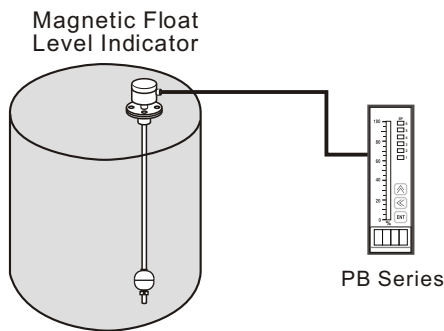


## PRINCIPLE

The "Magnet Float Level Indicator" is composed of the float and sensing rod (shown as below). As the float raised or lowered by liquid level, the sensing rod will have a resistance output, which is directly proportional to the liquid level. Also, the float level indicator can be equipped with the TAB-2100 (please see page 3) to produce a 0/4~20mA signal. In addition, we can use with PB series bargraphic display scaling panel meter for level control and display. Anyway, "Magnet Float Level Indicator" is a great benefit to all kinds of industries with its easy working principle and reliability.



## FEATURES

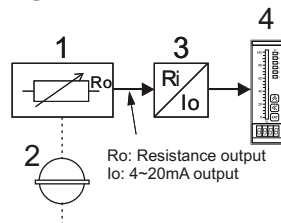
- Every sensing element is protected by a plastic Package, safety in use and transport. (as fig. 1)
- High performance and reliability of electric circuit
- Modular designed (as fig.2).
- Lower installation costs, less maintenance, reduced personnel training, and decreased plant shock down time.

## APPLICATIONS

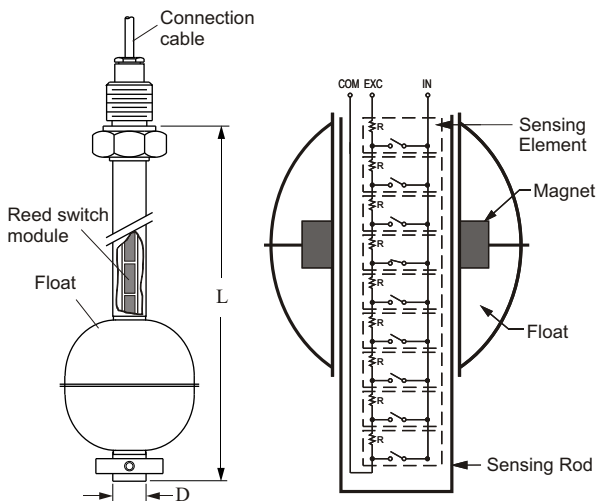
Applied for waste water treatment turn-key facility, Electric power plant, shipping vessel, hydraulic facility, chemical industrial equipment, petrochemical industry and hot coal boiler. e.g. diesel engine generator, motor oil meter, oil material storage tank.

## SCHEMATIC DIAGRAM OF THE PRINCIPLES

1. Sensing Rod
2. Float
3. Transmitter
4. Display Unit



## CONSTRUCTION



## Sensing Element Size

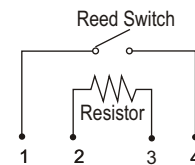
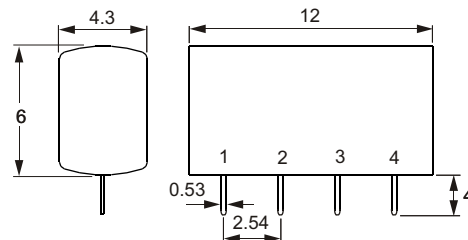


Fig.2

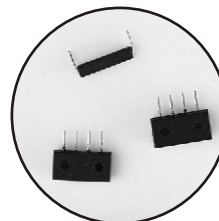





Fig.1  
Sensing Element

# HOUSING DIMENSION

**B**  
 Material : Aluminum  
 Enclosure : IP65  
 Max.Temp.: -20 C ~200 C


**C**  
 Material : PP.+Fiber  
 Enclosure : IP65  
 Max.Temp.: -20 C ~80 C


**D** Explosion-proof 


Material : Aluminum  
 Enclosure : NEPSI Ex d IIB T3~T6  
 ATEX  II 2G EEx d IIB T3~T6  
 ATEX  II 2D IP65 T3~T6  
 Max.Temp.: -20 C ~200 C



**G**

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

**K** Explosion-proof 

Material : Aluminum  
 Enclosure : CESI 03 ATEX 108  
 II 2G EEx d IIC T6  
 Max.Temp.: -20 C ~100 C

