

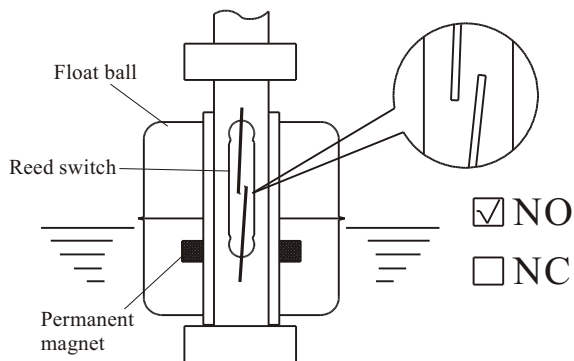


PRINCIPLE

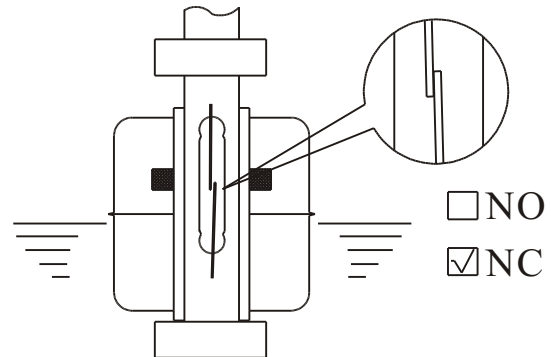
The single unit or multiple reed switch units are housed tightly in stainless steel or engineering plastic stem, and the permanent magnet is intercircled into the middle of the specified float ball(s). You can mount the float ball to penetrating through the stem, then the liquid buoyancy will deliver the float ball up and down at the specified position by graduating rings.

When the float internal magnet approaches the reed switch, it will actuate the reed switch contact point to create an open or close circuit. We can apply such on-off output signals to reach liquid level controlling and monitoring purpose.

The figures below show the float orientations on N.O. (Normal Open) and N.C. (Normal Close).



Rising float ball to actuate the reed switch



Rising float ball to switch off.

FEATURES

- ★ Multiple points measuring, multiple level points are available for custom-built.
- ★ It is used the magnet to actuate the reed switch without any extra electric power source. Each reed switch is durable for operation life reaching 2 million times.
- ★ All output signal wiring are simplified in same junction box (housing) to economize the external wiring construction.
- ★ FC(D) type magnetic float level switches are more economical in budget than other level switches by comparison in multiple points.
- ★ The housing protection rating up to IP65.
- ★ Rugged construction and multiple options for materials from engineering plastics as PVDF, PP, PVC, and stainless steels as SUS304, SUS316, float switches can be applied to versatile applications in chemical corrosion of acidity and alkalinity liquid, solvents or oil fuels.
- ★ The reed switch and lead wire are isolated absolutely with liquids. All stainless steel switches are applicable to high pressure and high temperature performances.

CHEMICAL RESISTANCE

● Excellent ○ Good △ Fair × Corroded

Chemical	Concentration %	Temp		Plastic				Rubber		Stainless	
		C	°F	PVC	PP	PVDF	PTFE	NBR	304	316	
Ammonia Water NH_4OH	10	40	104	●	●	●	●	○			
	10	80	176		○	●	●				
Aque Regia $3\text{HCl}+\text{HNO}_3$	10	40	104	△	△	●	●				
	10	80	176			●	●				
Benzene C_6H_6	Pure	40	104	×	△	○	●				
		80	176			△	●				
Bleaching Liquor $\text{Ca}(\text{ClO})_2$	5	40	104	●		●	●				
	5	80	176			●	●				
	20	40	104	●		●	●				
	20	80	176			●	●				
Boric Acid H_3BO_3	Satu	40	104	●	●	●	●	●			
		80	176		●	●	●	○			
Brine		40	104	●	●	●	●	●			
		80	176		●	●	●				
Butadiene $\text{CH}_2=\text{CH}=\text{CH}=\text{CH}_2$	Gas	40	104	●		●	●	△			
		80	176			●	●				
Butane $\text{CH}(\text{CH}_3)_2\text{CH}_3$	Gas	40	104	●	●	●	●				
		80	176		●	●	●				
Nitric Acid HNO_3	10	40	104	●	●	●	●	●	●	●	
	10	80	176	×	○	●	●		●	●	
	30	40	104	●	●	●	●		●	●	
	30	80	176	×	○	●	●		●	●	
	50	40	104	○	○	●	●		●	●	
	50	80	176	×	×	○	●				
	70	40	104	○	×	●	●		○	●	
	70	80	176	×		○	●				
	98	40	104			○	○				
	98	80	176				△				
Oxalic Acid HOOCCOOH	20	40	104	●	●	●	●	●		△	
	20	80	176		●	●	●				
	50	40	104	●	●	●	●			△	
	50	80	176		●	●	●				
Phosphoric Acid H_3PO_4	10	40	104	●	●	●	●	●	●	●	
	10	80	176		○	●	●	△	●	●	
	50	40	104	●	●	●	●	●	●	●	
	50	80	176		△	○	○	×	●	●	
	80	40	104	●	○	●	●	○	●	●	
	80	80	176		△	●	●		●	●	
Butane $\text{CH}(\text{CH}_3)_2\text{CH}_3$	Gas	40	104	●	●	●	●				
		80	176		●	●	●				
Sodium Hydroxide NaOH	15	40	104	●	●	●	●	●	●	●	
	15	80	176		○	△	●	△	×	×	
	30	40	104	●	●	●	●	●	●	●	
	30	80	176		○	△	●	●	×	×	
	50	40	104	●	●	○	●	●	●	●	
	50	80	176		○	×	●	●	×	×	
	70	40	104	○	○	○	●				
	70	80	176		○	×	●				

Chemical	Concentration %	Temp		Plastic				Rubber		Stainless	
		C	°F	PVC	PP	PVDF	PTFE	NBR	304	316	
Sodium Hypochlorite NaClO	3	40	104	●	○	●	●			△	○
	3	80	176								
	5	40	104	●	○	●	●			△	○
	5	80	176								
	7	40	104	●	△	○	●		×	×	
	7	80	176								
	10	40	104	●	△	●	●		×	×	
	10	80	176								
	13	40	104	●	△	●	●			×	
	13	80	176								
Sulfuric Acid H_2SO_4	10	40	104	●	●	●	●	●	●	●	
	10	80	176		●	●	●	○	○	○	
	30	40	104	●	●	●	●	●	×	×	
	30	80	176		●	●	●	○	×	×	
	50	40	104	●	●	●	●	○	×	×	
	50	80	176		●	●	●	△	×	×	
	60	40	104	●	●	●	●	●	×	×	
	60	80	176		○	●	●	○	×	×	
	70	40	104	●	●	●	●	○	×	×	
	70	80	176		○	●	●	△	×	×	
	80	40	104	●	●	●	●	○	×	×	
	80	80	176		○	●	●	△			
	90	40	104	○	●	●	●	△	×	×	
	90	80	176		○	●	●	△			
Toluene $\text{C}_6\text{H}_5\text{CH}_3$		40	104		△	●	●				
		80	176				○				
Chlorine Gas Cl_2	Wet	40	104	○		●	●				
	Wet	80	176			△	●				
	Dry	40	104	●		●	●				
	Dry	80	176			●	●				
Chromic Acid H_2CrO_4	10	40	104	●		●	●				
	10	80	176			●	●				
	20	40	104	△		●	●				
	20	80	176			●	●				
	40	40	104	△		●	●				
	40	80	176			●	●				
	50	40	104	×		●	●				
	50	80	176			△	●				
Hydrochloric Acid HCl	15	40	104	●	●	●	●	○			
	15	80	176		●	●	●				
	25	40	104	●	●	●	●	×			
	25	80	176		●	●	●				
	35	40	104	●	●	●	●	×			
	35	80	176		○	●	●				
	38	40	104	●	●	●	●	×			
	38	80	176		○	●	○				

