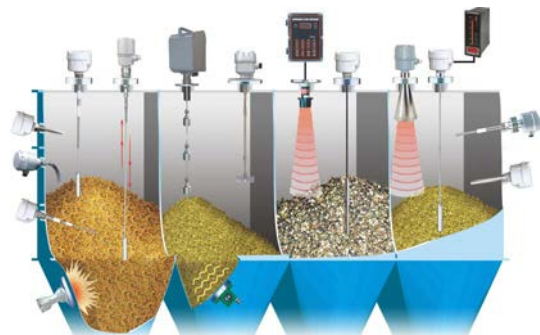
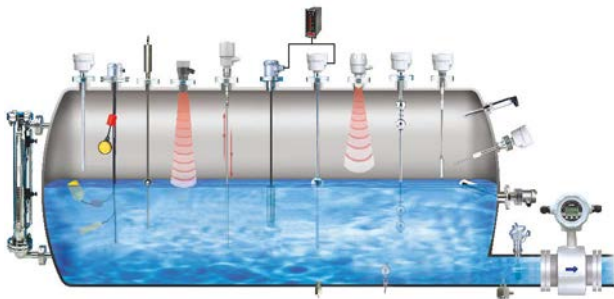


	Model	Product Name	Liquid	Solid	Transmitter	Switches	Explosion proof	Pages
Flow	EPD	Electromagnetic Flowmeter	⊙		⊙			01
	EPR	Paddle Wheel Flowmeter	⊙		⊙			02
Transmitter	EF	By-Pass Level Transmitter	⊙		⊙	⊙	⊙	03~05
	EG	Magnetostrictive Level Transmitter	⊙		⊙		⊙	06~07
	FG	Magnetic Float Level Transmitter	⊙		⊙		⊙	08~10
	EB	RF-Admittance Level Transmitter.	⊙		⊙		⊙	11~13
	EC	Pressure Level Transmitter	⊙		⊙			14~15
	JFR	FMCW Radar Level Transmitter	⊙	⊙	⊙			16
	EA	Ultrasonic Level Transmitter	⊙		⊙		⊙	17
	EAX	Ultrasonic Level Transmitter	⊙	⊙	⊙			18
	EE	Electromechanical Level Measuring System		⊙	⊙	⊙		19
	EST+MMS (HubLink)	Grain Silo Temperature & Level Monitoring System		⊙	⊙			20
Switches	SC	Tuning Fork Level Switch	⊙	⊙		⊙	⊙	21~25
	SA	Capacitance Level Switch	⊙	⊙		⊙	⊙	26~30
	SB	RF-Capacitance/Admittance Level Switch	⊙	⊙		⊙	⊙	31~32
	SE	Rotary Paddle Level Switch		⊙		⊙	⊙	33~35
	SD	Optical Level Switch	⊙			⊙		36~37
	SP	Thermal Dispersion Flow Switch	⊙			⊙	⊙	38~39
	SF	Paddle Flow Switch	⊙			⊙	⊙	39
	FF		⊙			⊙	⊙	40~44
	FC\FD	Magnetic Float Level Transmitter	⊙			⊙	⊙	45~56
	mini FC\FD	Mini Float/Magnetic Float Level Switch	⊙			⊙		57~59
	FA\FB	Cable Float Level Switch	⊙			⊙		60~62
	SQ	Pressure Switch	⊙			⊙		63~65
Vibrator & others	BVT	Pneumatic Vibrator		⊙				66
	BVR	Pneumatic Roller Vibrator		⊙				66
	BVK	Pneumatic Vibrator		⊙				66
	BAH	Air Hammer		⊙				67
	BVP	Air Hammer		⊙				67
	RA	Air Pad		⊙				67
	SRT	Conveyer Belt Misalignment Switch						68
	SRS	Safety Cable Pull Switch						68
	PB/PM	Microprocessor Based Bargraphic Display Scaling Meter						69
	AE	Controller for Dust Collector System						70~72
	RDA	valve and controller for dust collector system				⊙		73~76



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 $\text{CH}_3(\text{CH}_2)_2\text{CH}_3$	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 $\text{CH}_3(\text{CH}_2)_2\text{CH}_3$	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		○	●	●	△		
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		○	●	○			

Chemical Resistance

● 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 $CH_3COC_2H_5$		40	104		△		●				
		80	176				●				
Potassium Chromate K_2CrO_4		40	104	●	●	●	●	●			
		80	176		○	●	●	○			

ELECTROMAGNETIC FLOWMETER

EPD30/34

Features

- Measurement is virtually independent of density, viscosity, temperature, pressure and conductivity.
- Two measuring points inside tube and no moving parts to prevent pressure losses and pipe blockage.
- Electric conductive liquid and fluids with low solid contents can also be measured.
- Simple piping design: straight zone of the pipe for installation requests upstream 5D and downstream 2D.
- With self diagnosis function to check magnetizing signal, empty pipe and contaminated electrode.

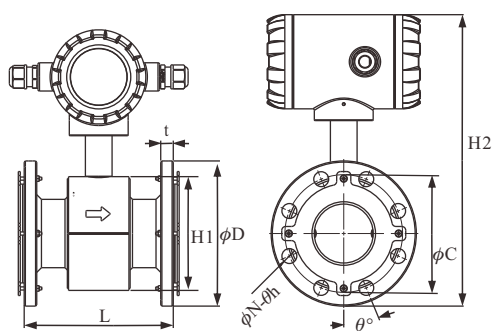
Application

- Waste water treatment
- Tapped water purification
- Sewerage
- Sea water desalination module
- Dyeing machines
- Solar energy and PCB wet processing
- Food manufacturing
- Pharmaceutical machines

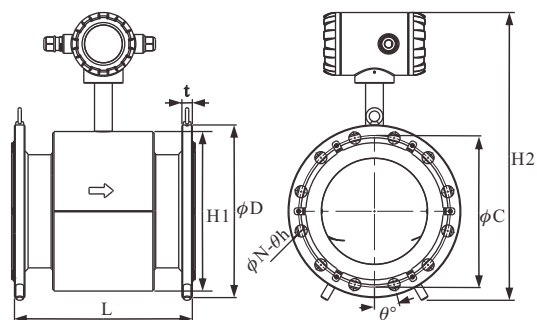
Specifications

1. Display: LCM 128*64 pixel backlit type
2. Input power: AC100~240Vac
3. Communication interface: RS-485 (Modbus)
(Optional support for ZigBee Pro wireless transmission)
4. Accuracy: $\pm 0.5\%$ of reading@1m/s(0.2% optional)
5. Medium temperature: -20~120°C(PTFE)
6. Ambient temperature: -40~70°C
7. Measurement range: 0.1m/s~10m/s
8. Analog output: 4~20mA
9. Frequency output scope: 2~8KHz
10. Pulse mode: NPN transistor output 32vdc/200mA
11. Protection rating: IP67/NEMA 4X
12. Enclosure material: Aluminum alloy
13. Power consumption: <10W
14. EMC regulation: IEC/EN 61326-1 Class A table2

Standard Type

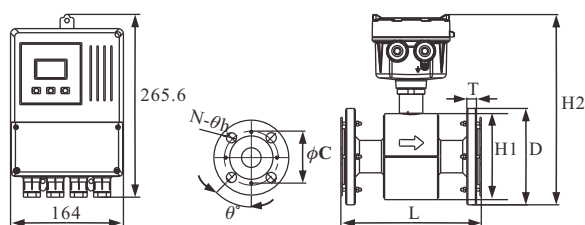


DN40~80

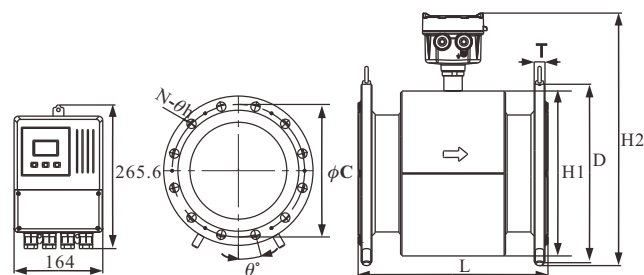


DN100~300

Remote Type



DN40~80



DN100~300

PADDLE WHEEL FLOWMETER

EPR1

Features

- 128*64 LCM display , convenient operation
- NPN and PNP pulse output
- 4~20mA analog output
- Wide range of voltage supply
- Integrated FRAM
(Ferroelectric random access memory)
- RS485 communication interface,
Modbus communication protocol
- Display module can be separated

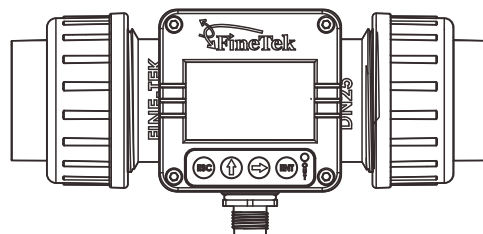
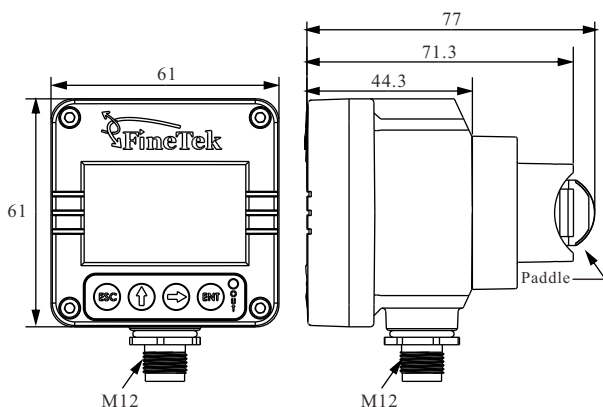
Application

- Food manufacturing
- Beverage manufacturing
- Water treatment industry
- Pharmaceutical industry
- Dyeing industry
- Chemical industry
- Semiconductor industry
- PCB wet processing control

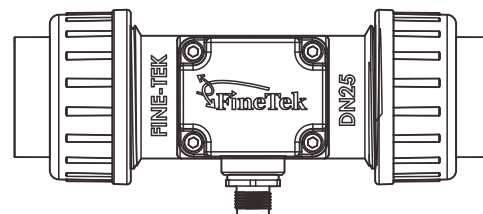
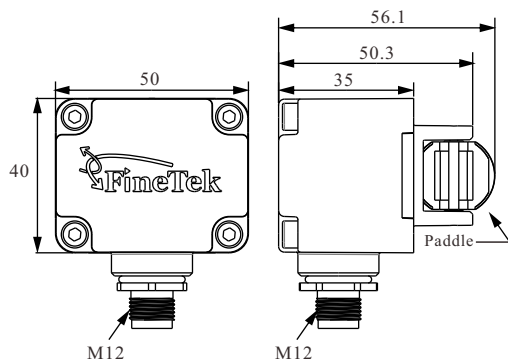
Specifications

1. Diameter(mm): DN20 、DN25 、DN40 、DN50
2. Flow range: 0.3~10m/s
3. Measurement accuracy: $\pm 3\%$ of Reading, Standard K-factor
4. Linearity: $\pm 0.5\%$ F.S.(10m/s)
5. Impurity range: 1% , max.(Graininess 0.5mm, max.)
6. Operating temperature:
Engineering plastics -15°C~60°C(5°F~140°F)
Stainless steel -15°C~100°C(5°F~212°F)
7. Process pressure:
Engineering plastics 10bar, max
Stainless steel 16bar, max
8. IP rating: IP66
9. Current output: 4~20mA
10. Pulse: NPN ,PNP 200mA Overcurrent protection
11. Frequency range: 0~300Hz
12. Power supply: 12~36Vdc , $\pm 10\%$
13. Communication Interface: RS485 Modbus

Intelligent all-in-one model



Flow transmitter model & pulse model

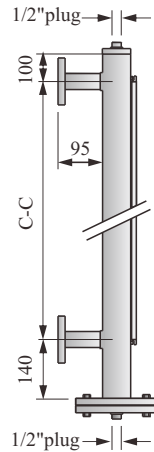


BY-PASS LEVEL TRANSMITTER



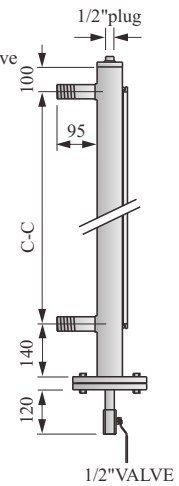
EF□□□B1H

1. Top end: Flat top with 1/2"PT plug
2. Connection flanges: 3/4"x10kg/cm²
3. Bottom end: Dual flanges with 1/2"PT plug
4. C-C distance: Min. 150 mm (SUS) Max. 5800 mm (plastic) Max. 3800 mm
5. Pressure range: PP, PVDF-- 5kg/cm² SUS304/316---25kg/cm² (Max. 50kg/cm²)
6. Temp. of the liquid: SUS304--140°C,200°C, 400°C SUS316--140°C,200°C, 400°C PP-----80°C PVDF-----120°C



