Ω
Contact Resistance	Min 100mΩ		Min 100mΩ
Operating Temp.	0~60°C(PVC)----- Liquid State -10~80°C(Neoprene)Liquid State	0~60°C(PVC)----- Liquid State -10~80°C(Neoprene)Liquid State	0~60°C(PVC)----- Liquid State -10~80°C(Neoprene)Liquid State
Actuation Angle	Up18° ± 4° / Down3° ± 3°	Up18° ± 4° / Down3° ± 3°	Up18° ± 4° / Down3° ± 3°
Weight Approx.	113 ± 2g/1mCable	117 ± 2g/1mCable	115 ± 2g/1mCable

※ For PLC and DCS usage, we recommend to use the REED switch.

Float Type Code

FA□□□□-(G)

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

FA□□□□□-(G)

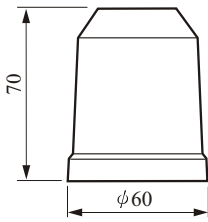
Ground(Optional)
Cable length
x6---0.6M 10--- 10M
03--- 3M Max. 20M
05--- 5M
Contact form (proximity switch)
NA --- NPN N.O.
NB --- NPN N.C.
PA --- PNP N.O.
PB --- PNP N.C.
Cable material
G---PVC
H---Neoprene

FA□□□□□-(G)

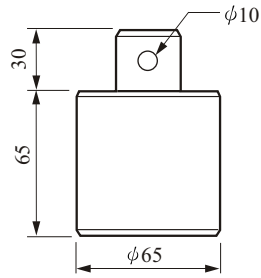
Ground(Optional)
Cable length
x6---0.6M 10--- 10M
03--- 3M Max. 20M
05--- 5M
Contact form (reed switch)
A --- N.O.
B --- N.C.
Cable material
J---PVC
K---Neoprene

DIMENSION OF WEIGHT

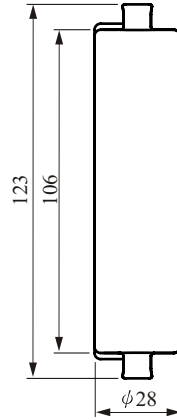
FAPW-03
FAPW-05



FASW



FAA-1471

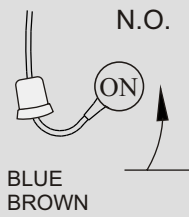


Type	Material	Weight
FAPW-03 FAPW-05	PP	0.3kg 0.5kg
FASW	SUS304	0.5kg
FAA-1471	PP	0.15kg