● Excellent ○ Good △ Fair × Corroded

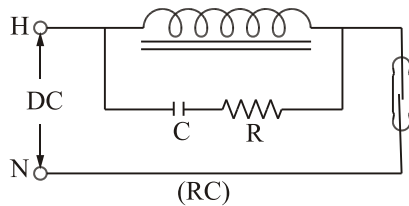
Chemical	Concentration %	Temp		Plastic				Rubber	Stainless	
		C	°F	PVC	PP	PVDF	PTFE	NBR	304	316
Citric Acid	10	40	104	●	●	●	●	●	●	●
$C_6H_8O_7$	10	80	176	○	●	●	●	●		
Gasoline	10	40	104	●		●	●			
	10	80	176			●	●			
Diesel Fuels		40	104			●	●		●	●
		80	176			●	●		●	●
Ethyl Alcohol C_2H_5OH	Pure	40	104	●	●	●	●	●	○	○
		80	176		○	●	●	○		
Formic Acid $HCOOH$	90	40	104	○	○	●	●			
		80	176			●	●			
Hydrofluoric Acid HF	Dilute	40	104	●	○	●	●			
	Dilute	80	176		○	●	●			
	30	40	104	○	○	●	●			
	30	80	176	×	○	●	●			
	40	40	104	△	○	●	●			
	40	80	176		○	●	●			
	50	40	104	△	○	●	●			
	50	80	176		○	●	●			
Hydrogen peroxide H_2O_2	5	40	104	●	●	●	●		○	●
	5	80	176		○	●	●			
	20	40	104	●	●	●	●			
	20	80	176		○	●	●			
	30	40	104	○	○	●	●			
	30	80	176		△	●	●			
	50	40	104	△	×	●	●			
	50	80	176			●	●			
	90	40	104			●	●			
	90	80	176			●	●			
Isopropyl Alcohol $(CH_3)_2CHOH$	Pure	40	104	●	●	●	●	○		
		80	176			●	●			
Kerosene		40	104	●	○	●	●			
		80	176			●	●			
Methyl Alcohol CH_3OH		40	104	○	●	●	●	△		
		80	176		○	●	●			
Methyl Ethyl Ketone CH_3COCH_3		40	104		△		●			
		80	176				●			
Potassium Chromate K_2CrO_4		40	104	●	●	●	●	●		
		80	176		○	●	●	○		

CONTACT PROTECTION CIRCUITS

INDUCTIVE LOADS

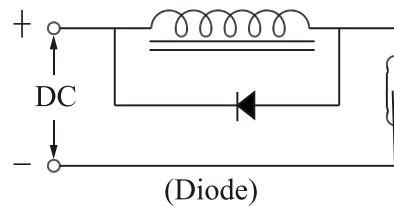
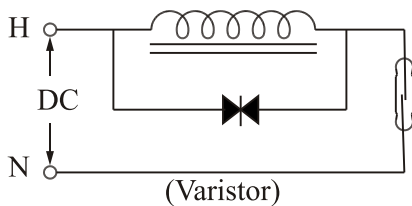
When using a reed switch with inductive loads such as motors, relays, solenoids, etc., The contact will be subjected to a high induced voltage during opening of the contact (load circuit).

Such high induced voltage (transients) may cause damages to the reed switch or significantly reduce its life. Therefore, protective circuits such as: RC (snubber), varistors or clamping diodes are recommended.



$$C = \frac{I^2}{10} (\mu F)$$

$$R = \frac{E}{10I(1 + \frac{50}{E})}$$

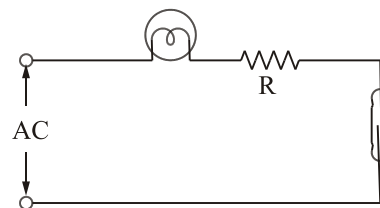
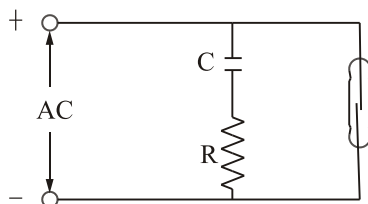


It is prohibited to connect directly with any solenoid valve, motor or magnetic switch.

CAPACITIVE LOADS

When using a reed switch with capacitive loads such as capacitors, incandescent lamps or long cables, the contact will be subjected to a high surge (inrush) current.

Therefore, protective circuits such as: surge suppressors or current limiting resistors are recommended.



HOUSING SPECIFICATION

B

Material : Aluminum
Enclosure : IP65
Poles : 2 ~12
Max.Temp. : -20 C ~200 C

C

Material : PP+FIBER
Enclosure : IP65
Poles : 2 ~12
Max.Temp. : -20 C ~80 C

D Explosion-proof

Material : Aluminum
Enclosure : Ex d IIB T4
Poles : 2 ~6
Max.Temp. : -20 C ~200 C

E

Material : Aluminum
Enclosure : IP65
Poles : 2 ~6
Max.Temp. : -20 C ~200 C

G

Material : PC
Enclosure : IP65
Poles : 2 ~6
Max.Temp. : -20 C ~80 C

H

Material : Aluminum
Enclosure : IP65
Poles : 2 ~6
Max.Temp. : -20 C ~100 C

K Explosion-proof

Material : Aluminum
Enclosure : CESA 03 ATEX 108
Poles : 2 ~6
Max.Temp. : -20 C ~100 C

L Explosion-proof

Material : Aluminum
Enclosure : CESA 03 ATEX 108
Poles : 2 ~6
Max.Temp. : -20 C ~100 C

*Recommend for flow switch used

M Explosion-proof

Material : SUS304 or SUS316
Enclosure : Ex d IIB T4
Poles : 2 ~6
Max.Temp. : -20 C ~200 C

*Recommend for side float sw. used

N Explosion-proof

Material : SUS304 or SUS316
Enclosure : Ex d IIB T4
Poles : 2 ~6
Max.Temp. : -20 C ~200 C

P

Material : Plastic
Enclosure : IP65
Poles : 2 ~6
Max.Temp. : -20 C ~80 C

Cable Grand EEEx d IIC

Material: Washer ---NBR
Body--- Aluminum (3/4" NPT)
Nickel plated (1/2" NPT)

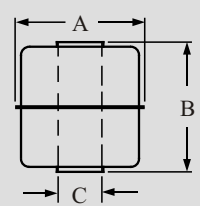
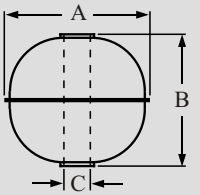
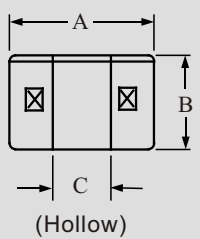
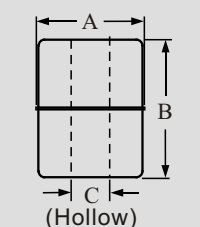
29-1104

Max=9
Min=6

29-1108

Max=12
Min=9

FLOAT SPECIFICATIONS

MODEL	TYPE	AxBx C	S.G.	Max. Pressure (kg/cm ²)	Weight (g)	Material/Color	Max. Temp. (C)
	S1	28 28 9.5	E>0.8	10	8	SUS 316	200
	S3	45 55 15	E>0.65	12	36	SUS 316	200
	S6	75 108 19	E>0.5	10	145	SUS 304	200
	S2	41 38 311	E>0.7	35	19	SUS 316	200
	S4	52 52 15	E>0.55	30	33	SUS 316	200
	S5	75 73 19	E>0.55	30	103	SUS 304	200
	S7	30 28 9.5	E>0.68	30	7	SUS 316	200
	P1	25 15 10	E>0.8	4	4	PP / white black	80
	P2	25 25 10	E>0.7	4	5	PP / white black	80
	P3	48 45 18.5	E>0.6	4	37	PP / black	80
	P4	20 25 10	E>0.8	4	5	PP/black	80
	F2	42 44 14	E>0.8	5	20	PP	80
	F3	45 45 20	E>0.5	5	25	PP	80
	F4	48 70 18	E>0.8	5	65	PVDF	120

THE PROPERTIES BETWEEN LIQUID AND FLOAT

Please choose the proper float subject to above independent specified terms and chemical characters.

1. Temperature: PVDF Max. 120 C,
PP Max. 80 C,
SUS304/ 316 Max. 200 C

2. Pressure: SUS304/ 316 Float, Max. 30kg/cm²
Engineering plastic, Max. 4kg/cm²

3. Viscosity: Please choose smaller S.G. with greater diameter floats to cope with high viscosity liquid applications.

4. Chemical: Please use plastic float for acid/alkaline corrosion of chemical applications. PVDF float is noted for high temperature cases.

5. Benzine: Please choose stainless steel floats to apply in any gasoline, fuel oil, petroleum application.

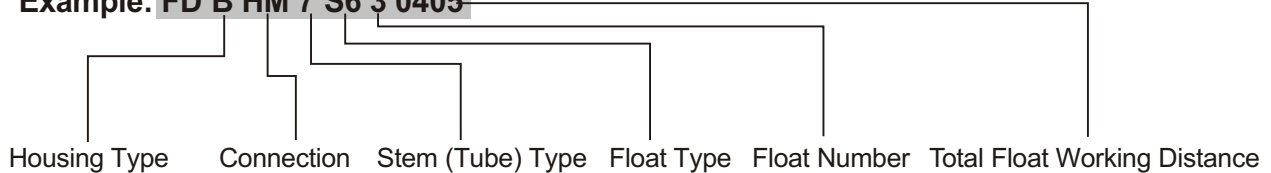
6. S.G.: The float S.G. Must be smaller than the liquid, otherwise, the liquid buoyancy can not deliver the float upword.