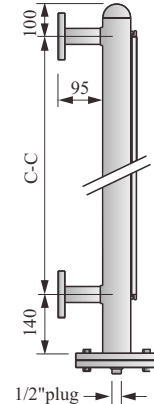
EF□□□B2K

1. Top end: Flat top with 1/2"PT plug
2. Connection pipe: 3/4"PT or 1"PT
3. Bottom end: Dual flange with 1/2" drain valve
4. C-C distance: Min. 150 mm (SUS) Max. 5800 mm (plastic) Max. 3800 mm
5. Pressure range: PP, PVDF-- 5kg/cm² SUS304/316---20kg/cm² (Max. 50kg/cm²)
6. Temp. of the liquid: SUS304--140°C,200°C, 350°C SUS316--140°C,200°C, 350°C PP-----80°C PVDF-----120°C



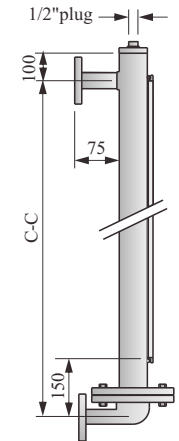
EF□□□A1H

1. Top end: Cap
2. Connection flanges: 3/4"x10kg/cm²
3. Bottom end: Dual flanges with 1/2"PT plug
4. C-C distance: Min. 150 mm (SUS) Max. 5800 mm
5. Pressure range: SUS304/316---25kg/cm² (Max. 50kg/cm²)
6. Temp. of the liquid: SUS304--140°C,200°C, 400°C SUS316--140°C,200°C, 400°C



EF□□□B1L

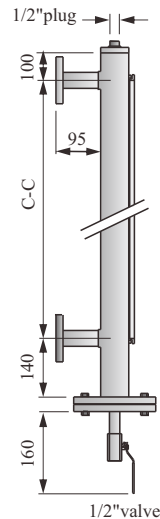
1. Top end: Flat top with 1/2"PT plug
2. Connection flanges: 3/4"x10kg/cm²
3. Bottom end: Dual flange with angle pipe
4. C-C distance: Min. 400 mm (SUS) Max. 5800 mm
5. Pressure range: SUS304/316---25kg/cm² (Max. 50kg/cm²)
6. Temp. of the liquid: SUS304--140°C,200°C, 400°C SUS316--140°C,200°C, 400°C



PATENTS
Taiwan: New model 135002

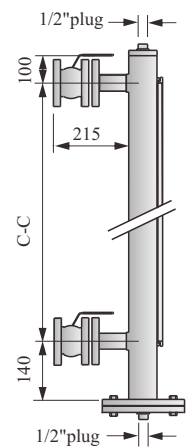
EF□□□B1K

1. Top end: Flat top with 1/2"PT plug
2. Connection flanges: 3/4"x10kg/cm²
3. Bottom end: Dual flanges with 1/2" drain valve
4. C-C distance: Min. 150 mm (SUS) Max. 5800 mm (plastic) Max. 3800 mm
5. Pressure range: PP, PVDF-- 5kg/cm² SUS304/316---20kg/cm² (Max. 50kg/cm²)
6. Temp. of the liquid: SUS304--140°C,200°C, 350°C SUS316--140°C,200°C, 350°C PP-----80°C PVDF-----120°C



EF□□□B7H

1. Top end: Flat top with 1/2"PT plug
2. Connection flanges: 3/4"x10kg/cm²
3. Ball valves: 3/4"x10kg/cm²
4. Bottom end: Dual flanges with 1/2"PT plug
5. C-C distance: Min. 150 mm (SUS) Max. 5800 mm (plastic) Max. 3800 mm
5. Pressure range: PP, PVDF-- 5kg/cm² SUS304/316---10kg/cm² (Max. 50kg/cm²)
6. Temp. of the liquid: SUS304--140°C,200°C, 350°C SUS316--140°C,200°C, 350°C PP-----80°C PVDF-----120°C

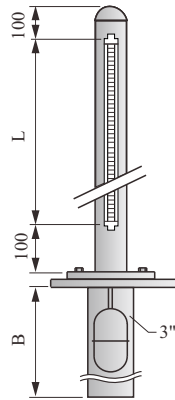


BY-PASS LEVEL TRANSMITTER



EF□□□A5M

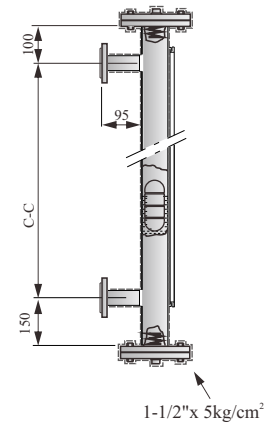
1. Top end: Cap
2. Bottom end: Dual flanges with tube
3. Pressure range:
SUS-----25kg/cm²
4. Temp. of the liquid:
SUS304--140°C,200°C, 400°C
SUS316--140°C,200°C, 400°C



EF□□□C1H

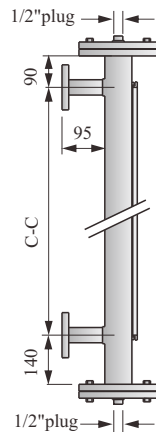
Removable Insulation

1. Top end:
Dual flanges with 1/2"PT plug
2. Connection flanges:
3/4"x10kg/cm²
3. Bottom end:
Dual flange with 1/2"PT plug
4. C-C distance: Min. 150 mm
Max. 5800 mm
5. Pressure range:
25kg/cm²(Max. 50kg/cm²)
6. Temp. of the liquid:
SUS304--140°C,200°C, 400°C
SUS316--140°C,200°C, 400°C



EF□□□C1H

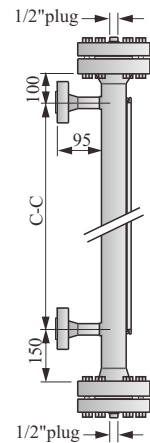
1. Top end:
Dual flanges with 1/2"PT plug
2. Connection flanges:
3/4"x10kg/cm²
3. Bottom end:
Dual flange with 1/2"PT plug
4. C-C distance: Min. 150 mm
(SUS) Max. 5800 mm
(plastic) Max. 3800 mm
5. Pressure range:
PP, PVDF-- 5kg/cm²
SUS---25kg/cm²(Max. 50kg/cm²)
6. Temp. of the liquid:
SUS304--140°C,200°C, 400°C
SUS316--140°C,200°C, 400°C
PP-----80°C
PVDF-----120°C



EF□□□C1H

High Pressure Type

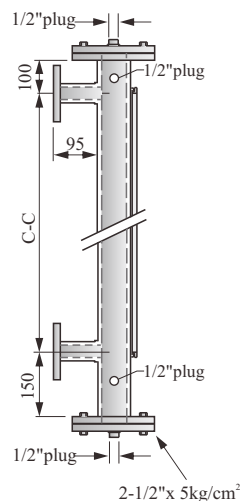
1. Top end:
Dual flanges with 1/2"PT plug
2. Connection flanges: 600Lb or 300Lb
3. Bottom end:
Dual flange with 1/2"PT plug
4. C-C distance: Min. 150 mm
Max. 5800 mm
5. Pressure range:
100kg/cm²(300°C down)600Lb
60kg/cm²(300°C up)300Lb
6. Temp. of the liquid:
SUS304--140°C
SUS316--140°C



EF□□□C8H

Jacket Type

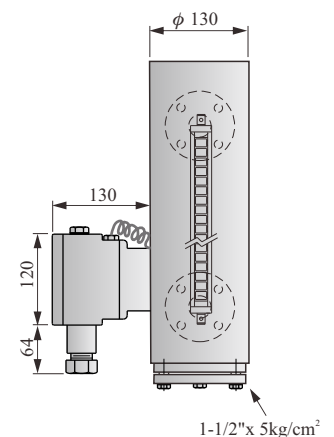
1. Top end:
Dual flanges with 1/2"PT plug
2. Connection flanges:
1-1/4"x10kg/cm²
3. Bottom end:
Dual flange with 1/2"PT plug
4. C-C distance: Min. 150 mm
Max. 5800 mm
5. Pressure range:
25kg/cm²(Max. 50kg/cm²)
6. Temp. of the liquid:
SUS304--140°C,200°C, 400°C
SUS316--140°C,200°C, 400°C



EF□□□B1H

Heating Type

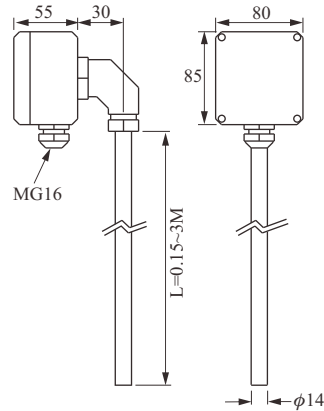
1. Top end:
Flat top with 1/2"PT plug
2. Connection flanges:
3/4"x10kg/cm²
3. Bottom end:
Dual flange with 1/2"PT plug
4. C-C distance: Min. 150 mm
Max. 5800 mm
5. Pressure range:
20kg/cm²
6. Temp. of the liquid:
SUS304--100°C
SUS316--100°C



BY-PASS LEVEL TRANSMITTER

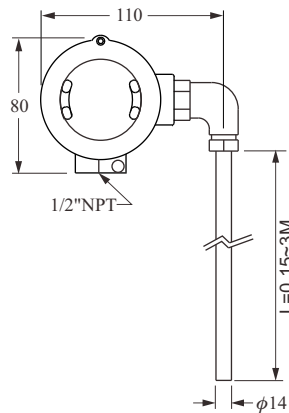
FGCG□□0

1. Housing material: PC(IP65)
2. Tube: $\phi 14\text{mm}$ / $\phi 17.2$ (length over 3M)
SUS 304 or SUS 316
3. Accuracy: 6.35mm
4. Output: 4~20mA two-wire
5. Power: 12~36Vdc
6. Measuring Range:
0.15~3M / 3~5.8M ($\phi 17.2$)
7. Ambient Temp.: -10~80°C



FGCL□□0

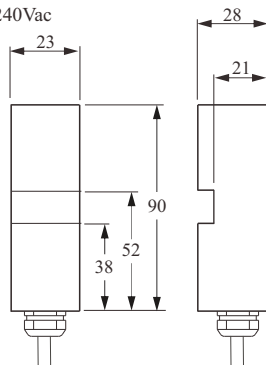
1. Housing material: Aluminum EEx d IIC T6
2. Tube: $\phi 14\text{mm}$ / $\phi 17.2$ (length over 3M)
SUS 304 or SUS 316
3. Accuracy: 6.35mm
4. Output: 4~20mA two-wire
5. Power: 12~36Vdc
6. Measuring Range:
0.15~3M / 3~5.8M ($\phi 17.2$)
7. Ambient Temp.: -10~80°C
8. Explosion-proof cable conduit is optional.