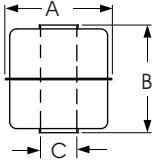
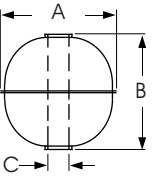
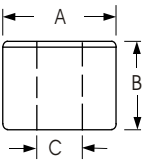
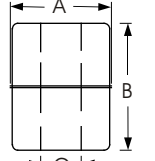
**N** Explosion-proof 

Material : SUS316  
 Enclosure : NEPSI Ex d IIB T3~T6  
 ATEX  II 2G EEx d IIB T3~T6  
 ATEX  II 2D IP65 T3~T6  
 Max.Temp.: -20 C ~200 C

**X**

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

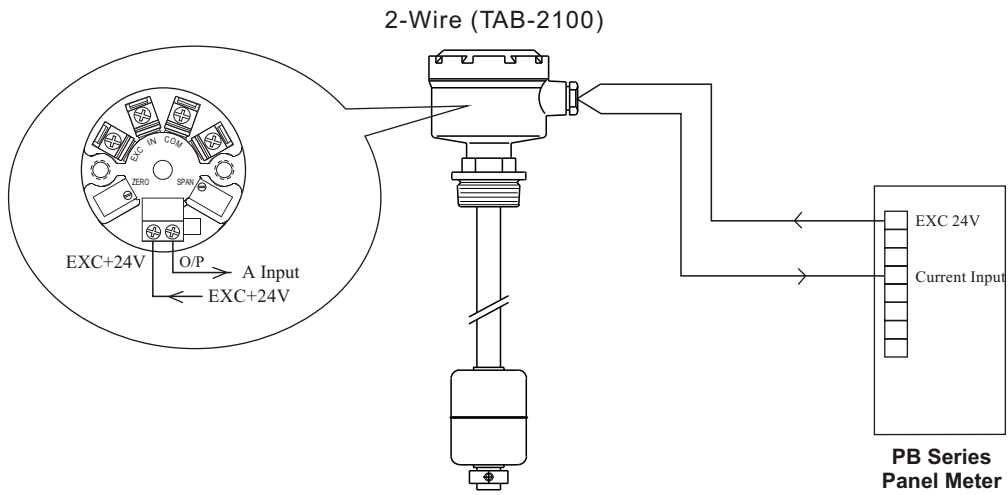
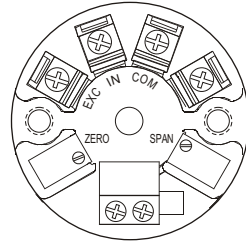
## FLOAT SPECIFICATION

Dimension	Type	AxBxC(mm)	S.G.	Max. Pressure (kg/cm <sup>2</sup> )	Material	Max.Temp. (C)	Approx. Weight (g)
	S3	45x55x15	0.65	12	SUS316	200°C	37.6
	S6	75x108x19	0.5	10	SUS304	200°C	165
	S4	52x52x15	0.55	30	SUS316	200°C	33.4
	S5	75x73x19	0.65	30	SUS304	200°C	102.4
	S8	100x100x20	0.5	30	SUS304	200°C	249.7
	S9	150x150x30	0.45	30	SUS304	200°C	534
	P3	48x45x18.5	0.6	5	PP	80°C	35.5
	F4	48x60x18	0.75	5	PVDF	120°C	65.3

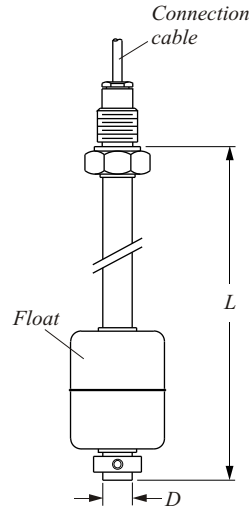
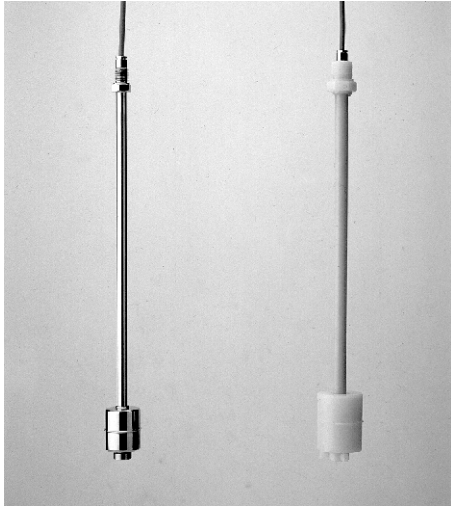
# TRANSDUCER

## MODEL: TAB-2100 Transducer

Voltage Supply : Loop power 12~32VDC  
Output Current : 4~20mA  
Load Resistance :  $R_L(\text{Max})=50(V_s-8)$   
Operation Temperature: 0 C~70 C  
Ambient Humidity : 0 C~80 C RH  
Accuracy : 0.1%(25 C)  
Temperature Effect : 0.5%FS  
Adjustment Range : Span Adjustment 20% FS  
Zero Adjustment 5% FS