ORDER SPECIFIED

The magnetic level switch can be done as per customer's specified technical data such as the flange, thread, housing, float ball diameter, float ball number, the float traveling up or down actuated position by N.C. or N.O. output, the total float working distance (L) or each

independent float actuating position, please refer the order information to define the application specifications. A single ball driving multiple actuated points is available to apply on the order form.

Example: FD B HM 7 S6 3 0405



It is requested the minimum interval for a single ball driving dual actuated positions (D) or neighboring two balls (B), or from the bottom to the lowest ball interval (C) or from the mounting position to the first ball (A), otherwise, there will be some magnetic mutually interference involved by insufficient interval. To ensure the defined distance, please see the data below:

A= Minimum distance from the mounting position to the highest actuation level.

B= Minimum distance between any two actuation levels.

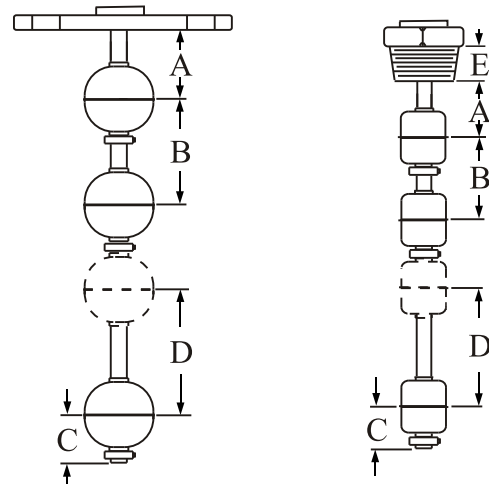
C= Minimum distance from end of the lowest level.

D= Minimum distance between two actuation levels by one float.

E= Screw length

FLOAT TYPE	S1	S2	S3	S4	S5	S6	P2	P3	F1
A(mm)	25	32	40	39	50	70	27	50	50
B(mm)	50	64	82	78	99	136	55	85	99
C(mm)	25	32	40	39	50	70	27	43	50
D(mm)	30	40	55	50	65	70	30	45	65

E (mm)	SCREW
14	1/2"PT
16	3/4"PT
19	1"PT
22	1-1/4"PT
22	1-1/2"PT
25	2"PT
28	2-1/2"PT
37	3"PT



HOW TO MAKE YOUR ORDER

F

Length: mm (total)

Quantity of float

Float Type (see page 6)
P1, P2, P3, P4
F2, F3, F4
S1, S2, S3, S4, S5, S6, S7

Stem

Code size	Material
1: 8	SUS304 or SUS316
2: Omit	
3: 9.5	SUS304 or SUS316
4: 12.7	SUS304 or SUS316
5: 17.2	PP
6: 16	PVDF
7: 17.2	SUS304 or SUS316
8: 12.7	PP
9: 12.7	PVC

Connection Type

Housing Type

B: AL. (Big space) IP65
C: PP (Anti-acidity) IP65
D: Aluminum Ex d IIB T4
E: AL. (Small space) IP65
G: PC (Anti-acidity) IP65
K: AL. (Explosion-proof)
EEEx d IIC T6
N: SUS304 or SUS316
Ex d IIB T4
P: Plastic IP65
-: Without housing

C: Metal (Stem)
D: Plastic (Stem)

Size for flange or screw		Pressure range or other
A: 3/8" (10A)	I: 4" (100A)	M: 5kg/cm ² JIS
B: 1/2" (15A)	J: 5" (125A)	N: 10kg/cm ² JIS
C: 3/4" (20A)	K: 6" (150A)	O: 150Lbs ANSI
D: 1" (25A)	S: Others	P: 300Lbs ANSI
E: 1-1/2" (40A)	1: 1/8"	Q: PT
F: 2" (50A)	2: 1/4"	R: PF
G: 2-1/2" (65A)	3: 1-1/4" (32A)	T: BSP (DIN)
H: 3" (80A)		U: NPT
		V: GAS
		S: Others
		W: PN10 (10Bar)
		X: PN16 (16Bar)
		Y: PN25 (25Bar)
		Z: PN40 (40Bar)
		J: Adjustment screw
		K: Adjustment flange

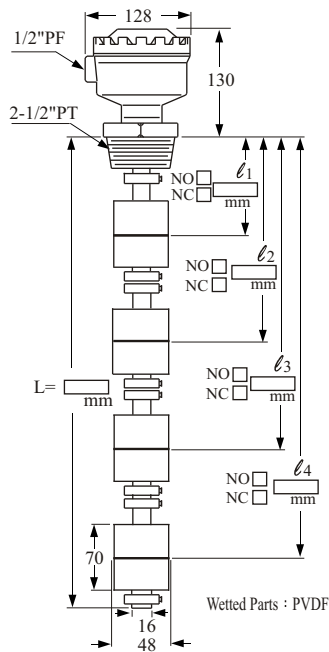
※Certified by GL, ABS Marine grade
are available. (Please see page 17)

ANTI-CORROSION SCREW TYPE / FLANGE TYPE

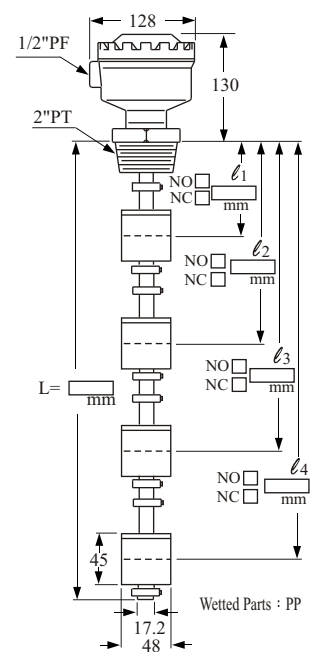
Housing material apply by PP, wet portion material options in PP, PVDF, specially applicable for chemical applications against corrosive environments.



Type FC C (GQ) 6 F4 4



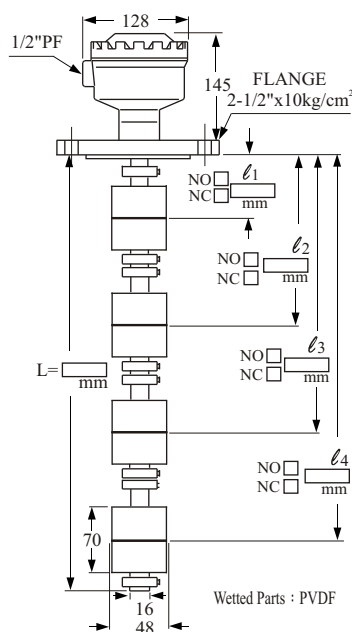
Type FC C (FQ) 5 P3 4



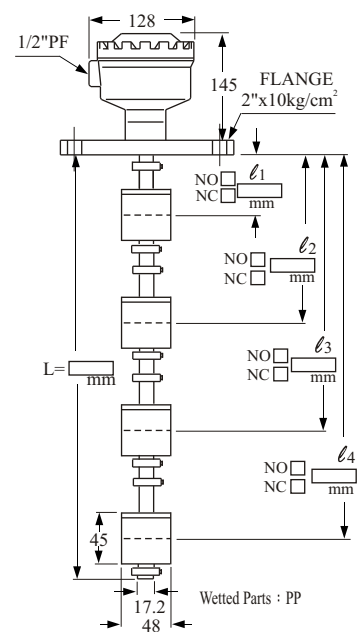
Order information

Type	Housing Type			
FC	C	(FQ)	6	F1 4
Connection Flanges	Pipe Diameter	Float Type	Float Quantity	
GQ=2-1/2" PT	6= 16	F4=PVDF 48x70	1~ 4	
FQ=2" PT	5= 17.2	P3=PP 48x45	1~ 4	
GN=2-1/2" 10kg/cm ²	6= 16	F4=PVDF 48x70	1~ 4	
FN=2" 10kg/cm ²	5= 17.2	P3=PP 48x45	1~ 4	