EFB-1220/1230

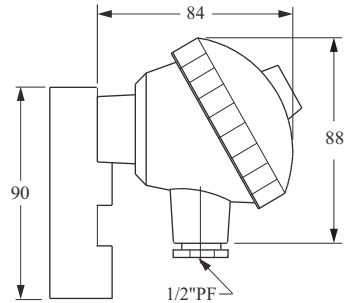
1. Contact Element: Reed Switch
2. Switch Form: EFB-1220, SPDT Hold type
EFB-1230, SPDT Normal type
3. Contact Capacity: 1A / 30W / 200Vdc / 240Vac
4. Housing Material: Aluminum
5. Operation Temp.: -20~200°C
6. Protection: IP67
7. Cable Length: 1M (Silicon Cable)

Wiring:
Black-COM, Brown-NC, Blue-NO,
Yellow/Green-Ground



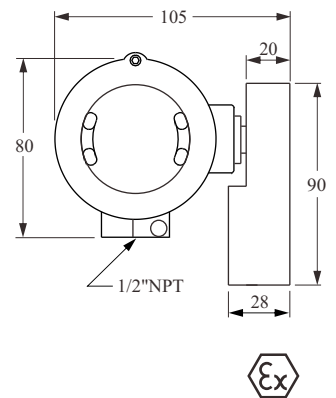
EFB-1250/1260

1. Contact Element: Reed Switch
2. Switch Form: EFB-1250, SPDT Hold type
EFB-1260, SPDT Normal type
3. Contact Capacity: 1A / 30W / 200Vdc / 240Vac
4. Housing Material: Aluminum
5. Operation Temp.: -20~150°C
6. Protection: Ip65



EFB-1300/1310

1. Housing material: Aluminum
CESI 03 ATEX 108
II 2 G EEx d IIC T6
2. Contact Element: Reed Switch
3. Switch Form:
EFB-1300, SPDT Hold type
EFB-1310, SPDT Normal type
4. Contact Capacity:
1A / 30W / 200Vdc / 240Vac
5. Housing Material: Aluminum
6. Operation Temp.: -20~85°C
7. Explosion-proof cable conduit is optional.



EFB-14□□

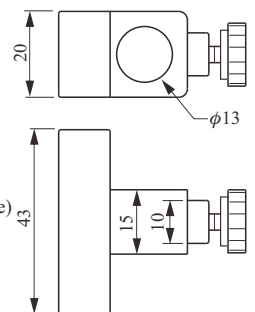
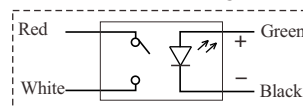
1. Housing material:
P.P. (IP67)
2. Switch Component:
Reed Switch
3. Switch Form:
EFB-1400, SPST NO Hold type
EFB-1410, SPST NO Normal type
EFB-1420, SPDT Hold type
EFB-1430, SPDT Normal type
EFB-1440, SPST NO Hold type (side lead wire)
EFB-1450, SPST NO Hold type (LED)
4. Contact Rating:
1A/30W 220Vac/200Vdc
5. LED Power: 24Vdc $\pm 20\%$ (For EFB-1450)
6. Operate Temp.:
-20~140°C (tank inside temp.)
7. Cable Length:
2M (PVC Cable)

Wiring:

Red-COM, White-NO (EFB-1400 / 1410 / 1440 / 1450)

Black-COM, Red-NC, White-NO (EFB-1420 / 1430)

EFB-1450 Wring



MAGNETOSTRICTIVE LEVEL TRANSMITTER

LEVEL TRANSMITTER

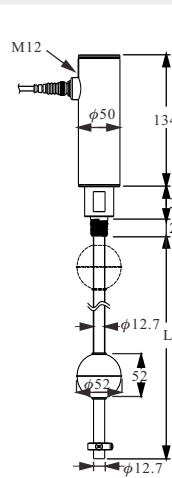
Can be used with PB/PM Series Panel Meter

EG31□

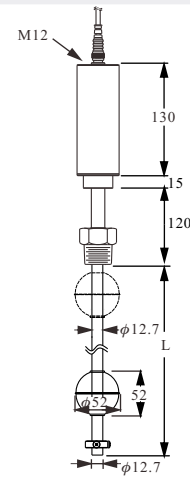
Standard

(unit: mm)

1. Measuring Range: 50~5500mm
2. Non Linearity: $\pm 0.05\%$ FS or $\pm 1.0\text{mm}$ (whichever is greater)
3. Repeatability: $\pm 0.004\%$ FS
4. Operation pressure: 30BAR
5. Ambient temp.: $-40 \sim 85^\circ\text{C}$
6. Operation temp.: $-40 \sim 125^\circ\text{C}$
7. Temp. Accuracy: $\pm 1^\circ\text{C}$
8. Output: 4~20mA
9. Digital Output: RS485/HART7.3
10. Power supply: 18~30Vdc
11. Enclosure: IP67 (enclosure) / IP69K(probe)
12. Housing Material: SUS304 (SUS316 optional)
13. Connection: Screw 1/2" PT (by order)
If installing directly(without removing float),the dimension of connection must be bigger than the external radius of the float ($>1-1/2"$)
14. Wetted Material: SUS304 (SUS316 option)



EG312
Standard type

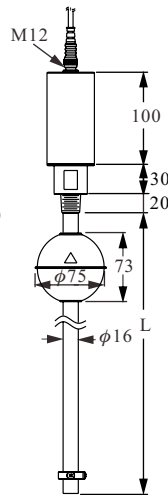


EG31A
High temperature type

EG32

High Accuracy Model

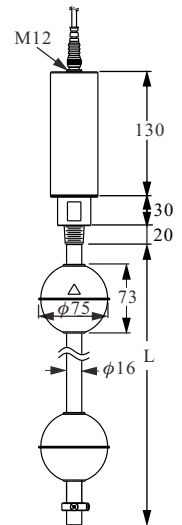
1. Measuring Range: 50~5500mm
2. Repeatability: $\pm 0.002\%$ FS
3. Operation pressure: 30 bar(Max.)
5. Ambient temp.: $-40^\circ\text{C} \sim 85^\circ\text{C}$
6. Operation temp.: $-40^\circ\text{C} \sim 125^\circ\text{C}$
7. Temp. Accuracy: $\pm 1^\circ\text{C}$
8. Output: 4~20mA / 2 Wire
9. Digital Output: RS485/HART7.3(option)
10. Power supply: 18~30V
11. Enclosure: IP67 (enclosure) / IP69K(probe)
12. Application:
Two-wire loop power output, comply with high accuracy & HART demands.



EG371

Single/dual Float Model

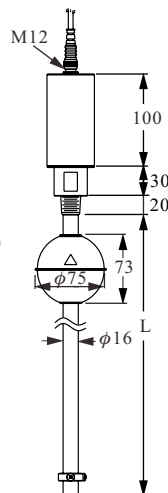
1. Measuring Range: 50~5500mm
2. Repeatability: $\pm 0.004\%$ FS
3. Operation pressure: 30 bar(Max.)
5. Ambient temp.: $-40^\circ\text{C} \sim 85^\circ\text{C}$
6. Operation temp.: $-40^\circ\text{C} \sim 125^\circ\text{C}$
7. Temp. Accuracy: $\pm 1^\circ\text{C}$
8. Output: 4~20mA / 2 Wire
9. Digital Output: RS485/HART7.3
10. Power supply: 18~30V
11. Enclosure: IP67 (enclosure) / IP69K(probe)
12. Application:
Two-wire loop power output, for single/dual level and interface measurement.



EG34

High Accuracy Model

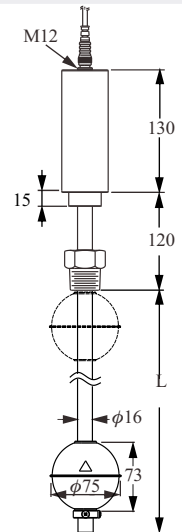
1. Measuring Range: 50~5500mm
2. Repeatability: $\pm 0.002\%$ FS
3. Operation pressure: 30 bar(Max.)
5. Ambient temp.: $-40^\circ\text{C} \sim 85^\circ\text{C}$
6. Operation temp.: $-40^\circ\text{C} \sim 125^\circ\text{C}$
7. Temp. Accuracy: $\pm 1^\circ\text{C}$
8. Output: 0~10V, 10~0V, $\pm 10\text{V}$, 0~5V, 5~0V, $\pm 5\text{V}$
4~20mA, 20~4mA, 20~0mA, 0~20mA
9. Digital Output: RS485
10. Power supply: 18~30V
11. Enclosure: IP67 (enclosure) / IP69K(probe)
12. Application:
Four wire output, high speed active in low voltage 5V.



EG37A

Ex-proof High Temp. Model

1. Measuring Range: 50~5500mm
2. Repeatability: $\pm 0.004\%$ FS
3. Operation pressure: 30 bar(Max.)
5. Ambient temp.: $-40^\circ\text{C} \sim 85^\circ\text{C}$
6. Operation temp.: $-40^\circ\text{C} \sim 195^\circ\text{C}$
7. Temp. Accuracy: $\pm 1^\circ\text{C}$
8. Output: 4~20mA / 2 Wire
9. Digital Output: RS485/HART7.3(option)
10. Power supply:
12~30V(4-wire), 18~30V(2-wire),
18~28V(Explosion proof)
11. Enclosure: IP67 (enclosure) / IP69K(probe)
12. Application:
Two-wire loop power output,
explosion-proof model for hazardous environment.

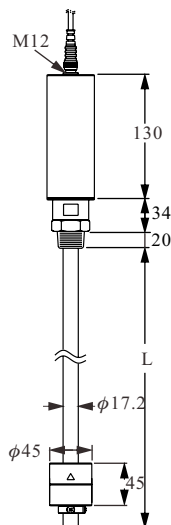


MAGNETOSTRICTIVE LEVEL TRANSMITTER / ISOLATED SAFETY BARRIER

EG374

Anti-Corrosion

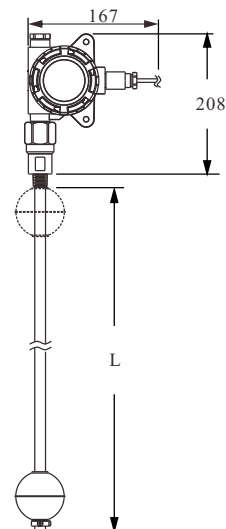
1. Measuring Range: 50~2000mm
2. Repeatability: $\pm 0.004\%$ FS
3. Operation pressure: 5 bar(Max.)
5. Ambient temp.: $-40^{\circ}\text{C}\sim 85^{\circ}\text{C}$
6. Operation temp.: $-40^{\circ}\text{C}\sim 80^{\circ}\text{C}$
7. Temp. Accuracy: $\pm 1^{\circ}\text{C}$
8. Output: 4~20mA /2 Wire
9. Digital Output: RS485/HART7.3
10. Power supply: 18~30V
11. Enclosure: IP67 (enclosure) / IP69K(probe)
12. Application:
Two-wire loop power output, for acid /alkali corrosion liquids.



EG36

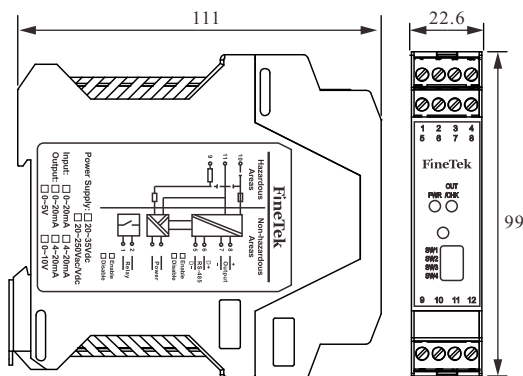
Diaplay

1. Measuring Range: 50~5500mm
2. Repeatability: $\pm 0.004\%$ FS
3. Operation pressure: 30 bar(Max.)
5. Ambient temp.: $-40^{\circ}\text{C}\sim 85^{\circ}\text{C}$
6. Operation temp.: $-40^{\circ}\text{C}\sim 125^{\circ}\text{C}$
7. Temp. Accuracy: $\pm 1^{\circ}\text{C}$
8. Output: 4~20mA /2 Wire
9. Digital Output: RS485/HART7.3
10. Power supply:
12~30V(4 wire), 16~30V(2 wire)
11. Enclosure: IP67 (enclosure) / IP69K(probe)
12. Application:
Two-wire loop power output, explosion-proof model with diaplay for hazardous environment.



