



Process Center AB

Magnetisk Nivåmätare Typ Flottör Serie FG

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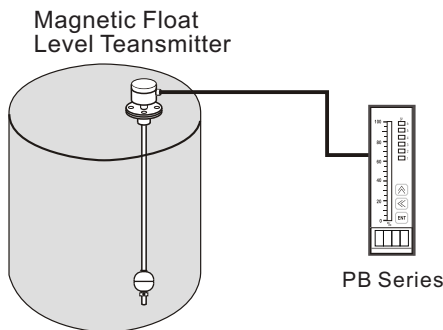
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WORKING PRINCIPLE

The "Magnet Float Level Transmitter" is composed of a float and sensing rod (shown below). As the float is raised or lowered by the liquid level, the sensing rod will induce a resistance output, which is directly proportional to the liquid level. The Magnet Float Level Transmitter is a sturdy, reliable and durable device that is applicable across most industries.



FEATURES

- Optional TAB-2100 (see p3) to produce a 0/4~20mA signal
- Optional PB series bargraphic display scaling panel meter for level control and display
- Sensing elements are protected with a plastic package for safety in use and transport.
- High performance and reliable electric circuit modular design (fig.2)
- Lower installation costs, maintenance, personnel training reduced and decreased plant shock downtime
- Explosion Proof series available
- Marine Standards: ABS, DNV, BV, LR, GL series available

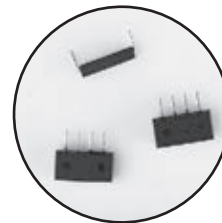


Fig.1
Sensing Element

APPLICATIONS

Waste water treatment + Turn-key facilities
 Electric power plants + Shipping vessels
 Hydraulic facilities + Chemical industrial equipments
 Petrochemical industries
 Hot coal boiler. e.g. diesel engine generators, motor oil meters, oil material storage tanks.

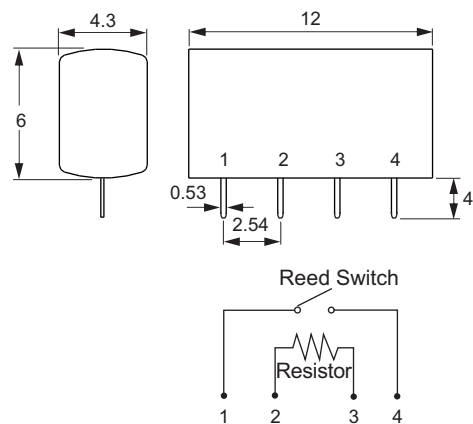
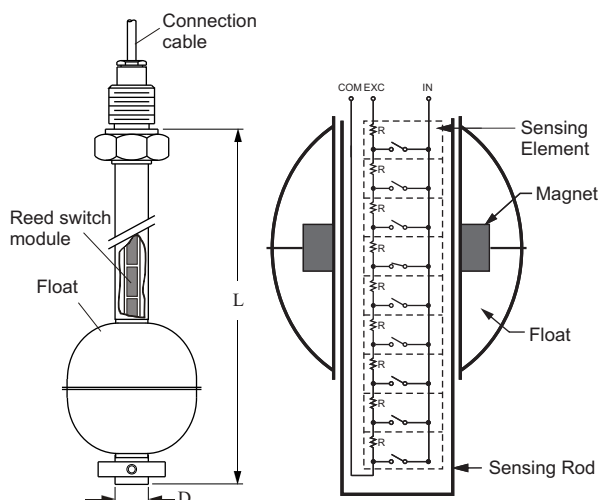