# ECONOMICAL



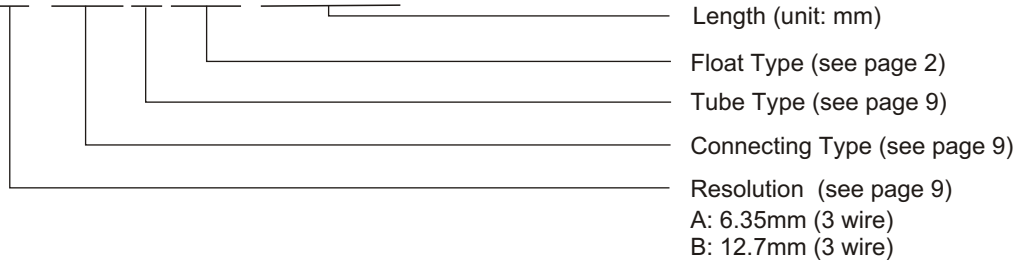
## SPECIFICATION

**Connection Cable:** Silicon cable 3C 1M  
**Output:** 3-wire resistance output  
**Ambient Temp.:** 60 C

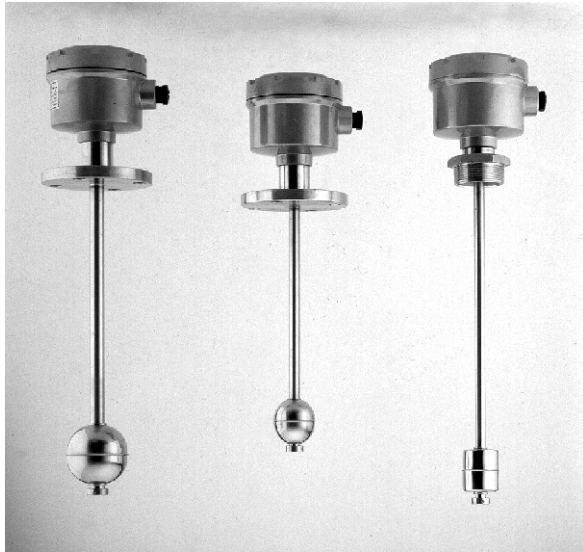
**Operating Temp.:** PP tube -10 C ~ 80 C  
 PVDF tube -20 C ~ 120 C  
 SUS tube -20 C ~ 120 C

Order No.	Connecting	Tube size & Material (D)	Float type & Material	Suitable S.G.	Measuring Range
FG□-AR4	3/8"PF	14 SUS 304 SUS 316	S3: 45x55 SUS 316 S4: 52x52 SUS 316	>0.5	FGA...Max.6M FGB...Max.6M
FG□-AR7	3/8"PF	17.2 SUS 304	S5: 75x73 SUS 304 S6: 75x108 SUS 304	>0.5	FGA...Max.6M FGB...Max.6M
FGB-CR5P3	3/4"PF	17.2 PP	P3: 48x45 PP	>0.6	FGB...Max.6M
FGB-CR6F4	3/4"PF	16 PVDF	F4: 48x60 PVDF	>0.8	FGB...Max.6M

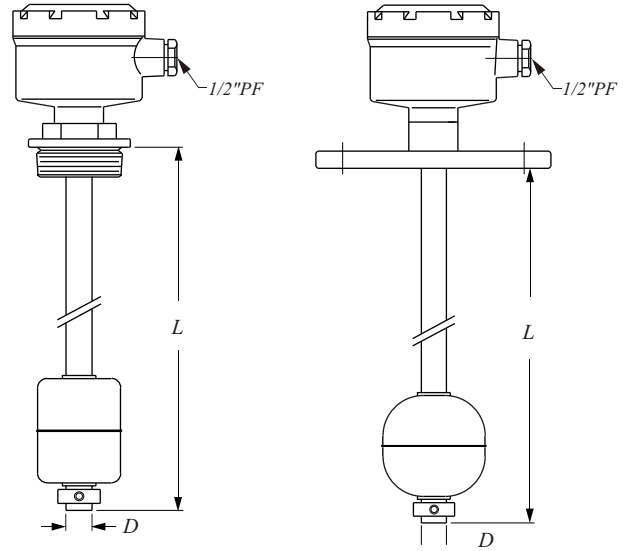
MODEL : FG □ - □ □ □ □ □ □ □ □



# STANDARD



B type housing, dimension see page 2.