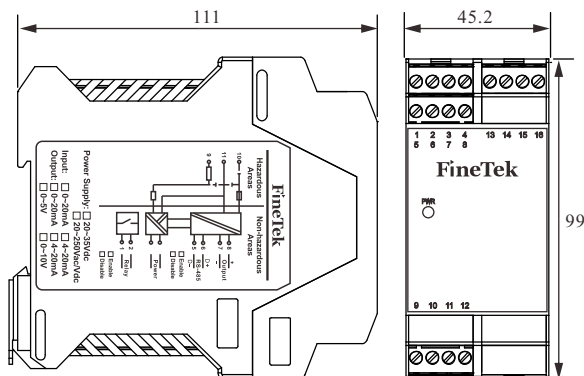
TX100R

1. Supply voltage: 20~35Vdc
2. Power supply protection: Reversed power supply protection
3. Power consumption: <100mA@24V, Load 20mA
4. Input current: 0~20/4~20
5. Open-circuit voltage: <28 Vdc
6. Distribution voltage: >15Vdc(Load 20mA)
7. Output:
Current: 0~20/4~20mA, Load impedance: <550ohm
Voltage: 0~5/0~10V, Load impedance: <20k ohm
8. Reaction time: 5ms(Reach 90% of the final value90%)
9. Transmission precision: 0.1%F.S., 0.5%@<0.3V(20°C)
10. Insulation strength:
2500 Vac, Leakage current <1 mA, 1min
1. Intrinsically safe end and non-intrinsically safe end
2. Non-intrinsically safe power supply end and output end
11. Field equipment:
1. Two-wire sensor
2. Three-wire sensor
3. Current output sensor



TX101F

1. Supply voltage: 20~250 Vdc/Vac, 50/60 Hz
2. Power supply protection: Non-directional input
3. Power consumption: <200mA@24V, Load 20mA
4. Input current: 0~20/4~20
5. Open-circuit voltage: <28 Vdc
6. Distribution voltage: >15Vdc(Load 20mA)
7. Output:
Current: 0~20/4~20mA, Load impedance: <550ohm
Voltage: 0~5/0~10V, Load impedance: <20k ohm
8. Reaction time: 5ms(Reach 90% of the final value90%)
9. Transmission precision: 0.1%F.S., 0.5%@<0.3V(20°C)
10. Insulation strength:
2500 Vac, Leakage current <1 mA, 1min
1. Intrinsically safe end and non-intrinsically safe end
2. Non-intrinsically safe power supply end and output end
11. Field equipment:
1. Two-wire sensor
2. Three-wire sensor
3. Current output sensor



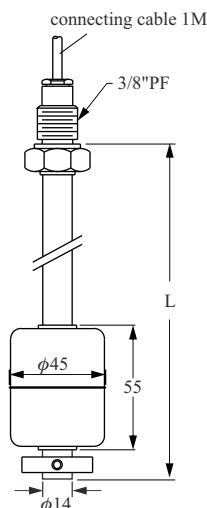
MAGNETIC FLOAT LEVEL INDICATOR

LEVEL TRANSMITTER

Can be used with PB/PM Series Panel Meter

FGA(B)-AR4S3(S4)

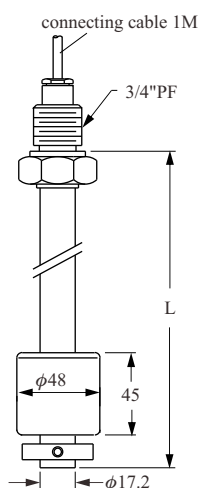
1. Connection cable:
Silicon cable 3Cx1M
2. Connection: 3/8"PF
3. Tube: $\phi 14$ SUS304
4. Float available: SUS316
S3- $\phi 45 \times 55$
(S4- $\phi 52 \times 52$)
5. Specific gravity: S3: $E > 0.65$
S4: $E > 0.55$
6. Resolution:
FGA--- 6.35mm(3 wires)
FGB--- 12.70mm(3 wires)
7. Measuring range: Max.6m
8. Total resistance of
measuring range: $1M\Omega$ (Max.)
9. Output: Resistance of three wires
10. Operation temperature: $-20 \sim 120^{\circ}\text{C}$
11. Operation pressure:
FGA(B)-AR4S3: 12 kg/cm^2
FGA(B)-AR4S4: 30 kg/cm^2



※ Notes: Please consider $\phi 17.2\text{mm}$ Tube with S5, S6 float if measuring range more than 3M

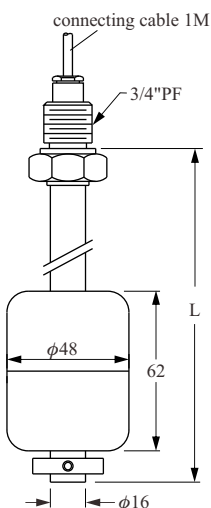
FGB-CR5P3

1. Connection cable:
Silicon cable 3Cx1M
2. Connection: 3/4"PF
3. Tube: $\phi 17.2$ P.P.
4. Float available: P.P.
P3- $\phi 48 \times 45$
5. Specific gravity: $E > 0.6$
6. Resolution: 12.70mm
7. Measuring range: Max. 6m
8. Total resistance of
measuring range: $1M\Omega$ (Max.)
9. Output:
Resistance of three wires
10. Operation temperature:
 $-20 \sim 80^{\circ}\text{C}$
11. Operation pressure:
 5 kg/cm^2



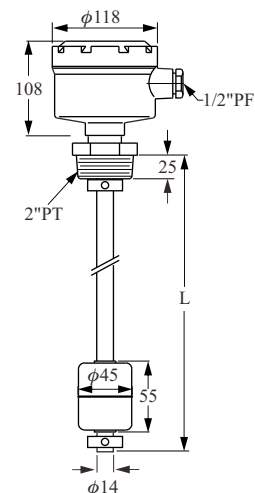
FGB-CR6F4

1. Connection cable:
Silicon cable 3Cx1M
2. Connection: 3/4"PF
3. Tube: $\phi 16$ PVDF
4. Float available: PVDF
F4- $\phi 48 \times 60$
5. Specific gravity: $E > 0.75$
6. Resolution: 12.70mm
7. Measuring range: Max. 6m
8. Total resistance of
measuring range: $1M\Omega$ (Max.)
9. Output:
Resistance of three wires
10. Operation temperature:
 $-20 \sim 120^{\circ}\text{C}$
11. Operation pressure:
 5 kg/cm^2



FGC(D)BFQ4S3(S4)

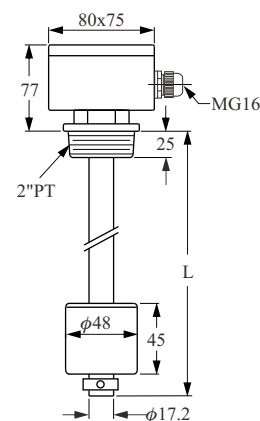
1. Housing material:
Aluminum (IP65)
2. Connection: 2"PT
3. Tube: $\phi 14$ SUS304
4. Float available: SUS316
S3- $\phi 45 \times 55$
(S4- $\phi 52 \times 52$)
5. Specific gravity: S3: $E > 0.65$
S4: $E > 0.55$
6. Resolution:
FGA--- 6.35mm(2 wires)
FGB--- 12.70mm(2 wires)
7. Measuring range: Max. 6m
8. Total resistance of
measuring range: $1M\Omega$ (Max.)
9. Output: Two wires 4~20mA
10. Operation temperature: $-20 \sim 120^{\circ}\text{C}$
11. Operation pressure:
FGC(D)-BFQ4S3: 12 kg/cm^2
FGC(D)-BFQ4S4: 30 kg/cm^2



※ Notes: Please consider $\phi 17.2\text{mm}$ Tube with S5, S6 float if measuring range more than 3M

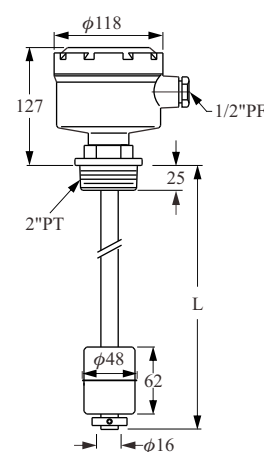
FGDGFQ5P3

1. Housing material:
P.C. (IP65)
2. Connection: 2"PT
3. Tube: $\phi 17.2$ P.P.
4. Float available: P.P.
P3- $\phi 48 \times 45$
5. Specific gravity: $E > 0.6$
6. Resolution: 12.70mm
7. Measuring range: Max. 6m
8. Total resistance of
measuring range: $1M\Omega$ (Max.)
9. Output: Two wires 4~20mA
10. Operation temperature:
 $-20 \sim 80^{\circ}\text{C}$
11. Operation pressure:
 5 kg/cm^2



FGDCFQ6F4

1. Housing material:
PP+FIBER (IP65)
2. Connection: 2"PT
3. Tube: $\phi 16$ PVDF
4. Float available: PVDF
F4- $\phi 48 \times 60$
5. Specific gravity: $E > 0.75$
6. Resolution: 12.70mm
7. Measuring range: Max. 6m
8. Total resistance of
measuring range: $1M\Omega$ (Max.)
9. Output: Two wires 4~20mA
10. Operation temperature:
 $-20 \sim 120^{\circ}\text{C}$
11. Operation pressure:
 5 kg/cm^2



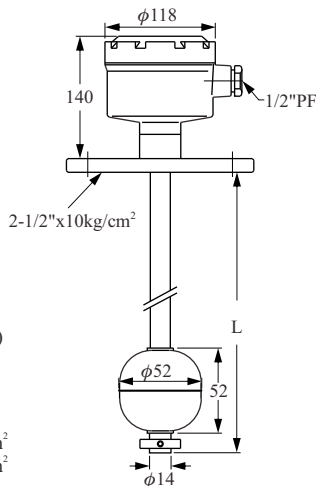
MAGNETIC FLOAT LEVEL TRANSMITTER

LEVEL TRANSMITTER

Can be used with PB/PM Series Panel Meter

FGC(D)BGN4S4(S3)

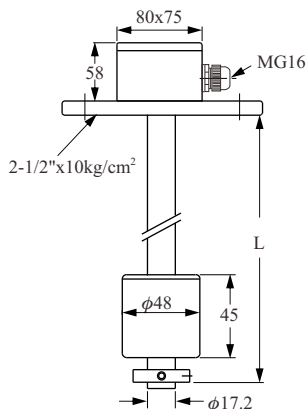
- Housing material:
Aluminum (IP65)
- Connection:
2-1/2"x10kg/cm²
- Tube: $\phi 14$ SUS304
- Float available: SUS316
S3- $\phi 45 \times 55$
(S4- $\phi 52 \times 52$)
- Specific gravity: S3: E.>0.65
S4: E.>0.55
- Resolution:
FGA--- 6.35mm(2 wires)
FGB--- 12.70mm(2 wires)
- Measuring range: Max. 6m
- Total resistance of
measuring range: 1M Ω (Max.)
- Output: Two wires 4~20mA
- Operation temperature:
-20~120°C
- Operation pressure:
FGC(D)-BGN4S3: 12 kg/cm²
FGC(D)-BGN4S4: 30 kg/cm²



※ Notes: Please consider $\phi 17.2$ mm Tube with S5, S6 float if measuring range more than 3M

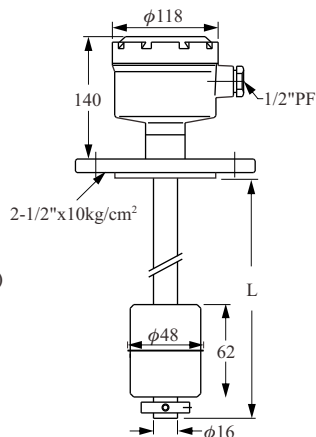
FGDGGN5P3

- Housing material:
P.C.(IP65)
- Connection:
2-1/2"x10 kg/cm²
- Tube: $\phi 17.2$ P.P.
- Float available: P.P.
P3- $\phi 48 \times 45$
- Specific gravity: E.>0.6
- Resolution: 12.70mm
- Measuring range:
Max. 6m
- Total resistance of
measuring range: 1M Ω (Max.)
- Output:
Two wires 4~20mA
- Operation temperature:
-20~80°C
- Operation pressure:
5 kg/cm²



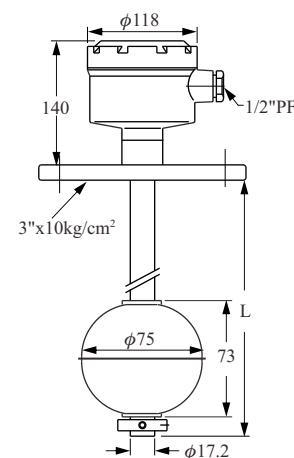
FGDCGN6F4

- Housing material:
PP+FIBER (IP65)
- Connection:
2-1/2"x10 kg/cm²
- Tube: $\phi 16$ PVDF
- Float available: PVDF
F4- $\phi 48 \times 60$
- Specific gravity: E.>0.75
- Resolution: 12.70mm
- Measuring range:
Max. 6m
- Total resistance of
measuring range: 1M Ω (Max.)
- Output:
Two wires 4~20mA
- Operation temperature:
-20~120°C
- Operation pressure:
5 kg/cm²