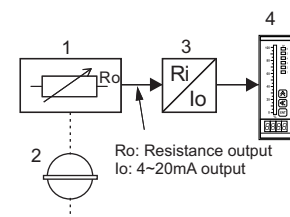
Fig.2
Sensing Element Size

CONSTRUCTION



SCHEMATIC DIAGRAMS

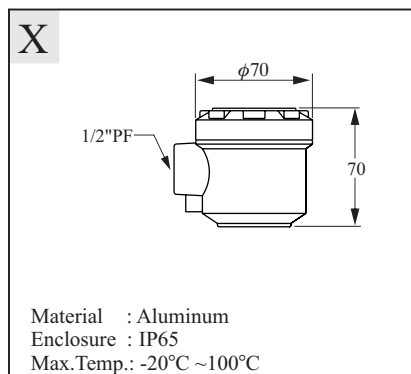
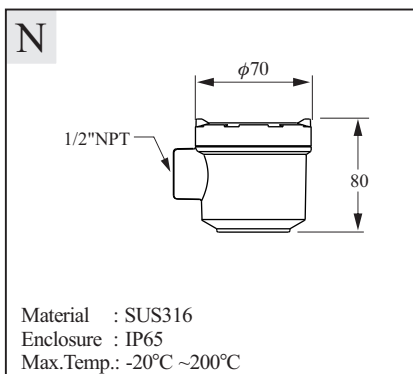
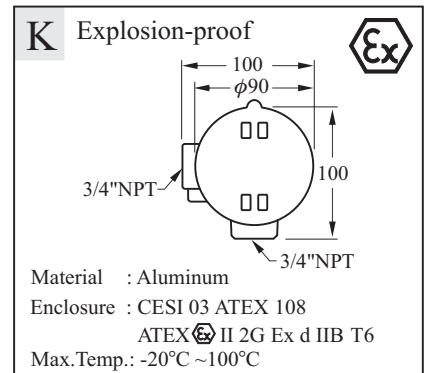
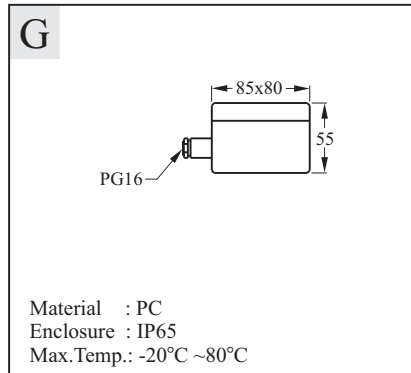
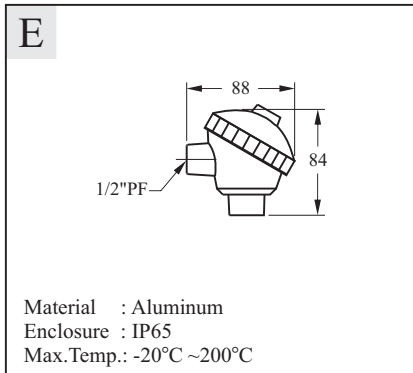
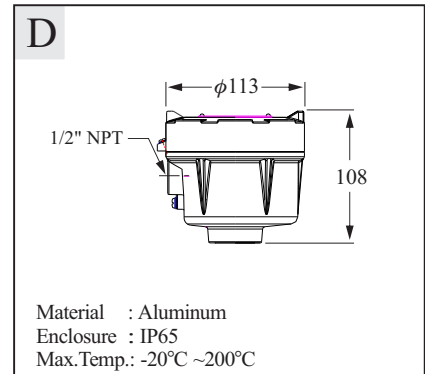
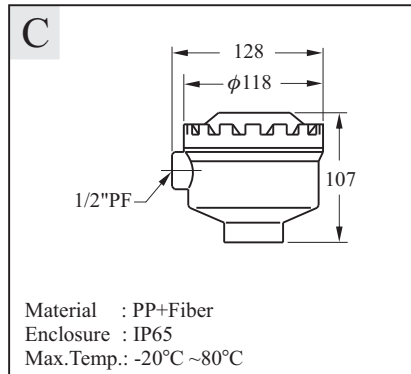
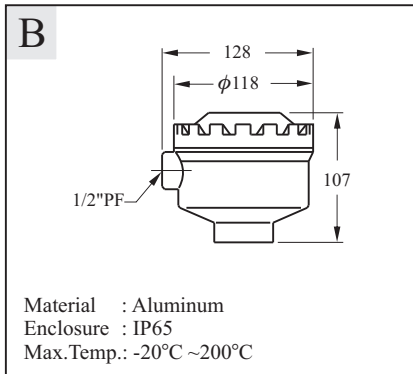
1. Sensing Rod
2. Float
3. Transmitter
4. Display Unit



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HOUSING DIMENSIONS



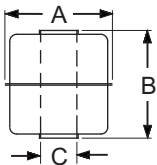
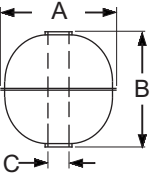
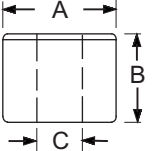
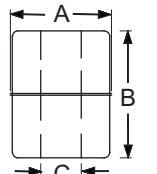