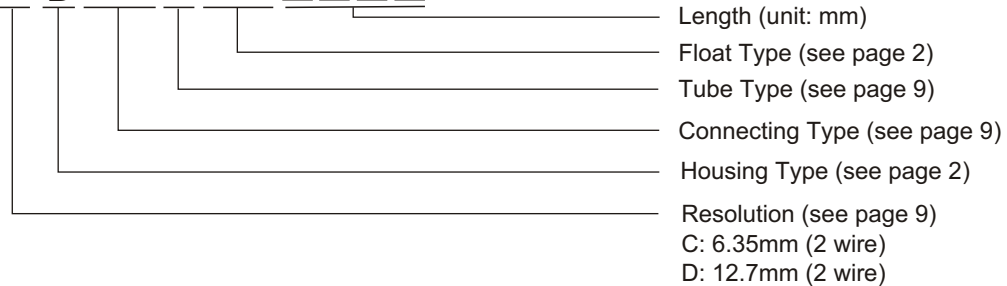
## SPECIFICATION

**Terminal Housing:** Aluminum, IP65  
**Output:** 4~20mA, 2-wire resistance output

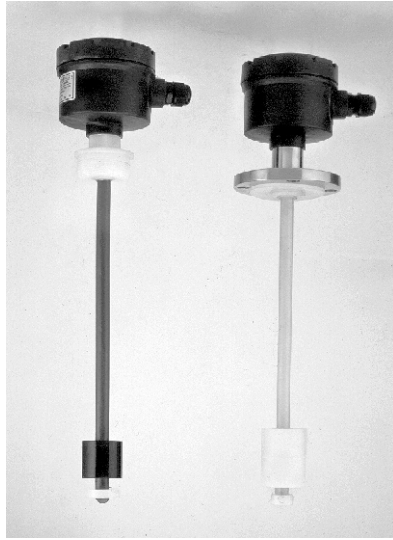
**Operating Temp.:** -20 C ~ 120 C  
**Ambient Temp.:** 60 C

Order No.	Connecting	Tube size & Material (D)	Float type & Material	Suitable S.G.	Measuring Range
FG□BFQ4	2"NPT	14 SUS 316 SUS 304	S3: 45x55 SUS 316 S4: 52x52 SUS 316	>0.5	FGC/D...Max.6M
FG□BGN4	2-1/2"x10kg/cm <sup>2</sup>	14 SUS 316 SUS 304	S3: 45x55 SUS 316 S4: 52x52 SUS 316	>0.5	FGC/D...Max.6M
FGDBHN7	3"x10kg/cm <sup>2</sup>	17.2 SUS 304	S5: 75x73 SUS 304 S6: 75x108 SUS 304	>0.45	FGD...Max.6M
FGDBIQ7	4"NPT	17.2 SUS 304	S8: 100x100 SUS 304	>0.5	FGD...Max.6M
FGDBKN8 FGDBKN9	6"x10kg/cm <sup>2</sup>	21.7 SUS 304 27.2	S9: 150x150 SUS 304	>0.45	FGD...Max.12M

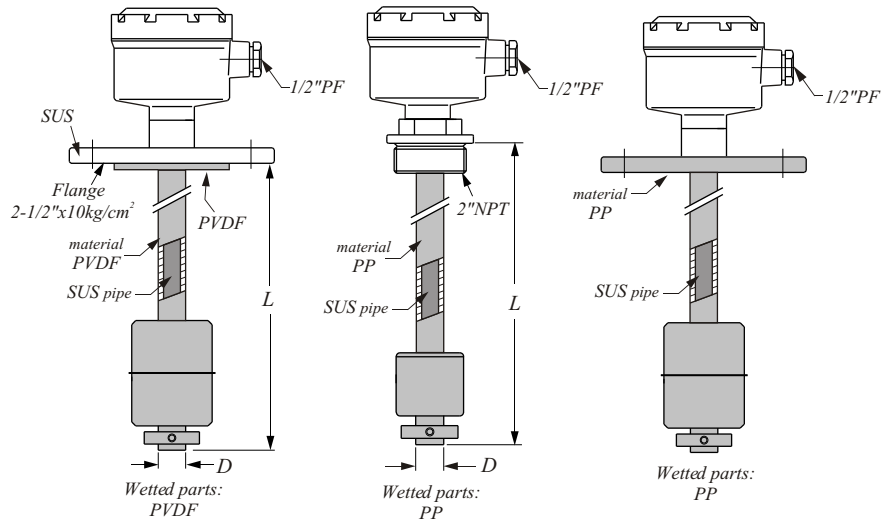
MODEL : FG□ B □ □ □ □ □ □ □ □ □ □



# ANTI-ACID / ALKALINE



C type housing, dimension see page 2.