Type FC C (GN) 6 F4 4



Type FC C (FN) 5 P3 4

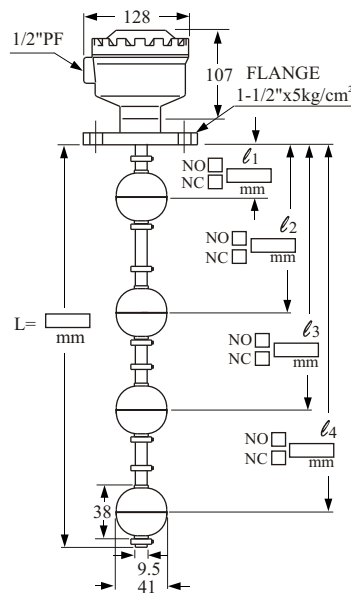


STANDARD FLANGE TYPE

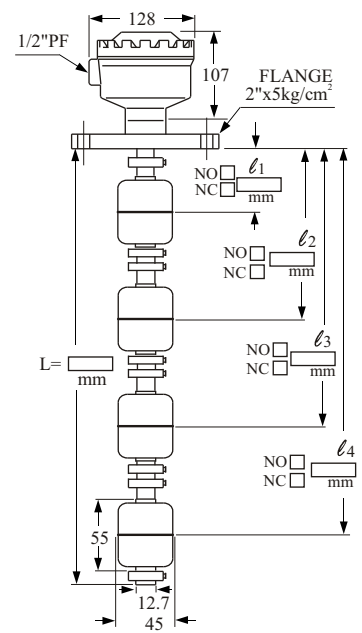
The housing complies with the IP65 rating and can therefore be used in outdoor environment.



Type FD B (EM) 3 S2 4



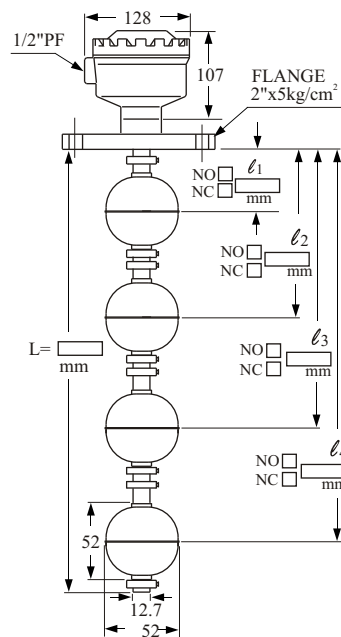
Type FD B (FM) 4 S3 4



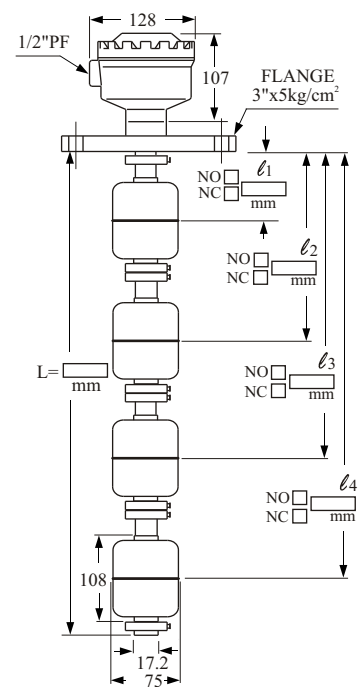
Order information

Type	Housing Type			
FD	B	(HM)	7	S6 4
Connection Flanges	Pipe Diameter	Float Type	Float Quantity	
EM=1-1/2" 5kg/cm ²	3= 9.5	S2= 41x38	1~4	
FM=2" 5kg/cm ²	4= 12.7	S3= 45x55	1~4	
FM=2" 5kg/cm ²	4= 12.7	S4= 52x52	1~4	
HM=3" 5kg/cm ²	7= 17.2	S6= 75x108	1~4	

Type FD B (FM) 4 S4 4



Type FD B (HM) 7 S6 4

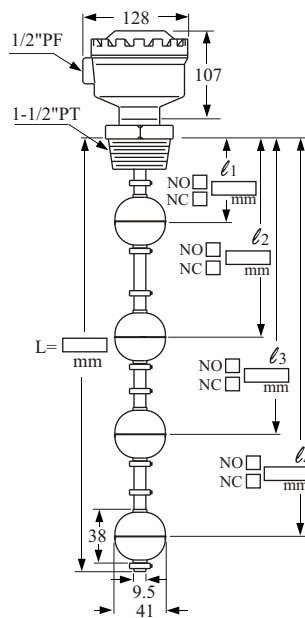


STANDARD SCREW TYPE

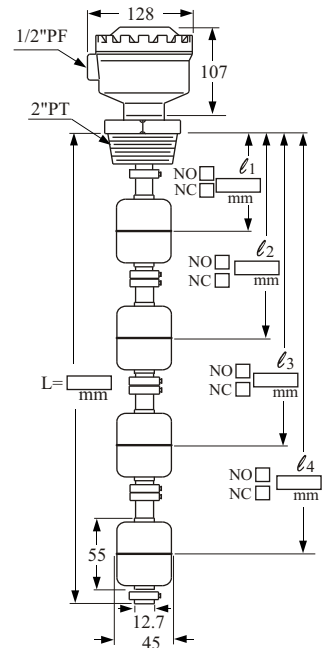
The housing complies with the IP65 rating and can therefore be used in outdoor environment.



Type FD B (EQ) 3 S2 4



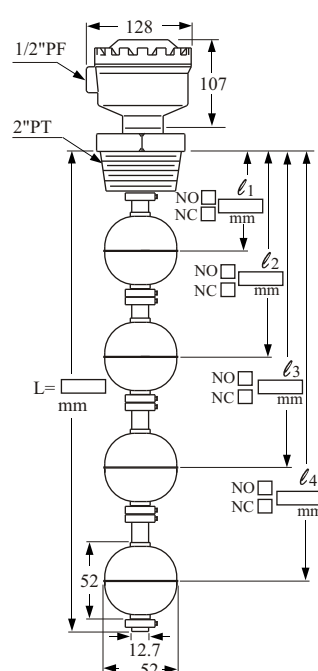
Type FD B (FQ) 4 S3 4



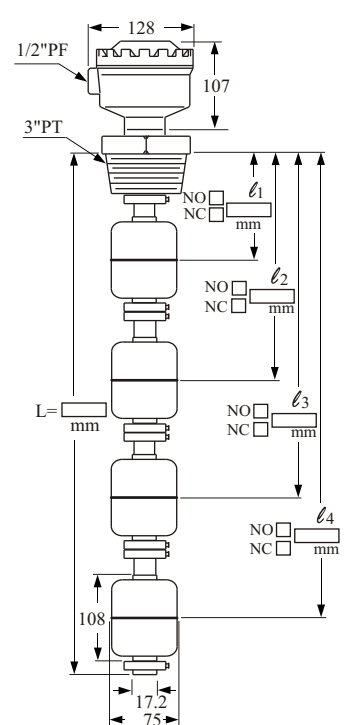
Order information

Type	Housing Type			
FD	B	(HQ)	7	S6 4
Connection Flanges	Pipe Diameter	Float Type	Float Quantity	
EQ=1-1/2" PT	3= 9.5	S2= 41x38	1~ 4	
FQ=2" PT	4= 12.7	S3= 45x55	1~ 4	
FQ=2" PT	4= 12.7	S4= 52x52	1~ 4	
HQ=3" PT	7= 17.2	S6= 75x108	1~ 4	

Type FD B (FQ) 4 S4 4

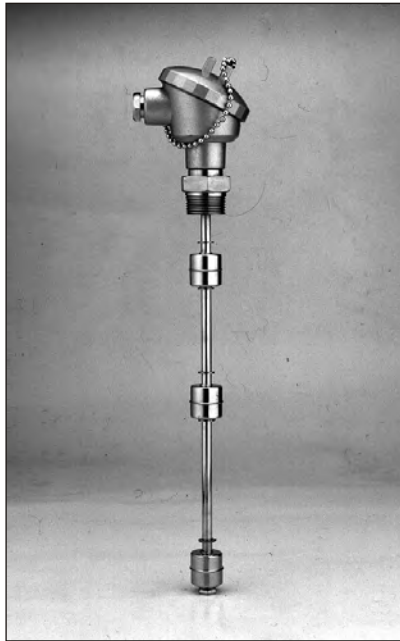


Type FD B (HQ) 7 S6 4

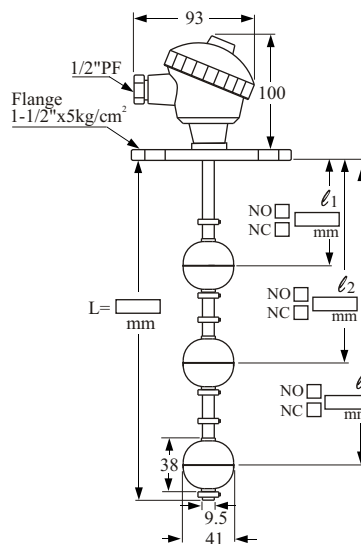


SCREW TYPE / FLANGE TYPE

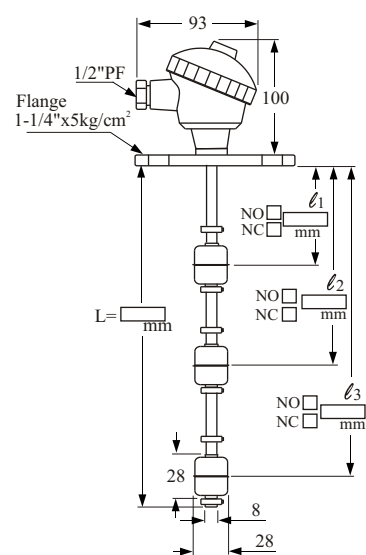
The housing complies with the IP65 rating and can therefore be used in outdoor environment.