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FLOAT SPECIFICATIONS

• FLOAT SPECIFICATION

Dimension	Type	AxBxC(mm)	S.G.	Max. Pressure (kg/cm ²)	Material	Max. Temp. (°C)	Approx. Weight (g)
	S3	45x55x15	0.65	12	SUS 316	200°C	37.6
	S6	75x108x19	0.5	10	SUS 304	200°C	165
	S4	52x52x15	0.55	30	SUS 316	200°C	33.4
	S5	75x73x19	0.61	30	SUS 304	200°C	105
	S8	100x100x20	0.5	15	SUS 304	200°C	249.7
	S9	150x150x30	0.45	15	SUS 304	200°C	534
	P3	48x45x18.5	0.6	5	PP	80°C	35.5
	F4	48x62x18	0.75	5	PVDF	120°C	65.3

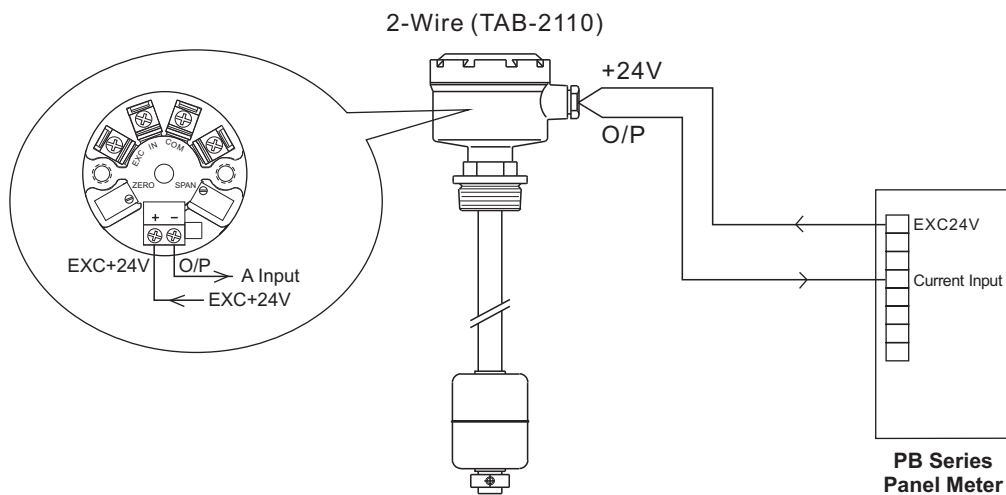
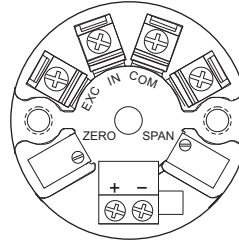
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TRANSDUCER

MODEL: TAB-2110 Transducer

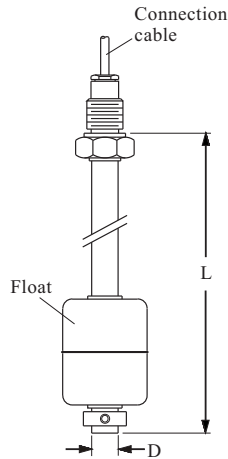
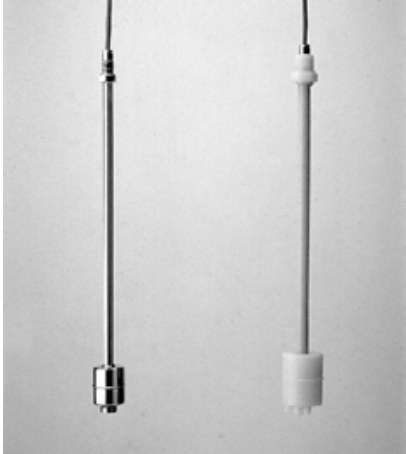
Power Supply	: 12~36Vdc
Output Current	: Loop power 4~20mA
Load Resistance	: $R_L(\text{Max})=50(\text{Vs}-8)$
Ambient Temperature	: -40~80°C
Ambient Humidity	: 0~80% RH
Accuracy	: $\pm 0.1\%(25^\circ\text{C})$
Temperature Effect	: 0.01%F.S./°C
Adjustment Range	: Span Adjustment 20% FS Zero Adjustment 5% FS