## SPECIFICATION

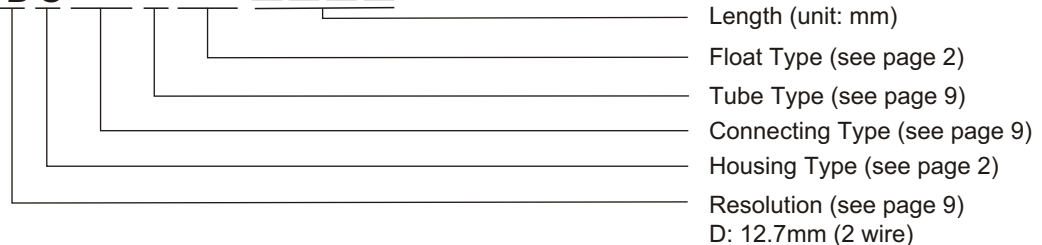
**Terminal Housing:** PP +Fiber, IP65  
**Output:** 4~20mA, 2-wire resistance output  
**Ambient Temp.:** 60 C

**Operating Temp.:** PP jacket tube -10 C ~ 80 C  
 PVDF jacket tube -20 C ~ 120 C

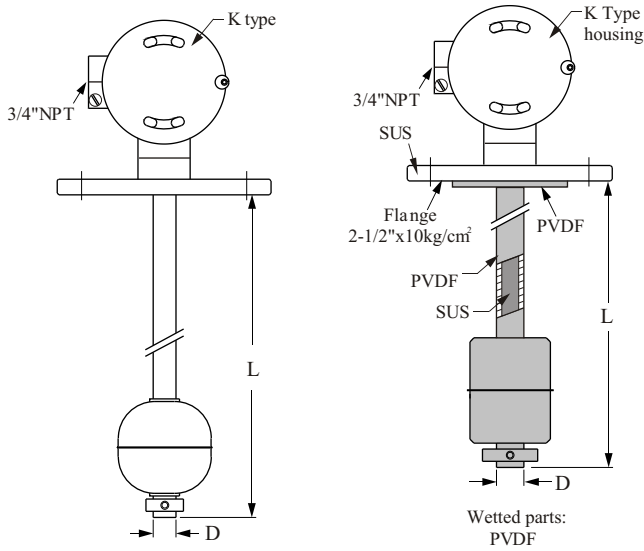
Order No.	Connecting	Tube size & Material (D)	Float type & Material	Suitable S.G.	Measuring Range
FGDCFQ5P3	2"NPT	17.2 PP	P3: 48X45 PP	>0.5	FGD...Max.6M
FGDCFQ6F4	2"NPT	16 PVDF	F4: X60 PVDF	>0.8	FGD...Max.6M
FGDCGN5P3	2-1/2"x10kg/cm <sup>2</sup>	17.2 PP	P3: 48X45 PP	>0.6	FGD...Max.6M
FGDCGN6F4	2-1/2"x10kg/cm <sup>2</sup>	16 PVDF	F4: 48x60 PVDF	>0.8	FGD...Max.6M

Every unit is protected by PP or PVDF jacket to prevent the sensing rod from chemical corrosion.

MODEL : FG DC



K type ATEX Explosion proof Enclosure can be selected, dimension see page 2.

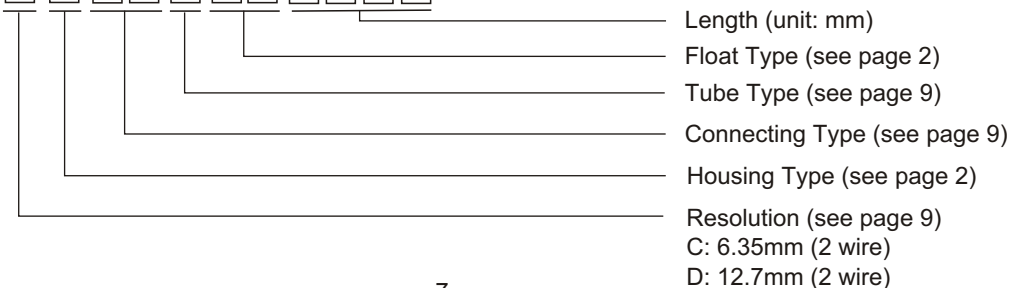


### SPECIFICATION

**Terminal Housing:** K type --- Aluminum, ATEX EEx d IIC T6 **Operating Temp.:** PP tube -10 C ~ 80 C  
**Output:** 4~20mA, 2-wire resistance output PVDF tube -20 C ~ 120 C  
**Ambient Temp.:** 60 C SUS tube -20 C ~ 120 C