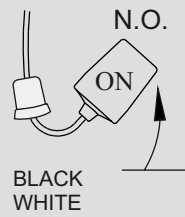
CONTACT FORM

● In Liquid

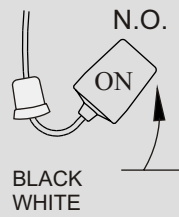
FACA



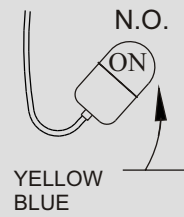
FAPA/FAEA



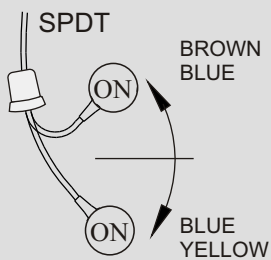
FARA/FADA



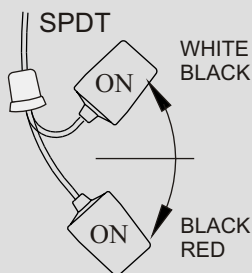
FASA



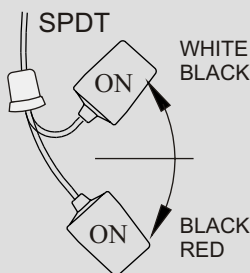
FACC



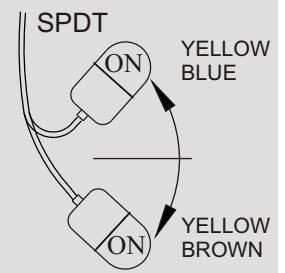
FAPC/FAEC



FARC/FADC

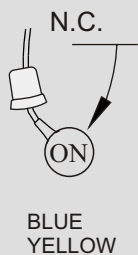


FASC



● In Air

FACB



FAPB/FAEB



FARB/FADB



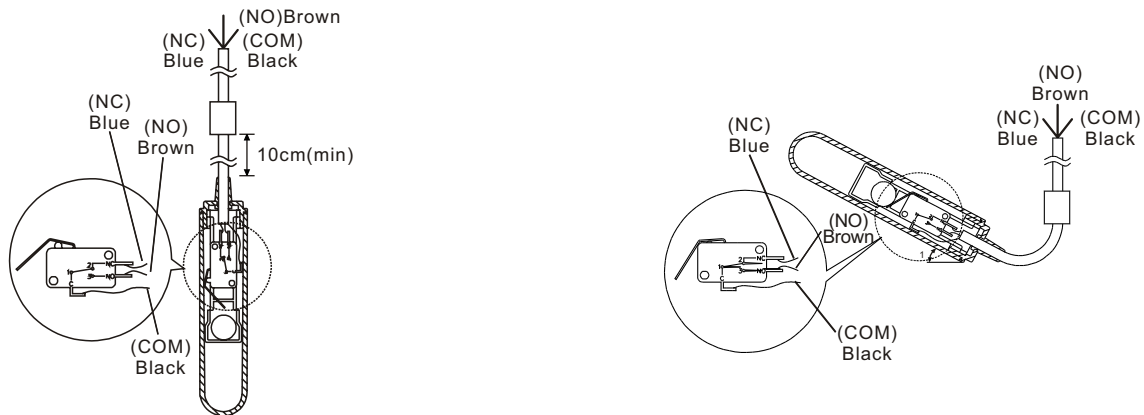
FASB



Wiring

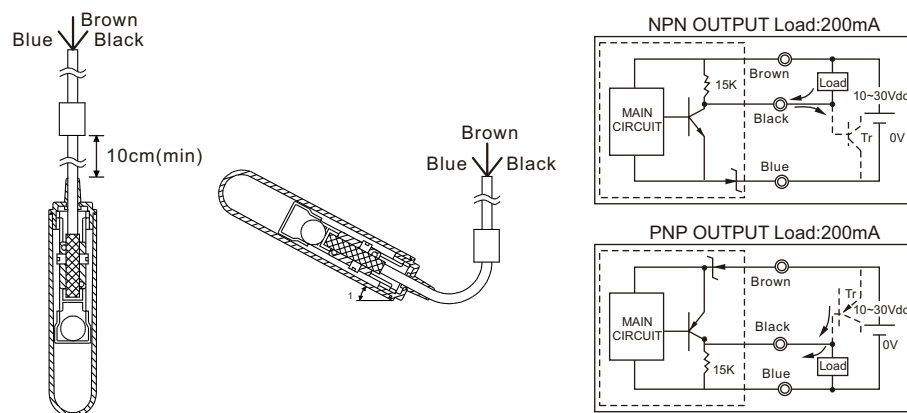
Micro Switch

When float is not in contact with liquid, the blue and black wires are in open state. Contact form is in NC mode. When liquid rises and lifts the float up until it reaches the actuation angle, the brown and black wires will be in open state. Contact form is in NO mode.



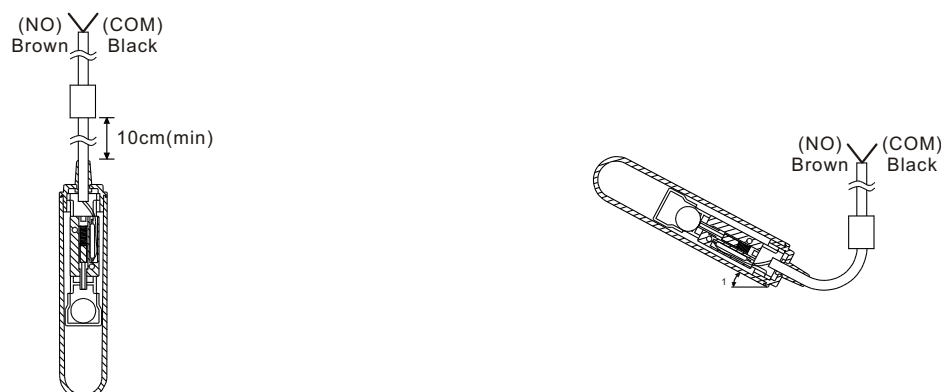
Proximity Switch

When switch is in dry state, metal ball should be more than 1mm away from proximity switch. No signal will be sent out. When liquid rises and lifts the float up to the actuation angle, metal ball will slide into proximity switch sensing range and signal will be sent out.