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ECONOMICAL



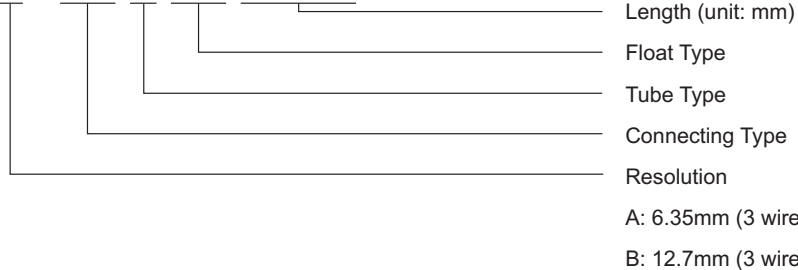
● SPECIFICATIONS

Connection Cable: Silicon cable 3C × 1M
Output: 3-wire resistance output
Total Resistance: 1MΩ (Max.)

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

Order No.	Connection	Tube size & Material (D)	Float type & Material	Suitable S.G.	Measuring Range
FG□-AR4	3/8"PF	φ14 SUS 304 SUS 316	S3: φ45x55 SUS 316 S4: φ52x52 SUS 316	>0.65 >0.55	FGA...Max.6M FGB...Max.6M
FG□-AR7	3/8"PF	φ17.2 SUS 304	S5: φ75x73 SUS 304 S6: φ75x108 SUS 304	>0.61 >0.5	FGA...Max.6M FGB...Max.6M
FGB-CR5P3	3/4"PF	φ17.2 PP	P3: φ48x45 PP	>0.6	FGB...Max.6M
FGB-CR6F4	3/4"PF	φ16 PVDF	F4: φ48x62 PVDF	>0.75	FGB...Max.6M

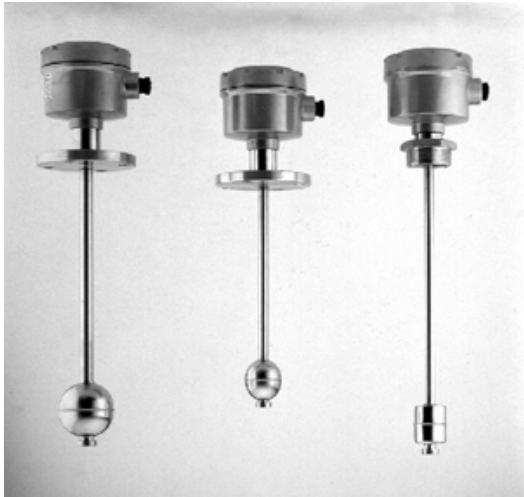
MODEL : FG □ - □ □ □ □ □ □ □ □



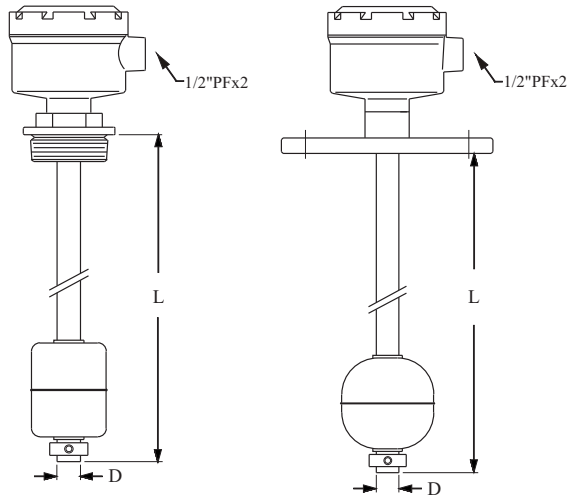
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STANDARD



* B type housing, dimension see page 2.



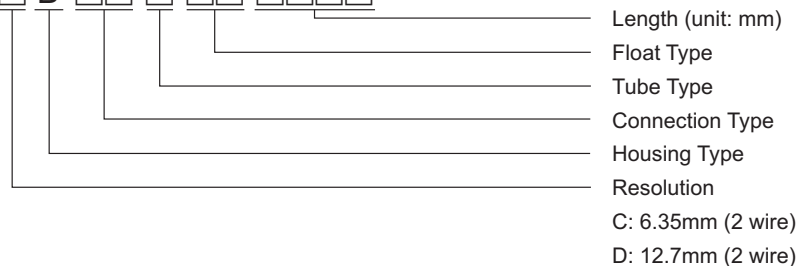
● SPECIFICATION

Terminal Housing: Aluminum, IP65
Output: 4~20mA, 2-wire
Total resistance : 1MΩ (Max.)