Order No.	Connecting	Tube size & Material (D)	Float type & Material	Suitable S.G.	Measuring Range
FG□KFQ4	2"NPT	φ 14 SUS 304	S4: φ52X52 SUS 316	>0.5	FGA/B...Max.6M FGC/D...Max.6M
FG□KGN4	2-1/2"x10kg/cm	φ 14 SUS 304	S4: φ52X52 SUS 316	>0.5	FGA/B...Max.6M FGC/D...Max.6M
FGDKHN7	3"x10kg/cm	φ 17.2 SUS 304	S6: φ75X108 SUS 304	>0.45	FGD...Max.6M
FGDKIQ4	4"NPT	φ 17.2 SUS 304	S8: φ100x100 SUS 304	>0.5	FGD...Max.6M
FGDKFQ5P3	2"NPT	φ 17.2 PP	P3: φ48X45 PP	>0.6	FGD...Max.6M
FGDKFQ6F4	2"NPT	φ 16 PVDF	F4: 48X60 PVDF	>0.8	FGD...Max.6M
FGDKGN5P3	2-1/2"x10kg/cm <sup>2</sup>	φ 17.2 PP	P3: φ48X45 PP	>0.6	FGD...Max.6M
FGDKGN6F4	2-1/2"x10kg/cm <sup>2</sup>	φ 16 PVDF	F4: 48X60 PVDF	>0.8	FGD...Max.6M

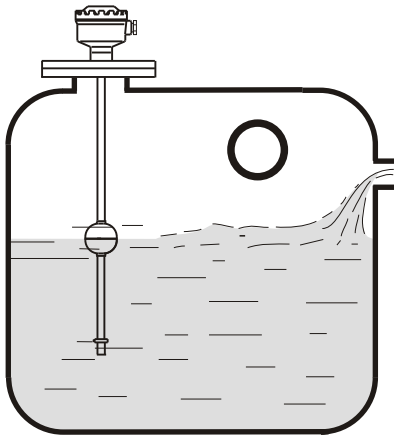
MODEL : FG □ □ □ □ □ □ □ □ □ □



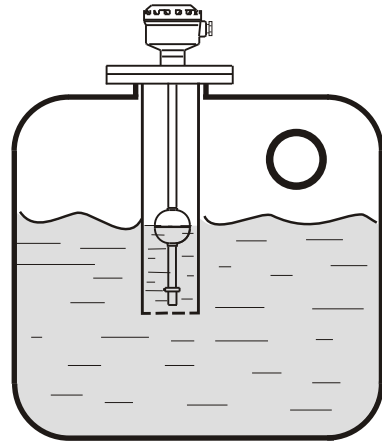
# INSTALLATION

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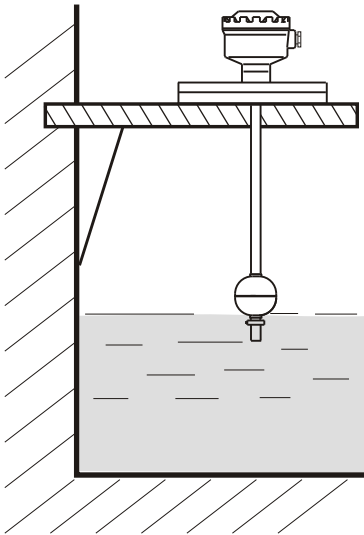
- ▶ The float level indicator should be mounted far away from liquid inlet, any strong liquid fluctuation will produce error output signals.



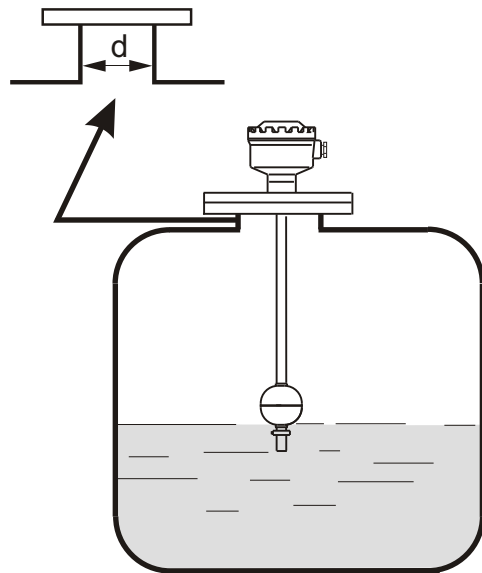
- ▶ It is requested a pipe shield or equivalent Device to normalize the indicator actuation if the indicator is used with any agitator Application.



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



- ▶ It is recommended to select the standpipe with diameter(d) larger than the float ball for Installation process.