FGC(D)BHN7S5(S6)

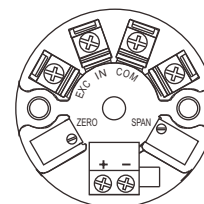
- Housing material:
Aluminum (IP65)
- Connection:
3"x10 kg/cm²
- Tube: $\phi 17.2$ SUS304
- Float available: SUS304
S5- $\phi 75 \times 73$
(S6- $\phi 75 \times 108$)
- Specific gravity: S5: E.>0.55
S6: E.>0.5
- Resolution:
FGC--- 6.35mm(2 wires)
FGD--- 12.70mm(2 wires)
- Measuring range: Max. 6m
- Total resistance of
measuring range: 1M Ω (Max.)
- Output: Two wires 4~20mA
- Operation temperature:
-20~120°C
- Operation pressure:
FGDBHN7S5: 30 kg/cm²
FGDBHN7S6: 10 kg/cm²



TRANSDUCER

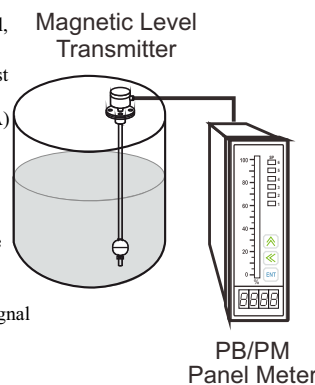
TAB-2110

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



PANEL METER

- 4 or 5 digits numerical display.
- 101-segment LED bargraph display.
- Modulized design, flexible to fit different applications by input signal, output signal and relay contacts.
- Standard input module supports most process signals, including:
(5V, 10V, 20V, 200V, 20mA, 200mA) jumper selectable.
- PB-2471 and PM-2430 monitor two channel signal in one unit.
- Support "Non-Linear Tank Volume Conversion" function, direct volume indication for any kind of tanks. (Optional)
- Optional output control including signal output and up to 6 relay contacts.
- Wide range power supply:
AC85V~265V.



NEPSI PROOF No. GYJ111211 Ex d IIC T3~T6

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

Ex II 2D Ex tb IIIC T85°C~T200°C Db IP65

FEATURES

- Every sensing element is protected by a rugged package, safety in use and transport.
- The measurement range will not be affected by change in specific gravity or pressure.
- High performance and reliability of electric circuit modular designed.

APPLICATIONS

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

SPECIFICATION

Output: 3-wire Resistance or 4~20mA

Maximum Resistance: 1MΩ(Max.)

Resolution: 6.35mm or 12.7mm

Suitable S.G.: >0.5

Operating Temp.:

PP: -20 °C ~ 80 °C

PVDF: -20 °C ~ 120 °C

SUS: -20 °C ~ 120 °C



SCREW TYPE

FLANGE TYPE

ORDER INFORMATION

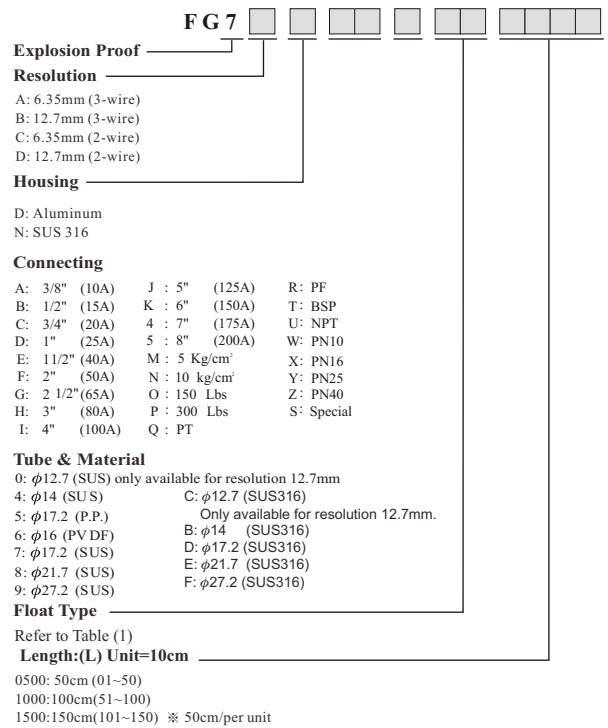
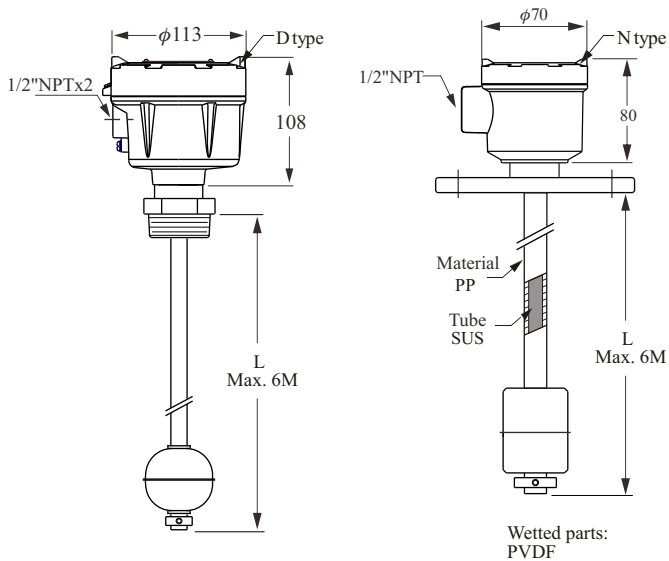
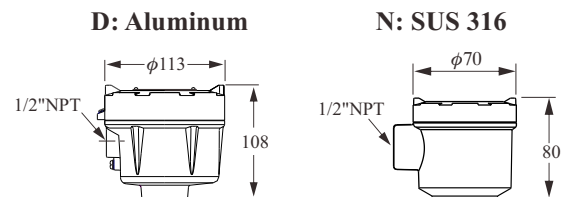


TABLE (1) FLOAT SPECIFICATION

Type	Dimensions	S.G.	Operating pressure (kg/cm ²)	Material
S3	45x55x15	0.65	12	SUS316
S4	52x52x15	0.55	30	SUS316
S5	75x73x19	0.61	30	SUS316
S6	75x108x19	0.5	10	SUS316
S8	100x100x20	0.5	15	SUS304
S9	150x150x30	0.45	15	SUS304
P3	48x45x18.5	0.6	5	PP
F4	48x62x18	0.75	5	PVDF

HOUSING SPECIFICATION



※Cable Conduit (Optional Part)

29-1108: 1/2"NPT

29-1104: 3/4"NPT

Please refer to page 45

RF-ADMITTANCE LEVEL TRANSMITTER

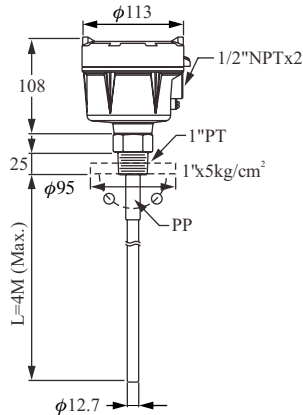
LEVEL TRANSMITTER

Can be used with PB/PM Series Panel Meter

EB5200

Rod Probe

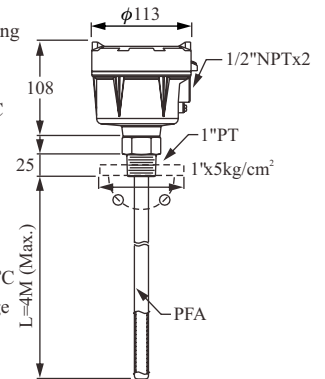
1. Housing Material: Aluminum IP65
2. Probe material: SUS 304
3. Operation temp.: -40~85°C
4. Ambient temp.: -40~85°C
- LCD monitor: -20~85°C
5. Operation voltage: 18~30Vdc
6. Analog output: 4~20mA(two wire)
7. Digital output: HART(option)
8. Measuring range: 20~2000pF
9. Accuracy : $\pm 1\%FS$ or $\pm 0.5pF$
10. Effect temp. : $\pm 0.2\%FS/^{\circ}C$ or $0.1pF/^{\circ}C$
11. Connection: 1"PT or 1"X5kg/cm² flange
12. Weight: Approx. 2.3 kg (1M)
13. Operating pressure: 40kg/cm²



EB52A0

Rod Coating

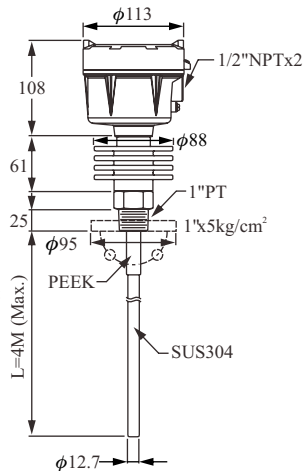
1. Housing Material: Aluminum IP65
2. Probe material: SUS304 with PFA Coating
3. Operation temp.: -40~85°C
4. Ambient temp.: -40~85°C
- LCD monitor: -20~85°C
5. Operation voltage: 18~30Vdc
6. Analog output: 4~20mA(two wire)
7. Digital output: HART(option)
8. Measuring range: 20~2000pF
9. Accuracy : $\pm 1\%FS$ or $\pm 0.5pF$
10. Effect temp. : $\pm 0.2\%FS/^{\circ}C$ or $0.1pF/^{\circ}C$
11. Connection: 1"PT or 1"X5kg/cm² flange
12. Weight: Approx. 2.3 kg (1M)
13. Operating pressure: 32kg/cm²



EB5201

Hi-temp Wire Probe

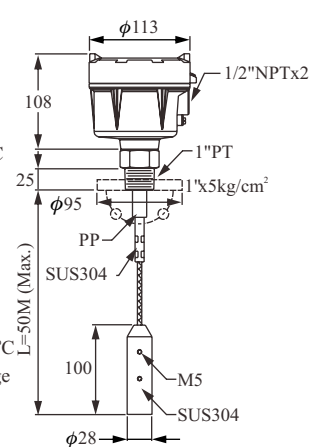
1. Housing Material: Aluminum IP65
2. Probe material: SUS 304
3. Operation temp.: -40~200°C
4. Ambient temp.: -40~85°C
- LCD monitor: -20~85°C
5. Operation voltage: 18~30Vdc
6. Analog output: 4~20mA(two wire)
7. Digital output: HART(option)
8. Measuring range: 20~2000pF
9. Accuracy : $\pm 1\%FS$ or $\pm 0.5pF$
10. Effect temp. : $\pm 0.2\%FS/^{\circ}C$ or $0.1pF/^{\circ}C$
11. Connection: 1"PT or 1"X5kg/cm² flange
12. Weight: Approx. 2.8 kg (1M)
13. Operating pressure: 40kg/cm²



EB5300

Wire Probe

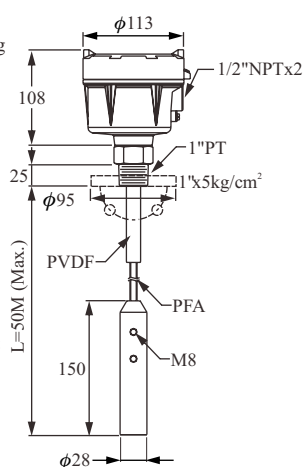
1. Housing Material: Aluminum IP65
2. Probe material: SUS 304
3. Weight material: SUS 304
4. Operation temp.: -40~85°C
5. Ambient temp.: -40~85°C
- LCD monitor: -20~85°C
6. Tensile strength: 2000Kgf
7. Operation voltage: 18~30Vdc
8. Analog output: 4~20mA(two wire)
9. Digital output: HART(option)
10. Measuring range: 20~2000pF
11. Accuracy : $\pm 1\%FS$ or $\pm 0.5pF$
12. Effect temp. : $\pm 0.2\%FS/^{\circ}C$ or $0.1pF/^{\circ}C$
13. Connection: 1"PT or 1"X5kg/cm² flange
14. Weight: Approx. 2.3 kg (1M)
15. Operating pressure: 40kg/cm²