Operating Temperature: -20 ~ 120 °C
Ambient Temperature: 0~70 °C

Order No.	Connection	Tube size & Material (D)	Float type & Material	Suitable S.G.	Measuring Range
FG□BFQ4	2"PT	φ14 SUS 316 SUS 304	S3: φ45x55 SUS 316 S4: φ52x52 SUS 316	>0.65 >0.55	FGC/D...Max.6M
FG□BGN4	2-1/2"x10kg/cm ²	φ14 SUS 316 SUS 304	S3: φ45x55 SUS 316 S4: φ52x52 SUS 316	>0.65 >0.55	FGC/D...Max.6M
FGDBHN7	3"x10kg/cm ²	φ17.2 SUS 304	S5: φ75x73 SUS 304 S6: φ75x108 SUS 304	>0.61 >0.5	FGD...Max.6M
FGDBIQ7	4"PT	φ17.2 SUS 304	S8: φ100x100 SUS 304	>0.5	FGD...Max.6M
FGDBKN8 FGDBKN9	6"x10kg/cm ²	φ21.7 φ27.2 SUS 304	S9: φ150x150 SUS 304	>0.45	FGD...Max.12M

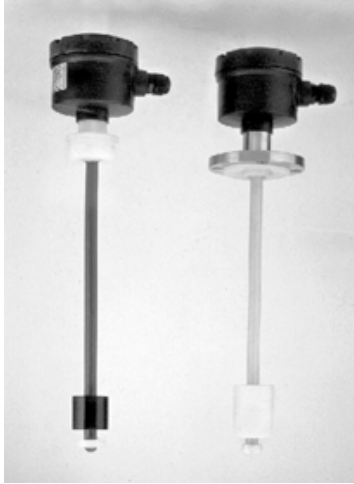
MODEL : FG□ B □ □ □ □ □ □ □ □



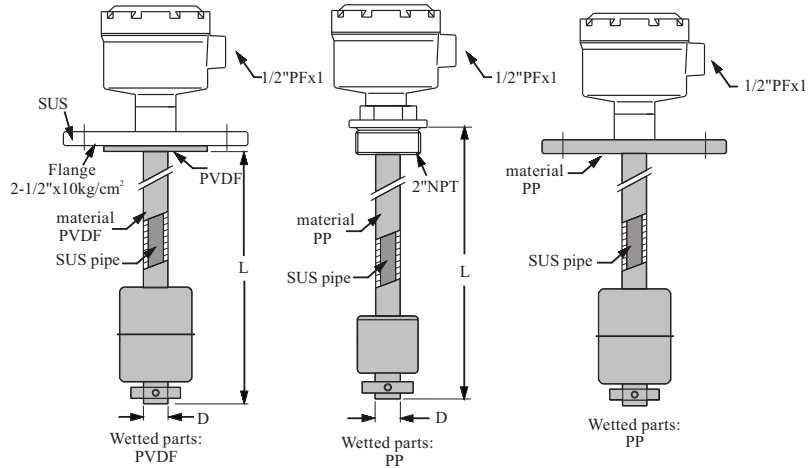
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ANTI-CORROSIVE



* C type housing, dimension see page 2.



● SPECIFICATIONS

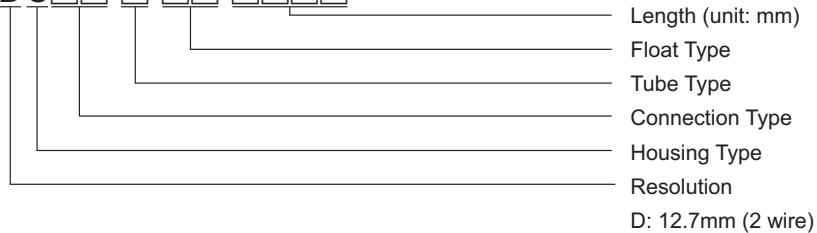
Terminal Housing: PP +Fiber, IP65
Output: 4~20mA, 2-wire
Ambient Temperature: 0~70 °C

Operating Temperature: PP jacket tube-10 ~ 80 °C
 PVDF jacket tube -20 ~ 120 °C
Total resistance: 1MΩ (Max.)