Type FD E (EM) 3 S2 3



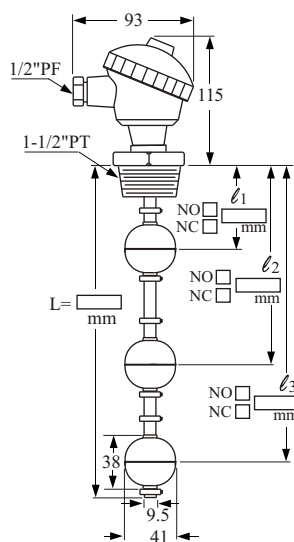
Type FD E (3M) 1 S1 3



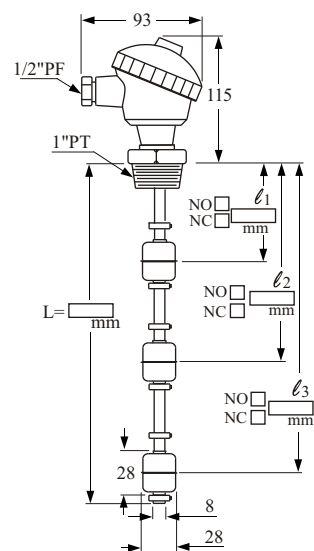
Order information

Type	Housing Type			
FD	E	(3Q)	1	S1 3
Connection Flanges	Pipe Diameter	Float Type	Float Quantity	
EM=1-1/2" 5kg/cm²	3= 9.5	S2= 41x38	1~ 3	
3M=1-1/4" 5kg/cm²	1= 8	S1= 28x28	1~ 3	
EQ=1-1/2" PT	3= 9.5	S2= 41x38	1~ 3	
DQ=1"PT	1= 8	S1= 28x28	1~ 3	

Type FD E (EQ) 3 S2 3



Type FD E (DQ) 1 S1 3



ENCLOSURE EXPLOSION PROOF

FLANGE TYPE

ATEX108  CESI 03 EX d IIB T3~T6

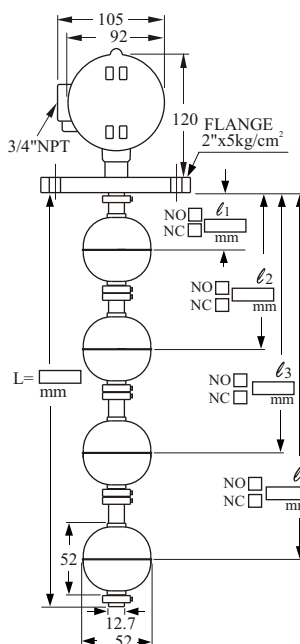
Order information

Type Housing Type

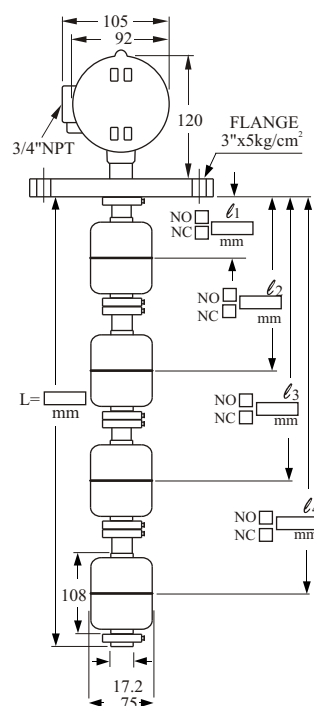
FD - K - HM - 7 - S6 - 4

Connection Flanges	Pipe Diameter	Float Type	Float Quantity
EM=1-1/2" 5kg/cm ²	3= 9.5	S2= 41x38	1~ 4
FM=2" 5kg/cm ²	4= 12.7	S3= 45x55	1~ 4
FM=2" 5kg/cm ²	4= 12.7	S4= 52x52	1~ 4
HM=3" 5kg/cm ²	7= 17.2	S6= 75x108	1~ 4

FD K (FM) 4 S4 4



 FD K (HM) 7 S6 4



SCREW TYPE

 EEx d IIC T6

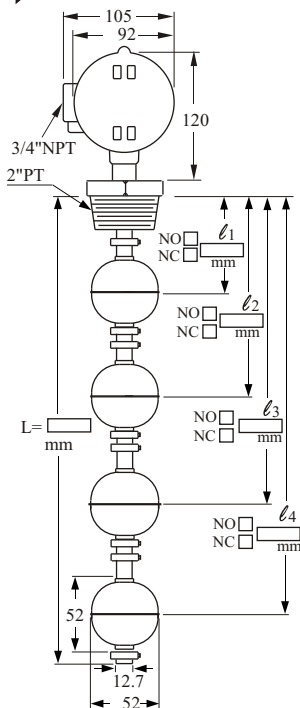
Order information

Type Housing Type

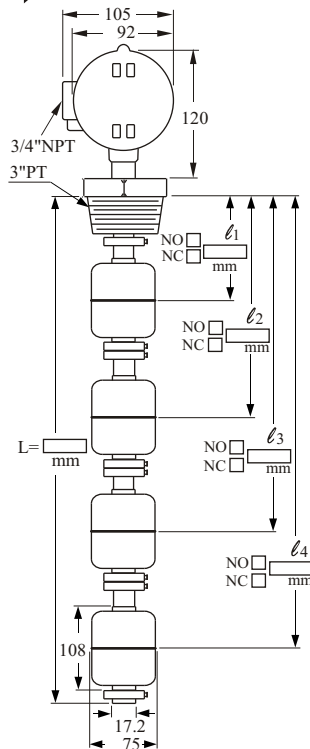
FD - K - HQ - 7 - S6 - 4

Connection Flanges	Pipe Diameter	Float Type	Float Quantity
EQ=1-1/2" PT	3= 9.5	S2= 41x38	1~ 4
FQ=2" PT	4= 12.7	S3= 45x55	1~ 4
FQ=2" PT	4= 12.7	S4= 52x52	1~ 4
HQ=3" PT	7= 17.2	S6= 75x108	1~ 4

 FD K (FQ) 4 S4 4



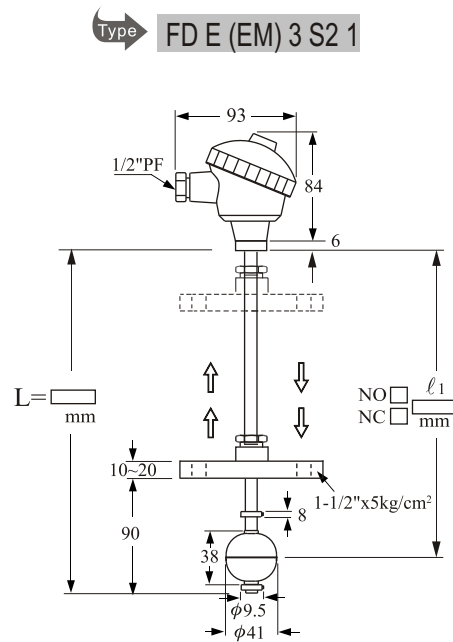
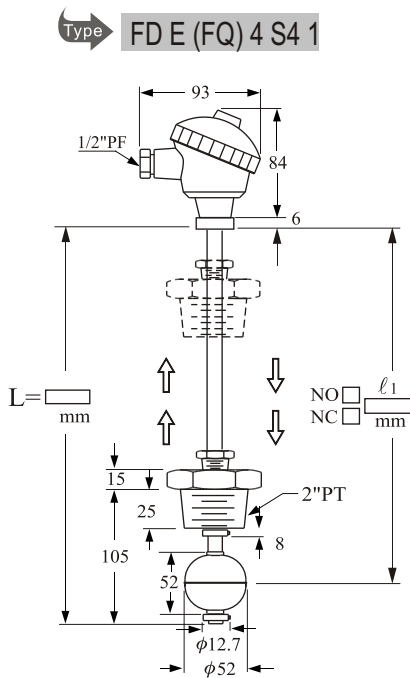
 FD K (HQ) 7 S6 4