Reed Switch

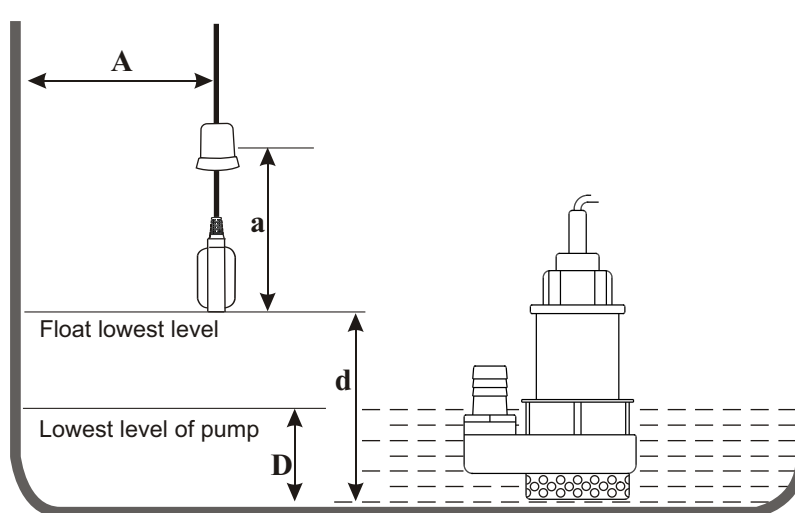
When liquid is in low level, metal ball stays away from sensing range. Brown and black wires are in open state, which is NC mode. When liquid rises and lifts the float up until it reaches the actuation angle, reed switch will be actuated. Brown and black wires will be in open state, which is NO mode.



DIMENSION FOR INSTALLATION

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

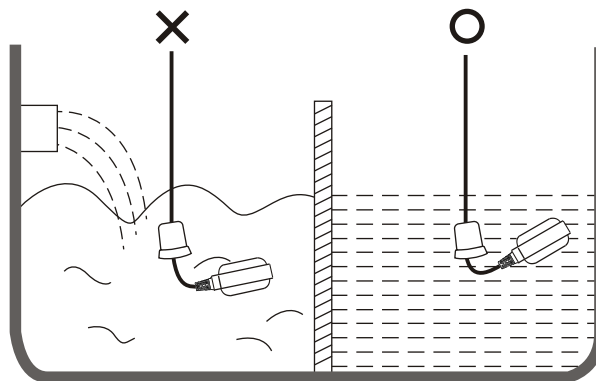
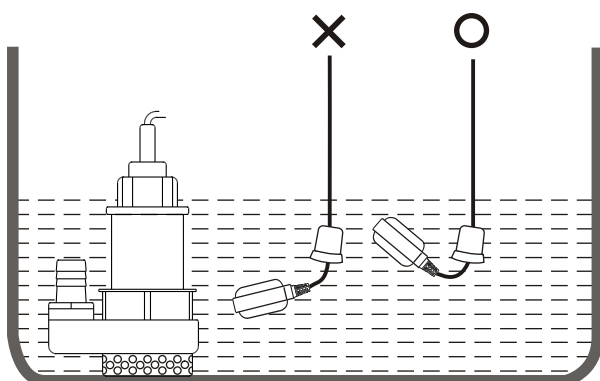
The lowest float level (d) must be higher than the lowest water level of pump (D).