# ORDER INFORMATION

FG
D
C
FQ
6
F1
1
5
0
0

**RESOLUTION** \_\_\_\_\_

- A: 6.35mm (3-wire)
- B: 12.7mm (3-wire)
- C: 6.35mm (2-wire)
- D: 12.7mm (2-wire)

**TERMINAL HOUSING (see page 2)** \_\_\_\_\_

- B: Aluminum (IP65)
- C: P.P (IP65)
- D: Aluminum (Ex d IIB T3~T6)
- G: PC (IP65)
- K: Aluminum (Ex d IIB T3~T6)
- N: SUS (Ex d IIB T3~T6)
- X: Aluminum (IP65)
- : None

**CONNECTING TYPE** \_\_\_\_\_

- |                  |                           |
|------------------|---------------------------|
| A : 3/8" (10A)   | M : 5 kg/cm <sup>2</sup>  |
| B : 1/2" (15A)   | N : 10 kg/cm <sup>2</sup> |
| C : 3/4" (20A)   | O : 150 Lbs               |
| D : 1" (25A)     | P : 300 Lbs               |
| E : 1-1/2" (40A) | Q : PT                    |
| F : 2" (50A)     | R : PF                    |
| G : 2-1/2" (65A) | T : BSP                   |
| H : 3" (80A)     | U : NPT                   |
| I : 4" (100A)    | V : GAS                   |
| J : 5" (125A)    | S : Other                 |
| K : 6" (150A)    |                           |
| 4 : 7" (175A)    |                           |
| 5 : 8" (200A)    |                           |

**TUBE TYPE & MATERIAL** \_\_\_\_\_

- |                |               |
|----------------|---------------|
| 4: 14 (SUS)    | 7: 17.2 (SUS) |
| 5: 17.2 (P.P.) | 8: 21.7 (SUS) |
| 6: 16 (PVDF)   | 9: 27.2 (SUS) |

**FLOAT TYPE (see page 2)** \_\_\_\_\_

Material	Type					
Plastic	P3	F4				
SUS	S3	S4	S5	S6	S8	S9

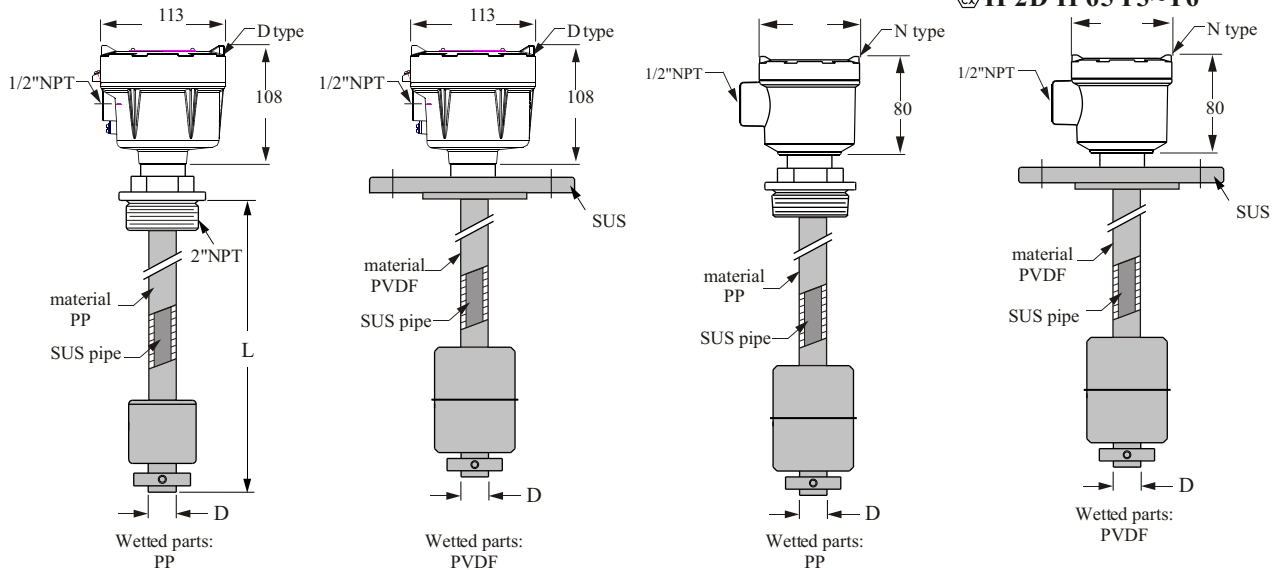
**LENGTH (UNIT : mm)** \_\_\_\_\_

Tolerance of the total product length is 5mm.  
 Characteristics, specifications and dimensions are subject to change without notice.  
 Please contact us for further informations.