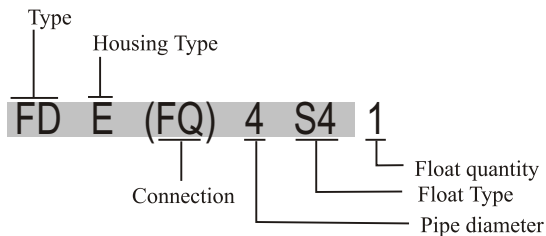
VERTICAL ADJUSTMENT TYPE

This is a special design for some liquid applications requiring monitoring different actuation levels frequently. The user needs only to loose the hexagon nut, then remove the mounted screw/ flange up or down to achieve the actuated level position adjustment.

- * Applicable at tank interior pressure under 5 kg/cm^2 .
- * Standard specification 80 C, special order of max. 200 C available.
- * Switch contact: 10W/ 250Vac SPDT
40W/ 250Vac SPDT
50W/ 250Vac SPST
- * Customer specified flange/ screw acceptable.



Order information



Connection	Pipe Diameter	Float Type
EJ=1-1/2" PT	3= $\phi 9.5$	S2= $\phi 41 \times 38$
FJ=2" PT	4= $\phi 12.7$	S4= $\phi 52 \times 52$
EK=1-1/2" 5kg/cm ²	3= $\phi 9.5$	S2= $\phi 41 \times 38$

- * Please specify the ℓ_1 while placing an order.
(Length from lower end of housing to center line of float ball)

TEST ROD

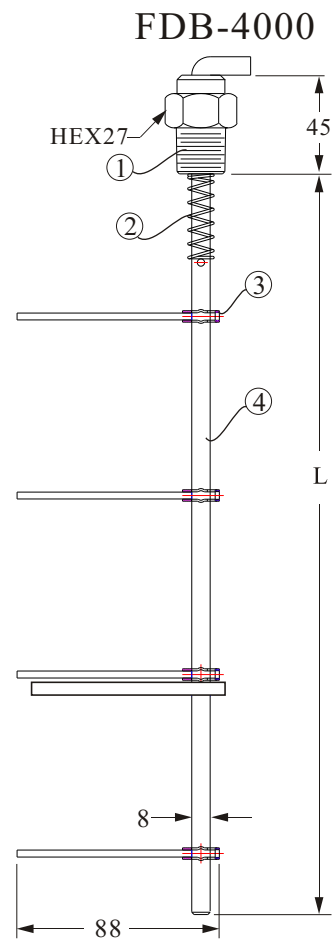
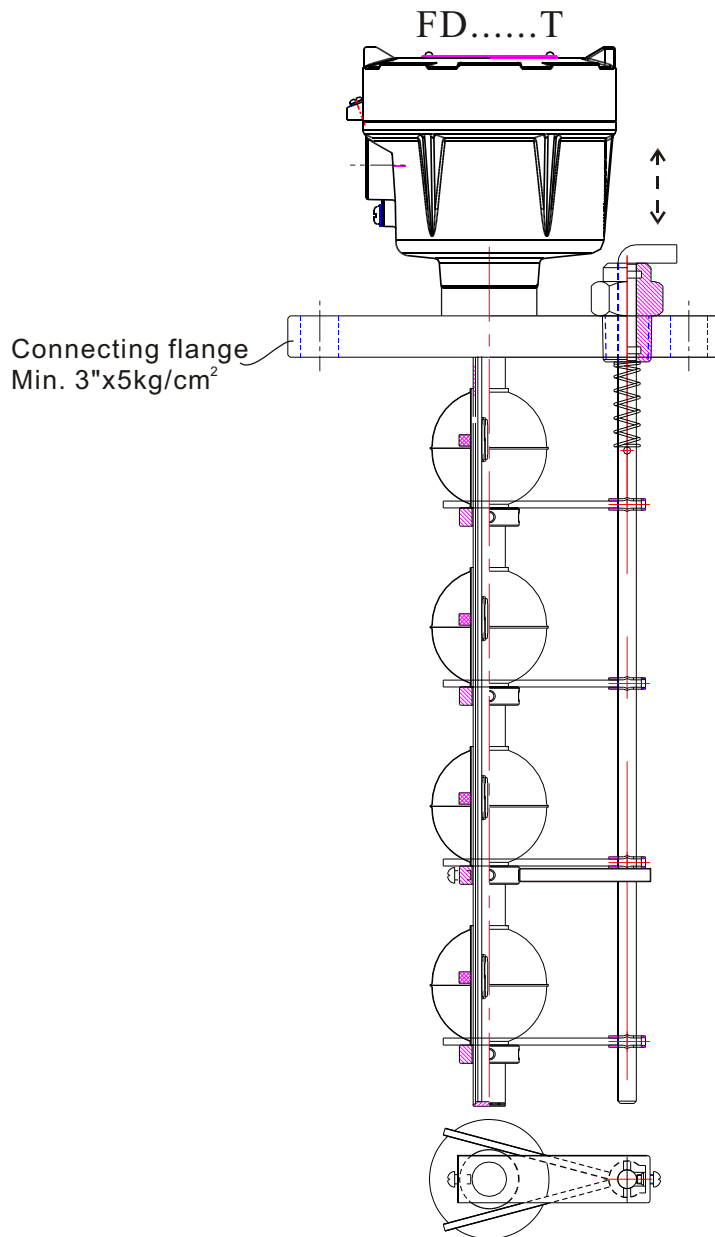
GL Marine Approval 50885-04HH

Function:

When the Test Rod is attached to a magnetic float level switch, user could test the performance of the magnetic switch directly by pulling the handle of the test rod on the top of the switch.

Material:

1. Rod Connection: Bronze
2. Compressed Spring: Stainless Steel
3. Positioning Clip: Stainless Steel
4. Test Rod Stem: Stainless Steel



MARINE GRADE APPROVAL

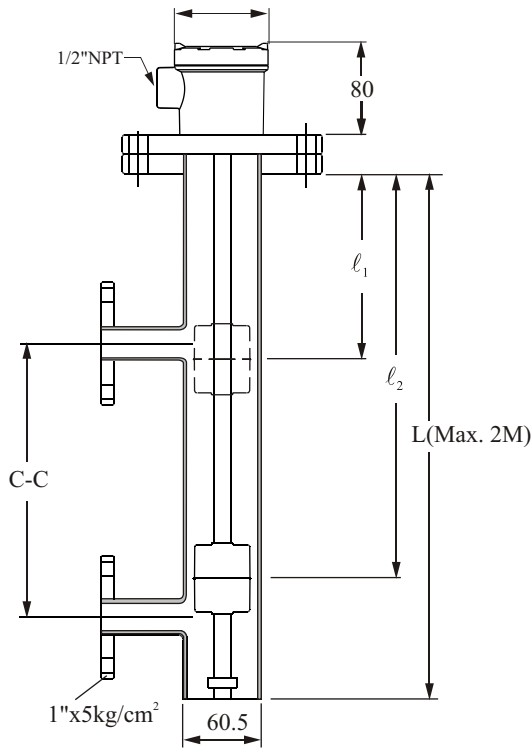


Germanischer Lloyd
(Germany)

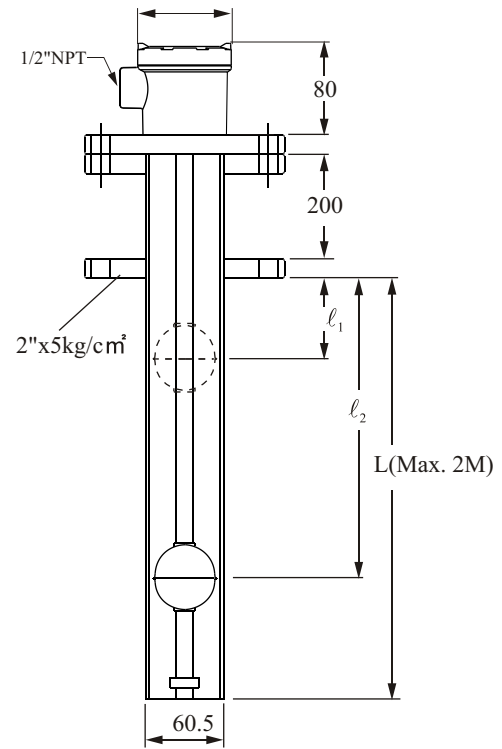


American Bureau of
Shipping (USA)