EB53A0

Wire Coating

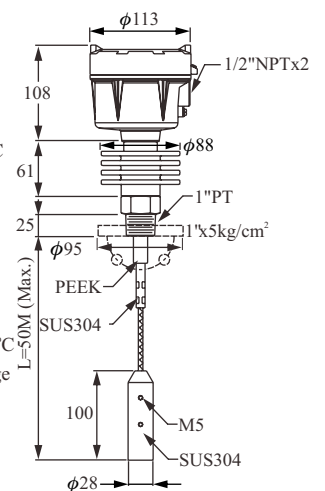
1. Housing Material: Aluminum IP65
2. Probe material: SUS304 with PFA Coating
3. Weight material: PTFE
4. Operation temp.: -40~85°C
5. Ambient temp.: -40~85°C
- LCD monitor: -20~85°C
6. Tensile strength: 2000Kgf
7. Operation voltage: 18~30Vdc
8. Analog output: 4~20mA(two wire)
9. Digital output: HART(option)
10. Measuring range: 20~2000pF
11. Accuracy : $\pm 1\%FS$ or $\pm 0.5pF$
12. Effect temp. : $\pm 0.2\%FS/^{\circ}C$ or $0.1pF/^{\circ}C$
13. Connection: 1"PT or 1"X5kg/cm² flange
14. Weight: Approx. 2.3 kg (1M)
15. Operating pressure: 32kg/cm²



EB5301

Hi-temp Wire Probe

1. Housing Material: Aluminum IP65
2. Probe material: SUS304
3. Weight material: SUS 304
4. Operation temp.: -40~200°C
5. Ambient temp.: -40~85°C
- LCD monitor: -20~85°C
6. Tensile strength: 2000Kgf
7. Operation voltage: 18~30Vdc
8. Analog output: 4~20mA(two wire)
9. Digital output: HART(option)
10. Measuring range: 20~2000pF
11. Accuracy : $\pm 1\%FS$ or $\pm 0.5pF$
12. Effect temp. : $\pm 0.2\%FS/^{\circ}C$ or $0.1pF/^{\circ}C$
13. Connection: 1"PT or 1"X5kg/cm² flange
14. Weight: Approx. 2.8 kg (1M)
15. Operating pressure: 40kg/cm²



RF-ADMITTANCE LEVEL TRANSMITTER

LEVEL TRANSMITTER

Can be used with PB/PM Series Panel Meter

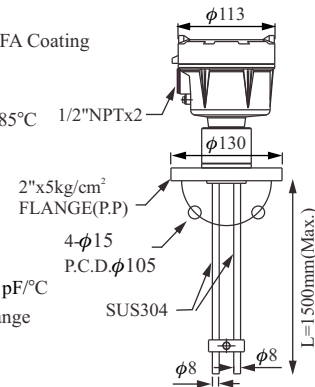
EB5400

Two rod Probe

1. Housing Material: Aluminum IP65
2. Probe material: SUS304 with PP / PFA Coating
3. Operation temp.: -40~85°C
4. Ambient temp.: -40~85°C

LCD monitor: -20~85°C 1/2"NPTx2

5. Operation voltage: 18~30Vdc
6. Analog output: 4~20mA(two wire)
7. Digital output: HART(option)
8. Measuring range: 20~2000pF
9. Accuracy : $\pm 1\%$ FS or $\pm 0.5\text{pF}$
10. Effect temp. : $\pm 0.2\%$ FS/°C or $0.1\text{pF}/^\circ\text{C}$
11. Connection: 2"x5kg/cm² flange² flange
12. Weight: Approx. 2.3 kg (1M)
13. Operating pressure: 5kg/cm²



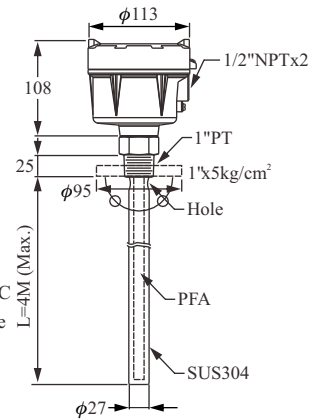
EB55A0

Anti-wave tube

1. Housing Material: Aluminum IP65
2. Probe material: SUS 304 Coting PFA
3. Operation temp.: -40~85°C
4. Ambient temp.: -40~85°C

LCD monitor: -20~85°C

5. Operation voltage: 18~30Vdc
6. Analog output: 4~20mA(two wire)
7. Digital output: HART(option)
8. Measuring range: 20~2000pF
9. Accuracy : $\pm 1\%$ FS or $\pm 0.5\text{pF}$
10. Effect temp. : $\pm 0.2\%$ FS/°C or $0.1\text{pF}/^\circ\text{C}$
11. Connection: 1"PT or 1"x5kg/cm² flange
12. Weight: Approx. 2.3 kg (1M)
13. Operating pressure: 32kg/cm²



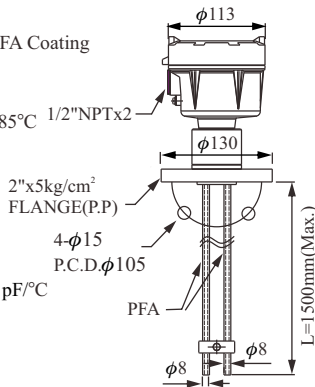
EB54A0

Two Coating Rod Probe

1. Housing Material: Aluminum IP65
2. Probe material: SUS304 with PP / PFA Coating
3. Operation temp.: -40~85°C
4. Ambient temp.: -40~85°C

LCD monitor: -20~85°C 1/2"NPTx2

5. Operation voltage: 18~30Vdc
6. Analog output: 4~20mA(two wire)
7. Digital output: HART(option)
8. Measuring range: 20~2000pF
9. Accuracy : $\pm 1\%$ FS or $\pm 0.5\text{pF}$
10. Effect temp. : $\pm 0.2\%$ FS/°C or $0.1\text{pF}/^\circ\text{C}$
11. Connection: 2"x5kg/cm² flange
12. Weight: Approx. 2.3 kg (1M)
13. Operating pressure: 5kg/cm²



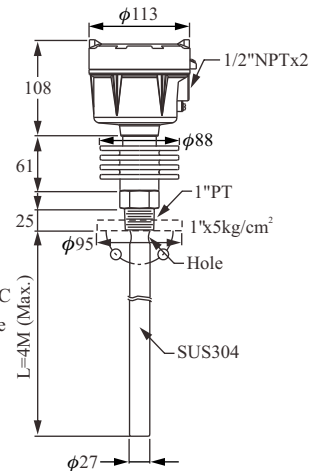
EB5501

Hi-Temp Anti-wave tube

1. Housing Material: Aluminum IP65
2. Probe material: SUS 304
3. Operation temp.: -40~200°C
4. Ambient temp.: -40~85°C

LCD monitor: -20~85°C

5. Operation voltage: 18~30Vdc
6. Analog output: 4~20mA(two wire)
7. Digital output: HART(option)
8. Measuring range: 20~2000pF
9. Accuracy : $\pm 1\%$ FS or $\pm 0.5\text{pF}$
10. Effect temp. : $\pm 0.2\%$ FS/°C or $0.1\text{pF}/^\circ\text{C}$
11. Connection: 1"PT or 1"x5kg/cm² flange
12. Weight: Approx. 2.8 kg (1M)
13. Operating pressure: 40kg/cm²



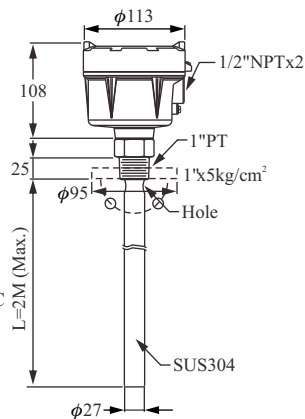
EB5500

Anti-wave tube

1. Housing Material: Aluminum IP65
2. Probe material: SUS 304
3. Operation temp.: -40~85°C
4. Ambient temp.: -40~85°C

LCD monitor: -20~85°C

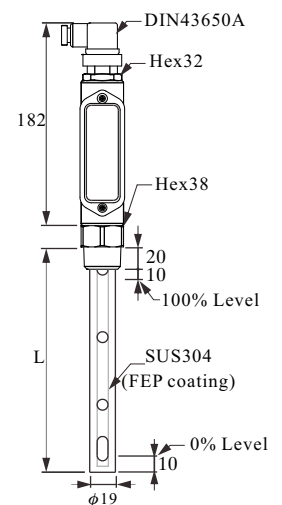
5. Operation voltage: 18~30Vdc
6. Analog output: 4~20mA(two wire)
7. Digital output: HART(option)
8. Measuring range: 20~2000pF
9. Accuracy : $\pm 1\%$ FS or $\pm 0.5\text{pF}$
10. Effect temp. : $\pm 0.2\%$ FS/°C or $0.1\text{pF}/^\circ\text{C}$
11. Connection: 1"PT or 1"x5kg/cm² flange
12. Weight: Approx. 2.3 kg (1M)
13. Operating pressure: 40kg/cm²



EB4300

Standard

1. Supply voltage: 11~36 Vdc
2. Output : 0~5 Vdc / 1~6 Vdc / 4~20mA
3. Length : 1500 mm (max.)
4. Linearity: $\pm 1\%$ F.S.
5. User interface: Dual buttons & LED indicators
6. Ambient temperature: -40~85°C
7. Operating temperature: -40~85°C
8. Process pressure: 52 bar (750 psi)
9. IP rating: IP65



PTB PROOF No. 05 ATEX 1004 II 2G Ex d IIB T6~T3

II 2D Ex tD A21 IP65 T80°C~T190°C

FEATURES

- 4~20mA 2 wire Loop power
- Low consumption of power (20mA Max)
- Easy calibration (Any 2 points for calibration)
- Wide measuring range for capacitance
- No blind distance, ideal for different tanks.
- Suitable for high temperature, high pressure and corrosive environment.

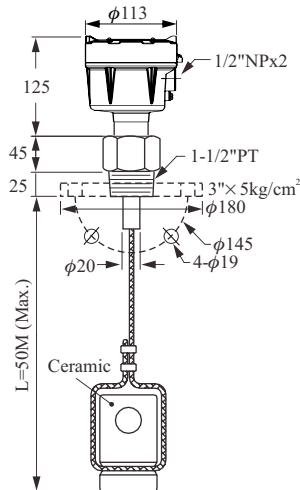
SPECIFICATION

Housing Material: Aluminum IP65
 Output current: 4~20mA.
 Supply voltage: 12~36 Vdc
 Measuring Range: 0~5000pF
 Accuracy : $\pm 1\%$ FS(25°C)
 Operating pressure: 40kg/cm²

► EB1710

[Wire Probe Type]

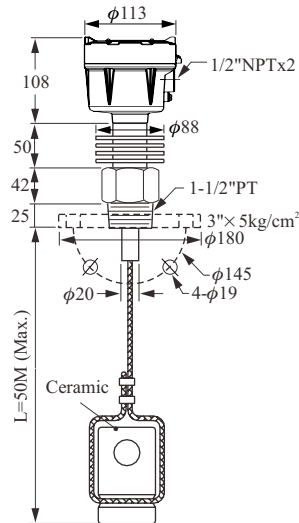
Probe material: SUS 304 wire probe
 Operation temp.: -40~80°C
 Ambient temp.: -20~70°C



► EB1711

[Hi-Temp Wire Probe Type]

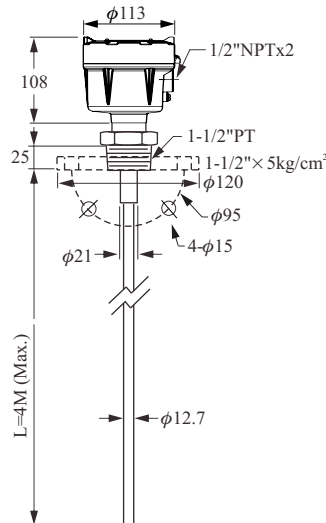
Probe material: SUS 304 wire probe
 Operation temp.: -40~200°C
 Ambient temp.: -20~70°C



► EB1720

[Rod Probe Type]

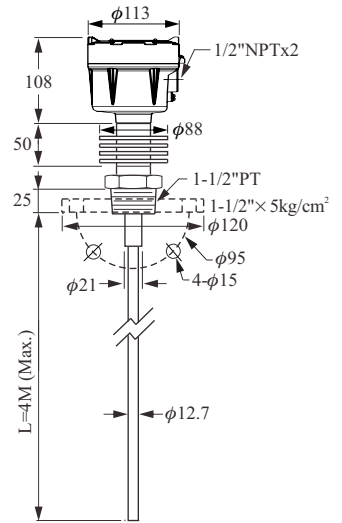
Probe material: SUS 304/316
 Operation temp.: -40~80°C
 Ambient temp.: -20~70°C