Order No.	Connecting	Tube size & Material (D)	Float type & Material	Suitable S.G.	Measuring Range
FGDCFQ5P3	2"PT	φ17.2 PP	P3: φ48x45 PP	>0.55	FGD...Max.6M
FGDCFQ6F4	2"PT	φ16 PVDF	F4: φ48x62 PVDF	>0.75	FGD...Max.6M
FGDCGN5P3	2-1/2"x10kg/cm ²	φ17.2 PP	P3: φ48x45 PP	>0.6	FGD...Max.6M
FGDCGN6F4	2-1/2"x10kg/cm ²	φ16 PVDF	F4: φ48x62 PVDF	>0.75	FGD...Max.6M

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

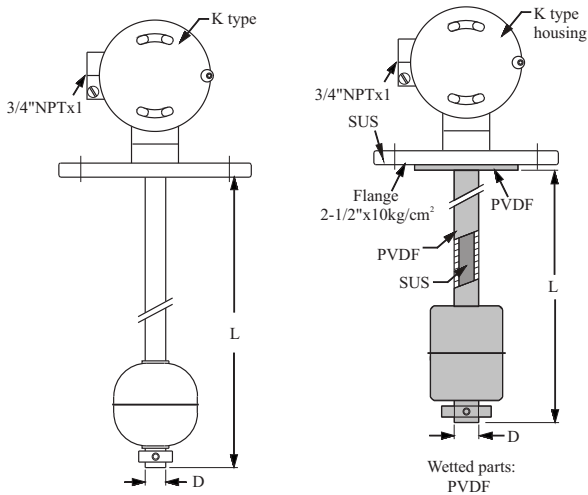
MODEL : FG DC□□□□□□□□



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*K type ATEX Explosion proof enclosure can be selected (see p2).

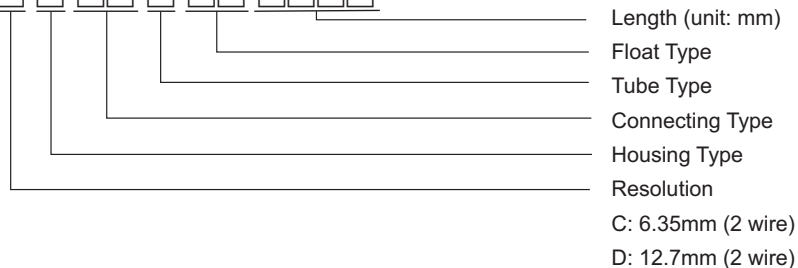


● SPECIFICATION

Terminal Housing: K type --- Aluminum, ATEX Ex d IIB T6 **Operating Temperature:** PP tube -10 ~ 80°C
Output: 4~20mA, 2-wire PVDF tube -20 ~ 120°C
Ambient Temperature: 0~70 °C SUS tube -20 ~ 120°C
Total resistance: 1MΩ (Max.)

Order No.	Connection	Tube size & Material (D)	Float type & Material	Suitable S.G.	Measuring Range
FG□KFQ4	2"PT	φ14 SUS 304	S4: φ52x52 SUS 316	>0.55	FGA/B...Max.6M FGC/D...Max.6M
FG□KGN4	2-1/2"x10kg/cm ²	φ14 SUS 304	S4: φ52x52 SUS 316	>0.55	FGA/B...Max.6M FGC/D...Max.6M
FGDKHN7	3"x10kg/cm ²	φ17.2 SUS 304	S6: φ75x108 SUS 304	>0.5	FGD...Max.6M
FGDKIQ4	4"PT	φ17.2 SUS 304	S8: φ100x100 SUS 304	>0.5	FGD...Max.6M
FGDKFQ5P3	2"PT	φ17.2 PP	P3: φ48x45 PP	>0.6	FGD...Max.6M
FGDKFQ6F4	2"PT	φ16 PVDF	F4: φ48x62 PVDF	>0.75	FGD...Max.6M
FGDKGN5P3	2-1/2"x10kg/cm ²	φ17.2 PP	P3: φ48x45 PP	>0.6	FGD...Max.6M
FGDKGN6F4	2-1/2"x10kg/cm ²	φ16 PVDF	F4: φ48x62 PVDF	>0.75	FGD...Max.6M

MODEL : FG □ □ □ □ □ □ □ □ □ □





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HOW TO ORDER

FG **D** **C** **FQ** **6** **F1** **1500** (P)