RHM DM 4 S3 1



RSM FM 4 S3 1



RHM (DM) 4 S3 1
 Connection Float quantity
 Float Type
 Pipe diameter

RSM (FM) 4 S3 1
 Connection Float quantity
 Float Type
 Pipe diameter

*Please specify the ℓ_1 , ℓ_2 , C-C and L while placing an order.
 (Length from lower end of housing to center line
 of float ball)

Connection	Pipe Diameter	Float Type
DM=1" x 5kg/cm ²	4= ϕ 12.7	S3= ϕ 45x55
FM=2" x 5kg/cm ²	4= ϕ 12.7	S4= ϕ 52x52

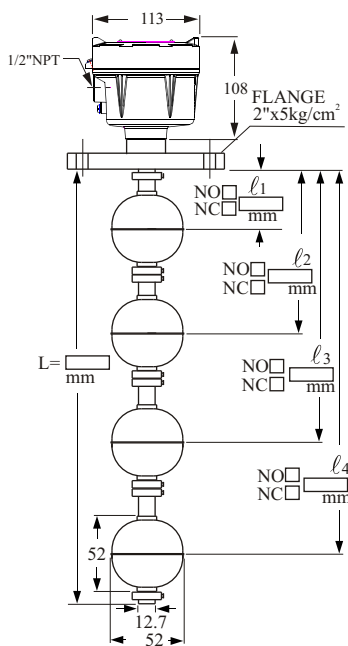
ENCLOSURE EXPLOSION PROOF TYPE

NEPSI  GYJ03348 EX d IIB T3~T6

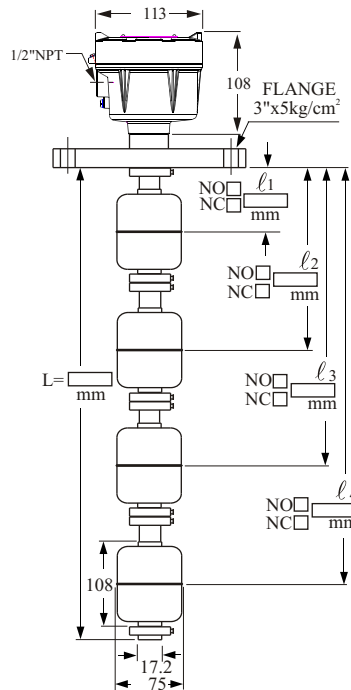
ATEX **PTB** Pending

FLANGE TYPE

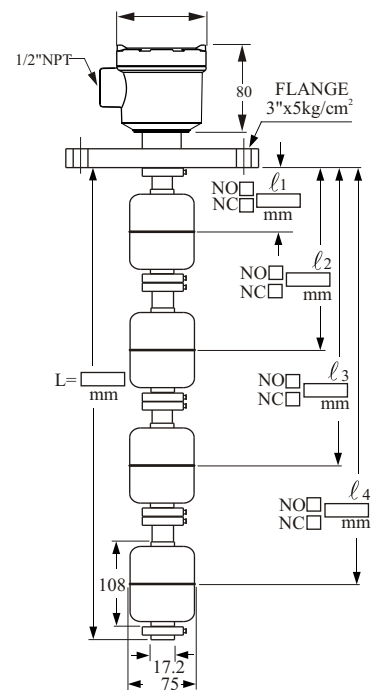
Type RF7 D FM 4 S4 4



Type RF7 D HM 7 S6 4

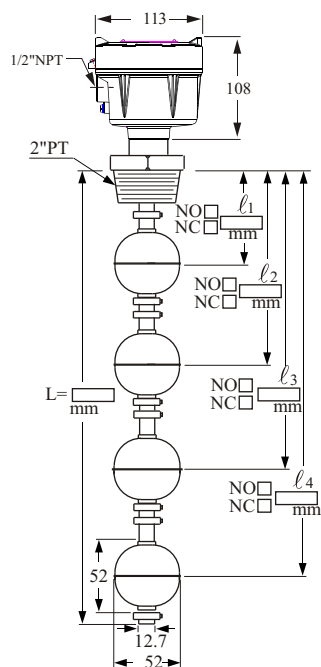


Type RF7 N HM 7 S6 4

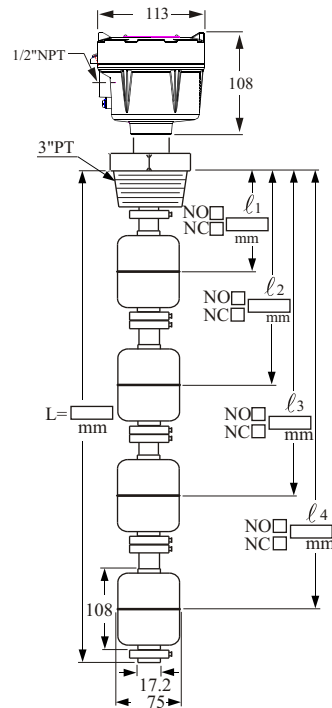


SCREW TYPE

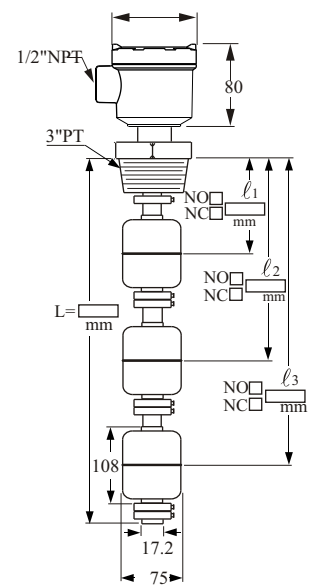
Type RF7 D FQ 4 S4 4



Type RF7 D HQ 7 S6 4



Type RF7 N HQ 7 S6 3



HOW TO MAKE YOUR ORDER

FD7									Order No.
RF7									Model No.

Length: mm (total)
 Quantity of float
 Float Type (see page 6)
 P1,P2, P3, P4
 F2, F3, F4
 S1, S2, S3, S4, S5, S6, S7
 Stem
 Code size Material
 1: 8 SUS304 or SUS316
 2: Omit
 3: 9.5 SUS304 or SUS316
 4: 12.7 SUS304 or SUS316
 5: 17.2 PP
 6: 16 PVDF
 7: 17.2 SUS304
 Connection Type
 Housing Type

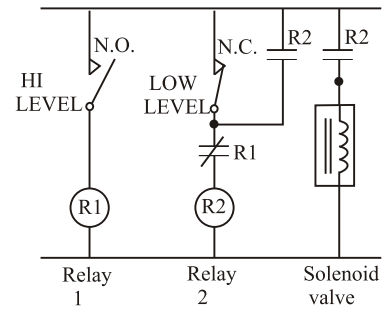
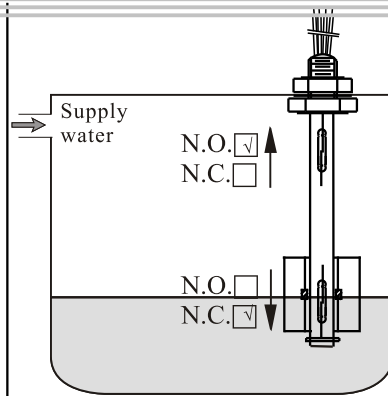
D: Aluminum (Explosion-proof)
 Eex d IIC T3~T6
 N: SUS304 or SUS316
 (Explosion-proof)
 Eex d IIC T3~T6

Size for flange or screw		Pressure range or other
A: 3/8" (10A)	I: 4"(100A)	M: 5kg/cm ² JIS
B: 1/2" (15A)	J: 5"(125A)	N: 10kg/cm ² JIS
C: 3/4" (20A)	K: 6"(150A)	O: 150Lbs ANSI
D: 1" (25A)	S: Others	P: 300Lbs ANSI
E: 1-1/2"(40A)	1: 1/8"	Q: PT
F: 2" (50A)	2: 1/4"	R: PF
G: 2-1/2"(65A)	3: 1-1/4"(32A)	T: BSP (DIN)
H: 3" (80A)		U: NPT
		V: G
		S: Others
		W: PN10 (10Bar)
		X: PN16 (16Bar)
		Y: PN25 (25Bar)
		Z: PN40 (40Bar)
		J : Adjustment screw
		K: Adjustment flange