► EB1721

[Hi-Temp Rod Probe Type]

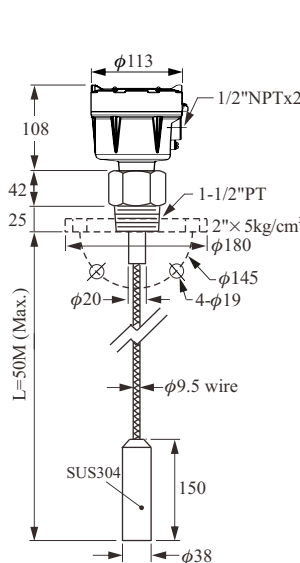
Probe material: SUS 304/316
 Operation temp.: -40~200°C
 Ambient temp.: -20~70°C



► EB1730

[Wire Probe Type]

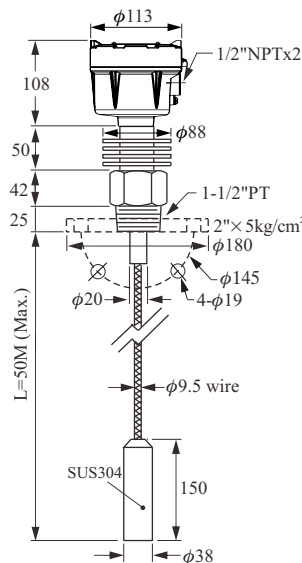
Probe material: SUS 304 wire probe
 Operation temp.: -40~80°C
 Ambient temp.: -20~70°C



► EB1731

[Wire Probe Type]

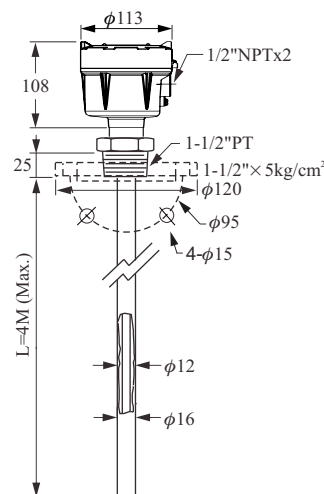
Probe material: SUS 304 wire probe
 Operation temp.: -40~200°C
 Ambient temp.: -20~70°C



► EB174□

[Anti-Corrosion Type]

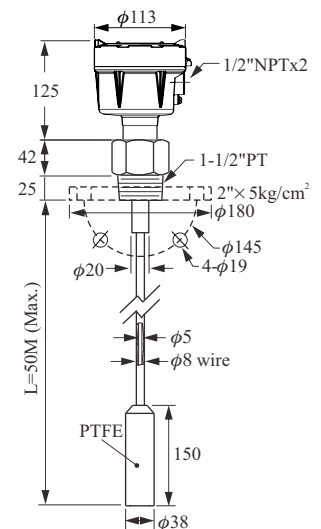
Probe material: SUS 304+Coating
 EB1740 --- PVDF Coating
 EB1742 --- PP Coating
 EB1743 --- FEP Coating
 Operation temp.: EB1740 --- -40~80°C
 EB1742 --- -40~80°C
 EB1743 --- -40~80°C
 Ambient temp.: -20~70°C



► EB175□

[Anti-Corrosion Wire Probe Type]

Probe material: SUS 304+Coating
 EB1752 --- PP Coating
 EB1753 --- PFA/FEP Coating
 Operation temp.: EB1752 --- -40~80°C
 EB1753 --- -40~80°C
 Ambient temp.: -20~70°C



※ Cable Conduit (Optional Part)

29-1108: 1/2"NPT

29-1104: 3/4"NPT

Please refer to page 45

PRESSURE LEVEL TRANSMITTER

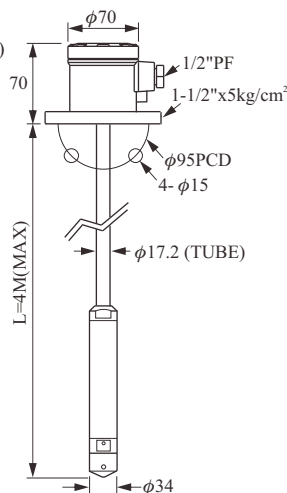
LEVEL TRANSMITTER

Can be used with PB/PM Series Panel Meter

EC1100

Extension Tube Flange Type

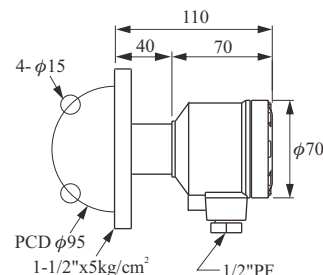
1. Housing material: Aluminum, IP65
2. Measuring range: 0.1, 0.2, 0.4 Bar
(0~1M, 0~2M, 0~4M)
assumed with the water S.G:1
3. Linearity: 0.3% FS
4. Long term stability: <0.1%
5. Operating temp: -10~80°C
6. Ambient temp: 60°C
7. Supply voltage: 13~36 Vdc
8. Output: 4~20mA
Loop resistance should be less than 500Ω
9. Connection: 1-1/2"x5kg/cm²
10. Wetted material: SUS 304/316
11. Weight: approx. 4.2kg (L=1M)



EC1210

Flange Standard Type

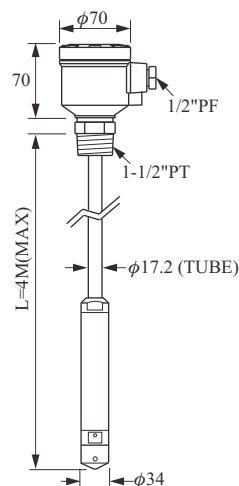
1. Housing material: Aluminum, IP65
2. Measuring range: 0.1, 0.2, 0.4 Bar
(0~1M, 0~2M, 0~4M)
assumed with the water S.G:1
3. Linearity: 0.3% FS
4. Long term stability: <0.1%
5. Operating temp: -10~80°C
6. Ambient temp: 60°C
7. Supply voltage: 13~36 Vdc
8. Output: 4~20mA
Loop resistance should be less than 500Ω
9. Connection: 1-1/2"x5kg/cm²
10. Wetted material: SUS 304/316
11. Weight: approx. 1.5kg (L=1M)



EC1110

Extension Tube Screw Type

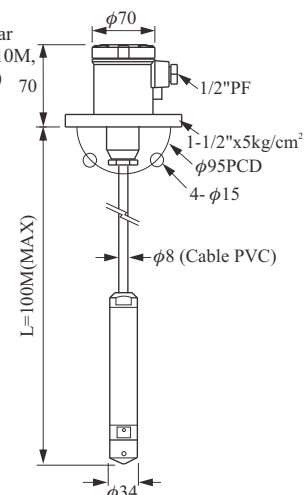
1. Housing material: Aluminum, IP65
2. Measuring range: 0.1, 0.2, 0.4 Bar
(0~1M, 0~2M, 0~4M)
assumed with the water S.G:1
3. Linearity: 0.3% FS
4. Long term stability: <0.1%
5. Operating temp: -10~80°C
6. Ambient temp: 60°C
7. Supply voltage: 13~36 Vdc
8. Output: 4~20mA
Loop resistance should be less than 500Ω
9. Connection: 1-1/2"PT
10. Wetted material: SUS 304/316
11. Weight: approx. 4kg (L=1M)



EC1300

Extension Cable Flange Type

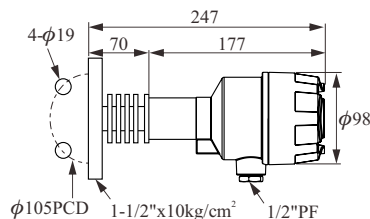
1. Housing material: Aluminum, IP65
2. Measuring range: 0.1, 0.2, 0.5, 1, 2, 5, 10 Bar
(0~1M, 0~2M, 0~5M, 0~10M, 0~20M, 0~50M, 0~100M)
assumed with the water S.G:1
3. Linearity: 0.3% FS
4. Long term stability: <0.1%
5. Operating temp: -10~80°C
6. Ambient temp: 60°C
7. Supply voltage: 13~36 Vdc
8. Output: 4~20mA
Loop resistance should be less than 500Ω
9. Connection: 1-1/2"x5kg/cm²
10. Wetted material: SUS 304/316
11. Weight: approx. 2.8kg (L=1M)



EC1200

Hi-Temp. Flange Type

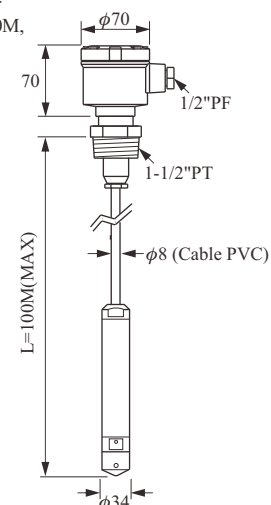
1. Housing material: Aluminum, IP65
2. Measuring range: 0.1, 0.2, 0.5, 1, 2, 5, 10 Bar
(0~1M, 0~2M, 0~5M, 0~10M, 0~20M, 0~50M, 0~100M)
assumed with the water S.G:1
3. Linearity: 0.3% FS
4. Long term stability: <0.1%
5. Operating temp: -10~150°C
6. Ambient temp: 60°C
7. Supply voltage: 13~36 Vdc
8. Output: 4~20mA
Loop resistance should be less than 500Ω
9. Connection: 1-1/2"x10kg/cm²
10. Wetted material: SUS 304/316
11. Weight: approx. 1.8kg (L=1M)



EC1310

Extension Cable Screw Type

1. Housing material: Aluminum, IP65
2. Measuring range: 0.1, 0.2, 0.4, 1, 2, 5, 10 Bar
(0~1M, 0~2M, 0~4M, 0~10M, 0~20M, 0~50M, 0~100M)
assumed with the water S.G:1
3. Linearity: 0.3% FS
4. Long term stability: <0.1%
5. Operating temp: -10~80°C
6. Ambient temp: 60°C
7. Supply voltage: 13~36 Vdc
8. Output: 4~20 mA
Loop resistance should be less than 500Ω
9. Connection: 1-1/2"PT
10. Wetted material: SUS 304/316
11. Weight: approx. 2.9kg (L=1M)



PRESSURE LEVEL TRANSMITTER & PRESSURE TRANSDUCER & LOOP POWER INDICATOR

LEVEL TRANSMITTER

Can be used with PB/PM Series Panel Meter

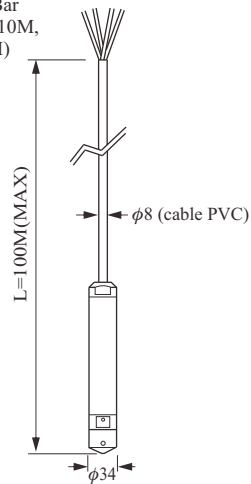
EC1320

Extension Cable Type

- Measuring range: 0.1, 0.2, 0.5, 1, 2, 5, 10 Bar
(0~1M, 0~2M, 0~5M, 0~10M,
0~20M, 0~50M, 0~100M)

assumed with the water S.G:1

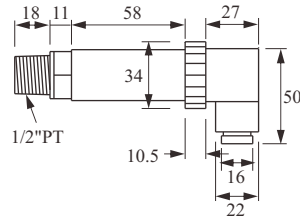
- Linearity: 0.3% FS
- Long term stability: <0.1%
- Operating temp: -10~80°C
- Ambient temp: 60°C
- Supply voltage: 13~36Vdc
- Output: 4~20 mA
Loop resistance should
be less than 500Ω
- Protection: IP68
- Wetted material: SUS 304/316
- Weight: approx. 0.8kg (L=1M)