# ENCLOSURE EXPLOSION PROOF (PLASTIC JACKET)

D or N type housing can be selected, dimension see page 2.

NEPSI PROOF No. GYJ03351 Ex d IIB T3~T6  
 PTB PROOF No. 05ATEX1028 Ex II 2GEx d IIB T3~T6  
 Ex II 2D IP65 T3~T6



## SPECIFICATION

**Terminal Housing:** D type --- Aluminum, Ex d IIB T3~T6  
 N type --- SUS, Ex d IIC T3~T6

**Operating Temp.:** PP tube -10 C ~ 80 C  
 PVDF tube -20 C ~ 120 C  
 SUS tube -20 C ~ 120 C

**Output:** 4~20mA, 2-wire resistance output  
**Ambient Temp.:** 60 C

ORDER NO. FG7 MODEL NO. RL7	Connecting	Tube size & Material (D)	Float type & Material	Suitable S.G.	Measuring Range
RL7□DFQ4	2"NPT	φ14 SUS316	S3: φ45X55 SUS 316	>0.5	RL7...Max.3M
RL7□DGN4	2-1/2"x10kg/cm <sup>2</sup>	φ14 SUS316	S3: φ45X55 SUS 316	>0.5	RL7...Max.3M
RL7DDHN7	3"x10kg/cm <sup>2</sup>	φ17.2 SUS304	S5: φ75X73 SUS 304	>0.45	RL7...Max.6M
RL7DDIQ4	4"NPT	φ17.2 SUS304	S8: φ100x100 SUS 304	>0.5	RL7...Max.6M
RL7DDKN8 RL7DDKN9 RL7DDKN8 RL7DDKN9	6"x10kg/cm <sup>2</sup>	φ21.7 φ27.2 SUS304	S9: φ150x150 SUS 304	>0.45	RL7...Max.6M
RL7DDFQ5P3	2"NPT	φ17.2 PP	P3: φ48X45 PP	>0.6	RL7...Max.6M
RL7DDFQ6F4	2"NPT	φ16 PVDF	F4: 48X60 PVDF	>0.8	RL7...Max.6M
RL7DDGN5P3	2-1/2"x10kg/cm <sup>2</sup>	φ17.2 PP	P3: φ48X45 PP	>0.6	RL7...Max.6M
RL7DDGN6F4	2-1/2"x10kg/cm <sup>2</sup>	φ16 PVDF	F4: 48X60 PVDF	>0.8	RL7...Max.6M

ORDER NO. FG7 □ □ □ □ □ □ □ □ □ □  
 MODEL NO. RL7 □ □ □ □ □ □ □ □ □ □

- Length (unit: mm)
- Float Type (see page 2)
- Tube Type (see page 11)
- Connecting Type (see page 11)
- Housing Type (see page 2)
- Resolution (see page 11)
- C: 6.35mm (2 wire)
- D: 12.7mm (2 wire)

# CODE NAME INFORMATION

Order No. FG7 **D** **D** **FQ** **6** **F1** **1500**  
 Model No. RL7 **D** **D** **FQ** **6** **F1** **1500**

**RESOLUTION**

- A: 6.35mm (3-wire)
- B: 12.7mm (3-wire)
- C: 6.35mm (2-wire)
- D: 12.7mm (2-wire)

**TERMINAL HOUSING (see page 2)**

- D: AL (EEx d IIB T3~T6)
- N: SUS (EEx d IIB T3~T6)

**CONNECTING TYPE**

- A : 3/8" (10A)      M : 5 kg/cm<sup>2</sup>
- B : 1/2" (15A)      N : 10 kg/cm<sup>2</sup>
- C : 3/4" (20A)      O : 150 Lbs
- D : 1" (25A)        P : 300 Lbs
- E : 1-1/2" (40A)    Q : PT
- F : 2" (50A)        R : PF
- G : 2-1/2" (65A)    T : BSP
- H : 3" (80A)        U : NPT
- I : 4" (100A)        V : GAS
- J : 5" (125A)        S : Other
- K : 6" (150A)
- 4 : 7" (175A)
- 5 : 8" (200A)

**TUBE TYPE & MATERIAL**

- 4: 14 (SUS)      7: 17.2 (SUS)
- 5: 17.2 (P.P.)    8: 21.7 (SUS)
- 6: 16 (PVDF)    9: 27.2 (SUS)

**FLOAT TYPE (see page 2)**

Material	Type					
Plastic	P3	F4				
SUS	S3	S4	S5	S6	S8	S9

**LENGTH (UNIT : mm)**

Tolerance of the total product length is 5mm.  
 Characteristics, specifications and dimensions are subject to change without notice.  
 Please contact us for further informations.