CAUTION FOR INSTALLATION

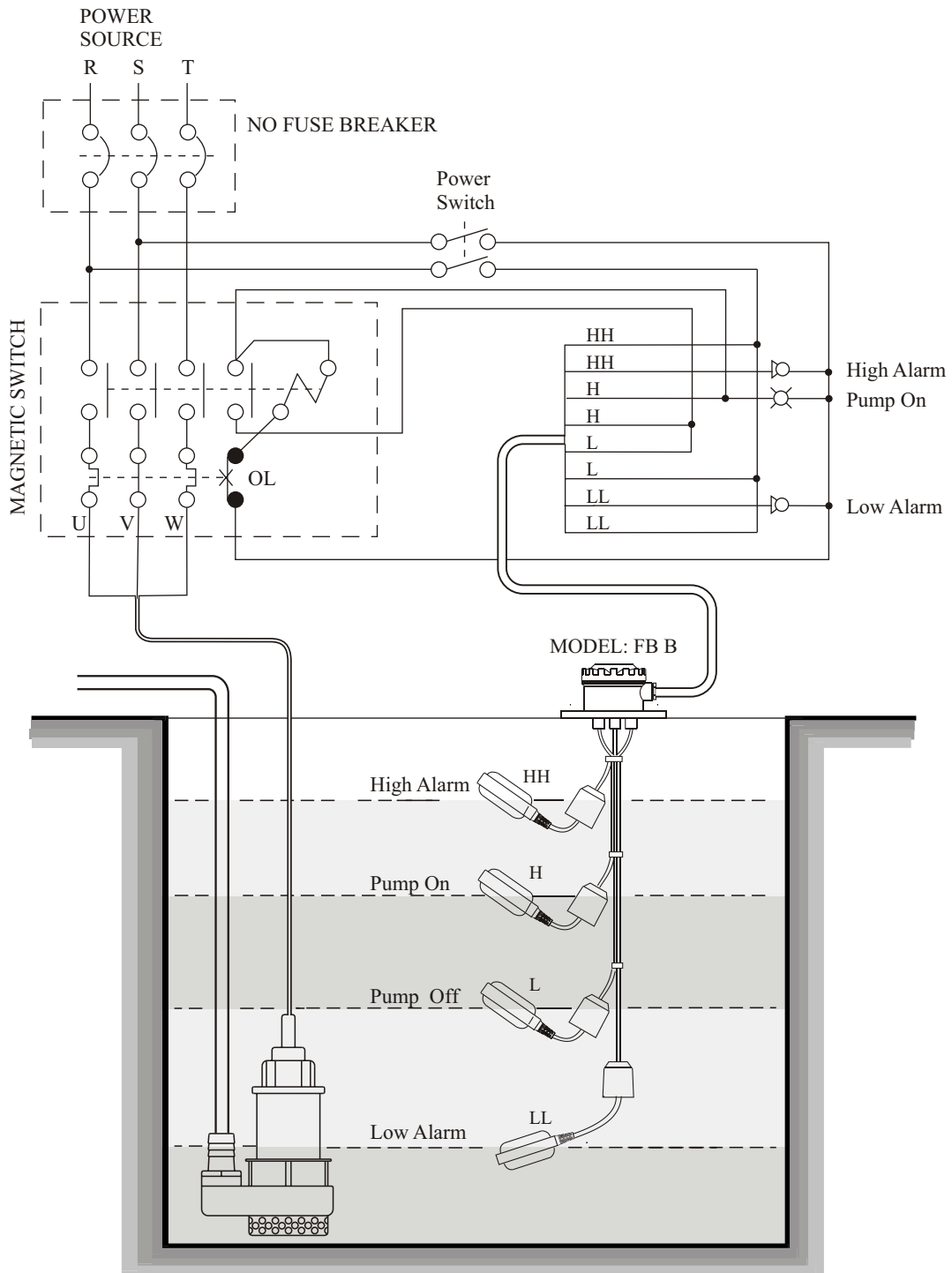
Keep proper distance between installation position and inlet of water pump to prevent float switch being sucked by inlet of water pump.

There should be a proper distance between installation position and inlet of water to prevent direct water impact. If it can't be avoided, please install wave-resistance pipe or wave-resistance plate for protection.



APPLICATION

The FBB type is suitable for installation from the roof of tank for pumping control with level alarms.



HOW TO ORDER FB TYPE

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

For example:

FB-B type is suitable for Corrosive liquid.

FB-A type is suitable for high temperature liquid. (170°C)

DISTANCE 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		

FB ()

Cable Length (unit: mm)

0500: 50cm (01~50)

1000: 100cm(51~100)

1500: 150cm(101~150)

※ 50cm/per unit

※ Duer 10M, 1st digit=A

Ex: 15M= A150

20M= A200

Cable Material

S: Stainless N: Nylon

Weight quantity

1~4

Weight material

C: P.P.

S: SUS304

Float quantity

1~4

Float material

C: P.P. (φ90x110 Neoprene cable)

P: P.P. (φ70x108 PVC cable)

R: P.P. (φ70x108 Neoprene cable)

S: SUS(φ75x120 Silicon cable)

D: PVC(φ70x108 Neoprene cable)

E: PVC(φ70x108 PVCcable)

L: P.P. (φ29x145 PVC cable)

M: P.P. (φ29x145 Neoprene cable)

G: P.P. (φ29x145 PVC cable)

H: P.P. (φ29x145 Neoprene cable)

J: P.P. (φ29x145 PVC cable)

K: P.P. (φ29x145 Neoprene cable)

Housing

A: Aluminum B: Plastic S: SUS304

MODEL: FB A

MODEL: FB B

MODEL: FB S