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 - : None
- C : P.P S : Others
- D : Aluminum X : Aluminum
- E : AL.
- G : PC
- K : Aluminum
- N : SUS
- F : Aluminum

CONNECTION

Dimension		Specification	
A: 3/8" (10A)	H: 3" (80A)	M: 5 Kg/cm ²	Z :PN40
B: 1/2" (15A)	I : 4" (100A)	N:10 Kg/cm ²	Q: PT
C: 3/4" (20A)	J : 5" (125A)	O: 150 Lbs	R: PF(G)
D: 1" (25A)	K: 6" (150A)	P: 300 Lbs	T : BSP
E: 1 1/2" (40A)	4 : 7" (175A)	W:PN10	U : NPT
F: 2" (50A)	5 : 8" (200A)	X :PN16	V : GAS
G: 2 1/2" (65A)		Y :PN25	S : Others

※ Tri-Clamp 1-1/2"=ES; 2"=FS

TUBE TYPE & MATERIAL

- 0: ϕ 12.7 (SUS304) Only available for resolution 12.7mm.
- 4: ϕ 14 (SUS304)
- 5: ϕ 17.2 (P.P.)
- 6: ϕ 16 (PVDF)
- 7: ϕ 17.2 (SUS304)
- 8: ϕ 21.7 (SUS304)
- 9: ϕ 27.2 (SUS304)
- C: ϕ 12.7 (SUS316) Only available for resolution 12.7mm.
- B: ϕ 14 (SUS316)
- D: ϕ 17.2 (SUS316)
- E: ϕ 21.7 (SUS316)
- F: ϕ 27.2 (SUS316)

※ For 5&6, measuring range>500mm, only \pm 12.7mm resolution is available.

FLOAT TYPE (see page 2)

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

- : None

LENGTH (UNIT : mm)

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

PIPE SHIELD

- ★ Total product length's margin of error \pm 5mm.
- ★ Characteristics, specifications and dimensions are subject to change.

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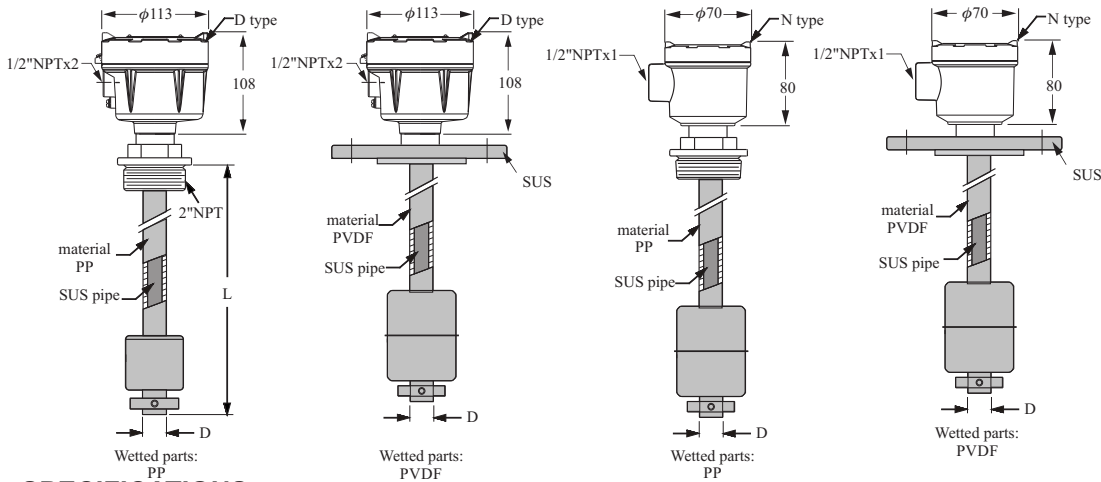
PTB PROOF No. 05 ATEX 1028 II 2G Ex d IIB T3~T6

II 2D Ex tb IIIC

T85°C~T200°C Db IP65

ENCLOSURE EXPLOSION PROOF

★ D or N type housing can be selected.