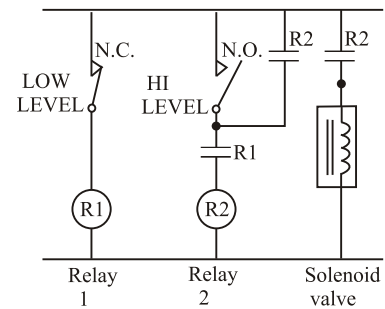
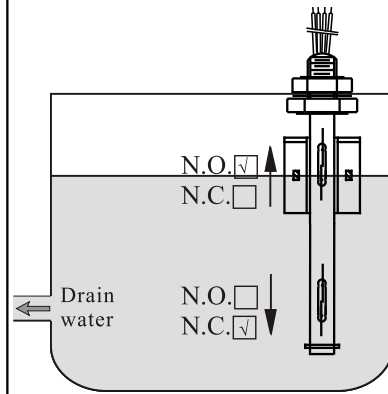
※Certified by GL, ABS Marine grade
 are available. (Please see page 17)

TYPICAL WIRING DIAGRAMS

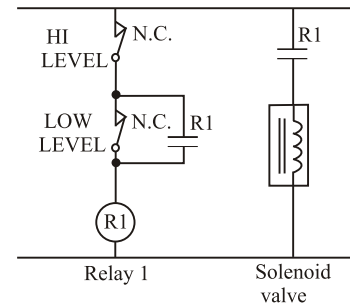
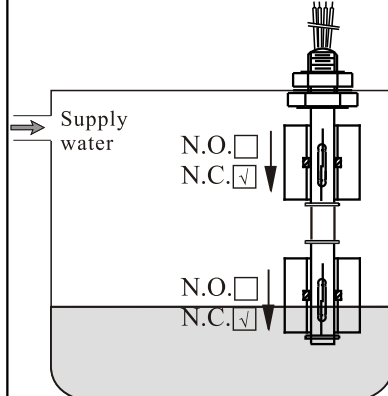
♦ AUTO SUPPLY CASE: SINGLE FLOAT DUAL SWITCHES



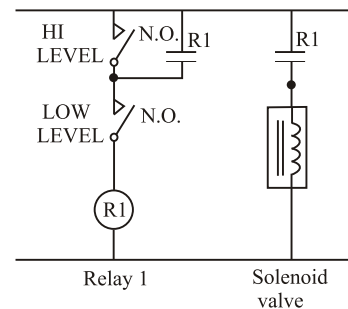
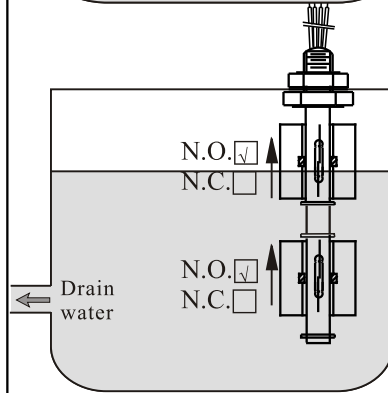
♦ AUTO DRAIN CASE: SINGLE FLOAT DUAL SWITCHES



♦ AUTO SUPPLY CASE: DUAL FLOATS DUAL SWITCHES



♦ AUTO DRAIN CASE: DUAL FLOATS DUAL SWITCHES

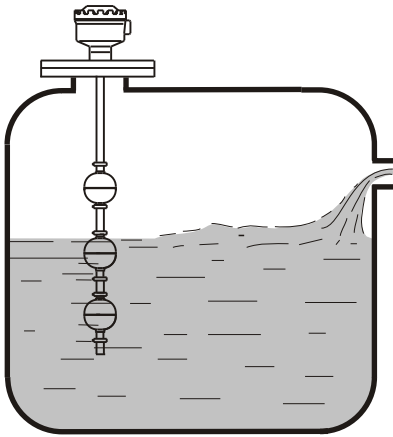


Note: The "N.O." Means normally opened circuit of the reed switch (off) in lower liquid level. As the float moves up to the specified higher level, the circuit closed (on).

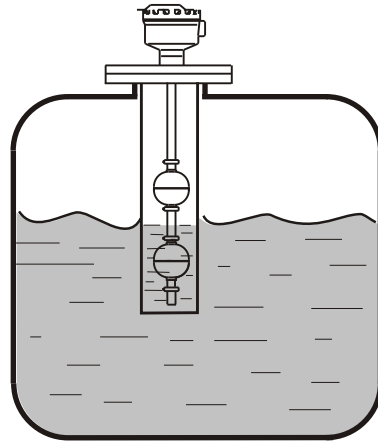
The "N.C." Means normally closed circuit of the reed switch (on) in lower liquid level. As the float moves up to the specified higher level, the circuit closed (off).

INSTALLATION

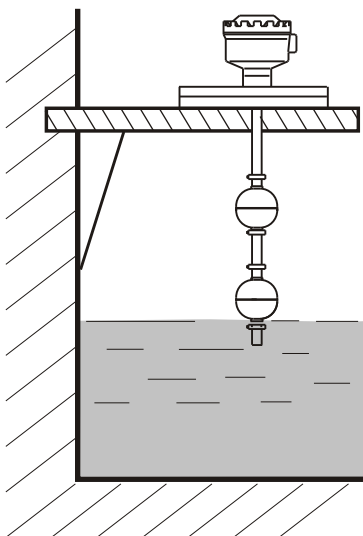
- The float level switch should be mounted far away from liquid inlet, any strong liquid fluctuation will produce error output signals.



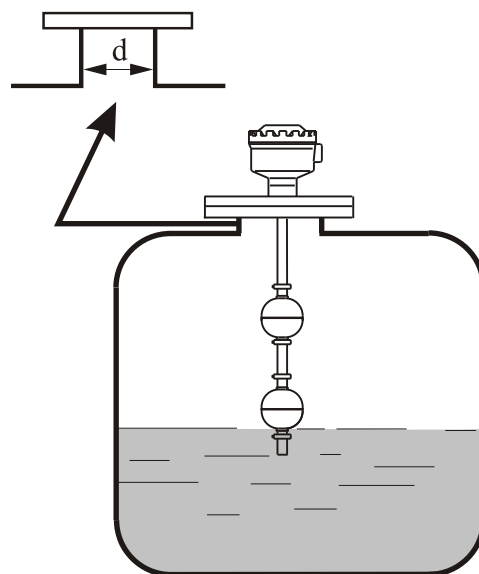
- It is requested a pipe shield or equivalent device to normalize the switch actuation if the switch is used with any agitator application.



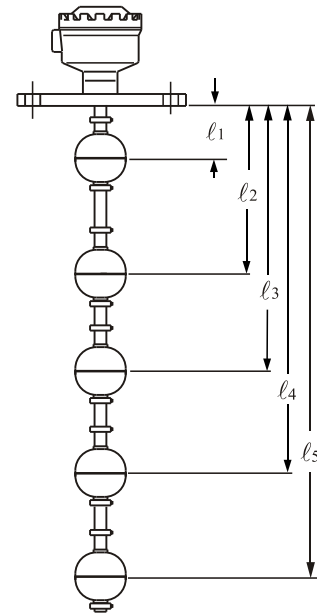
- It had better require an L type supporter, when the switch is mounted in concrete wall tank as figure below.



- It is recommended to select the standpipe with diameter larger than the float ball for installation process.



CONNECTION DIAGRAMS



- ※ $\begin{matrix} \text{NO} & \text{C} & \text{NC} \\ \hline \square & \checkmark & \checkmark \end{matrix}$ Means that the NC-C circuit will be close while liquid level lower than the float ball, by mark of " ON".
- ※ $\begin{matrix} \text{NO} & \text{C} & \text{NC} \\ \hline \checkmark & \checkmark & \square \end{matrix}$ Means that the NO-C circuit will be close while liquid level higher than the float ball, by mark of " ON".
- ※ $\begin{matrix} \text{NO} & \text{C} & \text{NC} \\ \hline \checkmark & \checkmark & \checkmark \end{matrix}$ Means that the NO-C circuit will be close while liquid level higher than the float ball, and NC-C circuit will be close while liquid level lower than the float ball.

※ Please screw the housing cap tightly and fix the conduit outlet, it will reinforce the housing performance against the moisture and direct water. (8mm multiple cord is recommended for wiring)

※ If the end user is intended to adjust the actuation level position independently, please move the float ball(s) position as well as the interior reed switches, otherwise, it will appear an error or no signal.