● SPECIFICATIONS

Terminal Housing: D type --- Aluminum
N type --- SUS

Output: 4~20mA, 2-wire

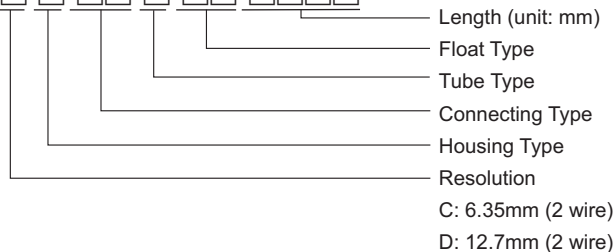
Ambient: 0~70 °C

Total Resistance: 1MΩ (Max.)

Operation Temperature: PP tube -10 ~ 80 °C
PVDF tube -20 ~ 120 °C

MODEL NO. FG7	Connecting	Tube size (D) & Material	Float type & Material	Suitable S.G.	Measuring Range
FG7□DFQ4	2\"/>				

MODEL NO.: FG7 □ □ □ □ □ □ □ □ □ □





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HOW TO ORDER

Order No. FG7 D D FQ 6 F1 1 5 0 0 (L)

EXPLOSION PROOF

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
- N: SUS

CONNECTION

Dimension	Specification
A : 3/8" (10A) H: 3" (80A)	M: 5 Kg/cm ² Z :PN40
B : 1/2" (15A) I: 4" (100A)	N:10 Kg/cm ² Q: PT
C : 3/4" (20A) J: 5" (125A)	O:150 Lbs R: PF(G)
D : 1" (25A) K: 6" (150A)	P: 300 Lbs T: BSP
E : 1 1/2" (40A) 4: 7" (175A)	W:PN10 U: NPT
F : 2" (50A) 5: 8" (200A)	X :PN16 V: GAS
G: 2 1/2" (65A)	Y :PN25 S: Others

TUBE TYPE & MATERIAL

- | | |
|--|---|
| <ul style="list-style-type: none"> 0: φ12.7 (SUS) 4: φ14 (SUS) 5: φ17.2 (P.P.) 6: φ16 (PVDF) 7: φ17.2 (SUS) 8: φ21.7 (SUS) 9: φ27.2 (SUS) | <ul style="list-style-type: none"> C: φ12.7 (SUS316) B: φ14 (SUS316) D: φ17.2 (SUS316) E: φ21.7 (SUS316) F: φ27.2 (SUS316) |
|--|---|
- Only available for resolution 12.7mm. Only available for resolution 12.7mm.
- ※ For 5&6, measuring range>500mm, only ± 12.7mm resolution is available.

FLOAT TYPE (see page 2)

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

LENGTH (UNIT : mm)

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

TAG

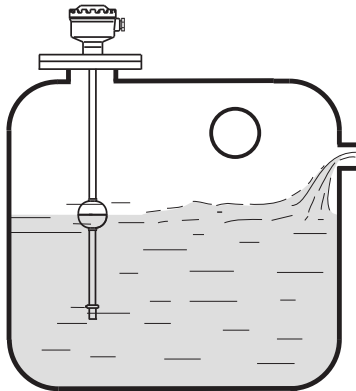
- ★ Total product length's margin of error ± 5mm.
- ★ Characteristics, specifications and dimensions are subject to change .

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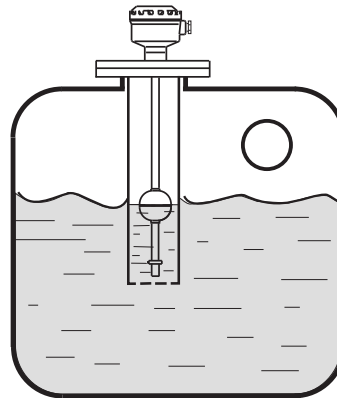
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INSTALLATION

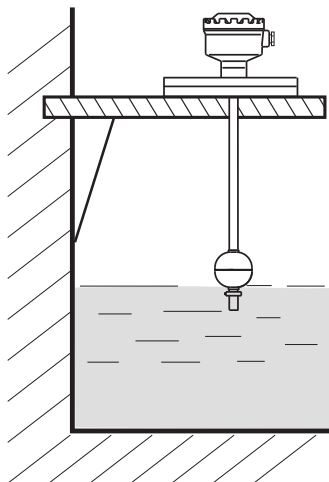
- ▶ The float level transmitter should be mounted far away from the inlet. Any rigorous liquid turbulence will produce error output signals.



- ▶ A pipe shield or an equivalent device can help normalize the indicator actuation especially when an agitator is present.



- ▶ Another useful alternative is an L type support frame 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 for the installation process.