EC1500

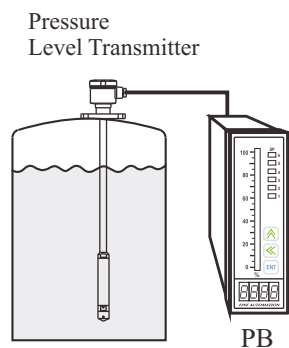
Pressure Transducer

- Measuring range: 0.1, 0.2, 0.5, 1, 2, 5, 10,
20, 50, 100 Bar
- Linearity: 0.3% FS
- Long term stability: <0.1%
- Operating temp: -10~80°C
- Ambient temp: 60°C
- Supply voltage: 13~36Vdc
- Output: 4~20 mA
Loop resistance should
be less than 500Ω
- Connection: 1/2"PT
- Protection: IP65
- Wetted material: SUS 304/316
- Weight: approx. 250g



PANEL METER

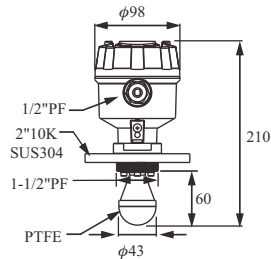
- Input signal: 4~20mA, 0~5V, 0~10V
- Power consumption: 9VA (max.)
- Relay contact: 4~6 SPST relay
3A/250Vac (max.)
- Analog output: 4~20mA/2~10Vdc
0~20mA/0~10Vdc
- Accuracy: ±0.1% F.S.
- Display: 4 or 5 digit, 101segment
LED Bargraph
- Operating temperature: 0~50°C
- Power Supply : 85~265Vac
- Dimension (mm): 48(W)x144(H)
144(W)x48(H)



FMCW RADAR LEVEL TRANSMITTER

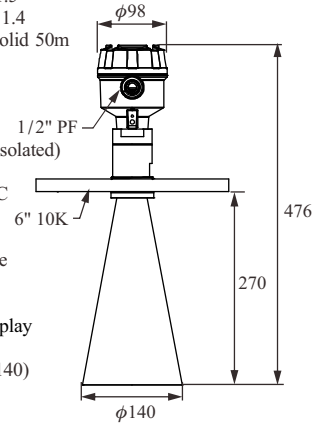
JFR-204

1. Min. Dielectric constant (solid): 1.5
2. Min. Dielectric constant (liquid): 1.4
3. Measuring range: Liquid 30m Solid 20m
4. Accuracy: ± 3 mm
5. Repeatability: ± 1 mm
6. Digital communication: RS485 (Isolated)
7. Ambient temperature: $-40\sim 90^{\circ}\text{C}$
8. Operating temperature: $-40\sim 200^{\circ}\text{C}$
9. Operating pressure: 0~40 bar
10. Frequency: K Band
11. Analog output: 4~20mA / 4 Wire
12. Protection rating: IP67
13. Power supply: 9.5~30Vdc
14. Local display: 5 digits LCM display
15. Housing material: Aluminum
16. Antenna type: Horn (43D)
17. Half-power beam width: $\pm 9^{\circ}$
18. Antenna material: SUS316+PTFE
19. Blind distance: 500mm



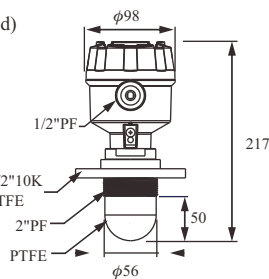
JFR-234

1. Min. Dielectric constant (solid): 1.5
2. Min. Dielectric constant (liquid): 1.4
3. Measuring range: Liquid 70m Solid 50m
4. Accuracy: ± 3 mm @distance<40m
 $\pm 0.01\%$ F.S. @distance>40m
5. Repeatability: ± 1 mm
6. Digital communication: RS485 (Isolated)
7. Ambient temperature: $-40\sim 90^{\circ}\text{C}$
8. Operating temperature: $-40\sim 200^{\circ}\text{C}$
9. Operating pressure: 0~40 bar
10. Frequency: K Band
11. Analog output: 4~20mA / 4 Wire
12. Protection rating: IP67
13. Power supply: 9.5~30Vdc
14. Local display: 5 digits LCM display
15. Housing material: Aluminum
16. Antenna type: High gain horn (140)
17. Half-power beam width: $\pm 3^{\circ}$
18. Antenna material: SUS316
19. Blind distance: 500mm



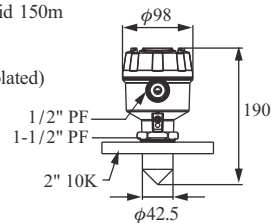
JFR-214

1. Min. Dielectric constant (solid): 1.5
2. Min. Dielectric constant (liquid): 1.4
3. Measuring range: Liquid 30m
4. Accuracy: ± 3 mm
5. Repeatability: ± 1 mm
6. Digital communication: RS485 (Isolated)
7. Ambient temperature: $-40\sim 90^{\circ}\text{C}$
8. Operating temperature: $-40\sim 200^{\circ}\text{C}$
9. Operating pressure: 0~40 bar
10. Frequency: K Band
11. Analog output: 4~20mA / 4 Wire
12. Protection rating: IP67
13. Power supply: 9.5~30Vdc
14. Local display: 5 digits LCM display
15. Housing material: Aluminum
16. Antenna type: Horn (56D)
17. Half-power beam width: $\pm 9^{\circ}$
18. Antenna material: PTFE
19. Blind distance: 500mm



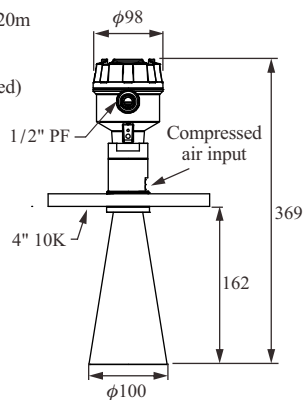
JFR244

1. Min. Dielectric constant (solid): 1.5
2. Min. Dielectric constant (liquid): 1.4
3. Measuring range: Liquid 20m Solid 150m
4. Accuracy: ± 3 mm
5. Repeatability: ± 1 mm
6. Digital communication: RS485 (Isolated)
7. Ambient temperature: $-40\sim 90^{\circ}\text{C}$
8. Operating temperature: $-40\sim 200^{\circ}\text{C}$
9. Operating pressure: 0~40 bar
10. Frequency: K Band
11. Analog output: 4~20mA / 4 Wire
12. Protection rating: IP67
13. Power supply: 9.5~30Vdc
14. Local display: 5 digits LCM display
15. Housing material: Aluminum
16. Antenna type: Lens (43DS)
17. Half-power beam width: $\pm 10^{\circ}$
18. Antenna material: PTFE
19. Blind distance: 500mm



JFR224

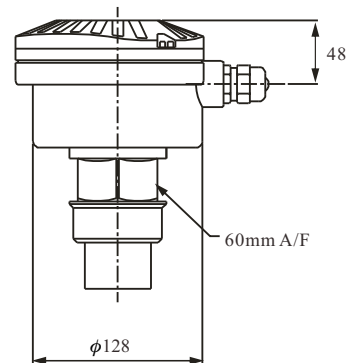
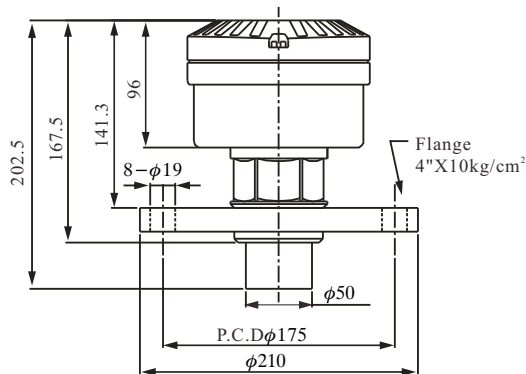
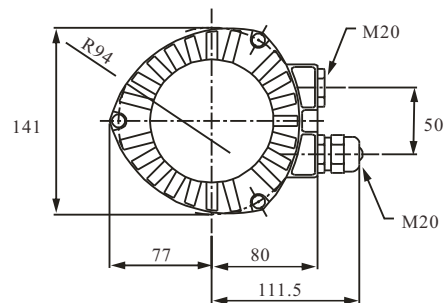
1. Min. Dielectric constant (solid): 1.5
2. Min. Dielectric constant (liquid): 1.4
3. Measuring range: Liquid 30m Solid 20m
4. Accuracy: ± 3 mm
5. Repeatability: ± 1 mm
6. Digital communication: RS485 (Isolated)
7. Ambient temperature: $-40\sim 90^{\circ}\text{C}$
8. Operating temperature: $-40\sim 200^{\circ}\text{C}$
9. Operating pressure: 0~40 bar
10. Frequency: K Band
11. Analog output: 4~20mA / 4 Wire
12. Protection rating: IP67
13. Power supply: 9.5~30Vdc
14. Local display: 5 digits LCM display
15. Housing material: Aluminum
16. Antenna type: High gain horn (100)
17. Half-power beam width: $\pm 5^{\circ}$
18. Antenna material: SUS316
19. Blind distance: 500mm



ULTRASONIC LEVEL TRANSMITTER

(EA)ZMICROFLEX SERIES

Type	ZMICROFLEX-C	ZMICROFLEX-CER	ZMICROFLEX-CIS
Measuring Range	8M	11M	11M
Accuracy	$<1.0\text{m} \pm 5\text{mm}$, $>1.0\text{m} \pm 0.5\%$	$<1.0\text{m} \pm 2.5\text{mm}$, $>1.0\text{m}/3.3\text{ft} \pm 0.25\%$	$<1.0\text{m} \pm 2.5\text{mm}$, $>1.0\text{m}/3.3\text{ft} \pm 0.25\%$
Resolution	1mm	1mm	1mm
Dead band	300mm	450mm	450mm
Ambient temperature	-20~70°C	-40~60°C	-40~60°C
Operating temperature	-20~70°C	-30~70°C	-30~70°C
Power supply	2 wire 12~30Vdc	2 wire 12~30Vdc	2 wire 12~30Vdc
Analog output	4~20mA(750 Ohm)	4~20mA(750 Ohm)	4~20mA(750 Ohm)
Relay output	None	2*SPST/1A 24V DC	None
Communication protocol	None	HART	HART
Beam angle	$\pm 6^\circ(3\text{dB})$	$\pm 6^\circ(3\text{dB})$	$\pm 6^\circ(3\text{dB})$
Explosion rating	None	None	Eex ia II C T4~T6



ULTRASONIC LEVEL TRANSMITTER

EAX

Features

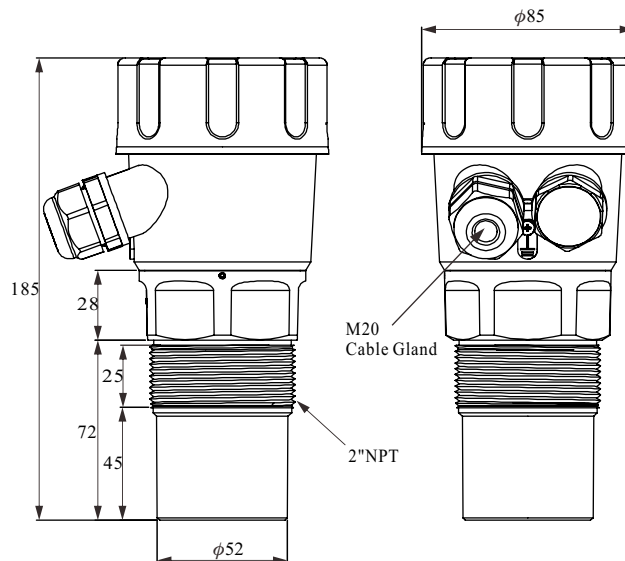
- 2 wire 4-20mA with HART
- Maximum range to 12 metres (40ft)
- Non-contact measurement
- Low cost per measuring point
- Auto compensation for steam and signal losses
- Ingress protection class IP67, NEMA 4x
- Adaptive sensitivity control
- Volume linearization to tank shapes or 32 point table
-

Application

- River level
- Wet wells
- Inlet screens
- Tanks
- Sumps
- Pump stations
- Water towers
- Dams
- Basin levels
- Chemical storage

Specifications

1. Power Supply: 24~30Vdc
2. Measurement Range: 0~12m
3. Analog Output: 4~20mA two wire output
4. Resolution: 1mm
5. Accuracy: $\pm 0.25\%$ F.S
6. Blanking Distance: 250mm
7. Operating Temperature: $-40\sim 60^{\circ}\text{C}$
8. Communication: HART
9. Display: 4 line graphic display
10. Enclosure Sealing: IP65
11. Mounting: 2" NPT Thread Flange
12. Weight: 1kg



ELECTROMECHANICAL LEVEL MEASURING SYSTEM

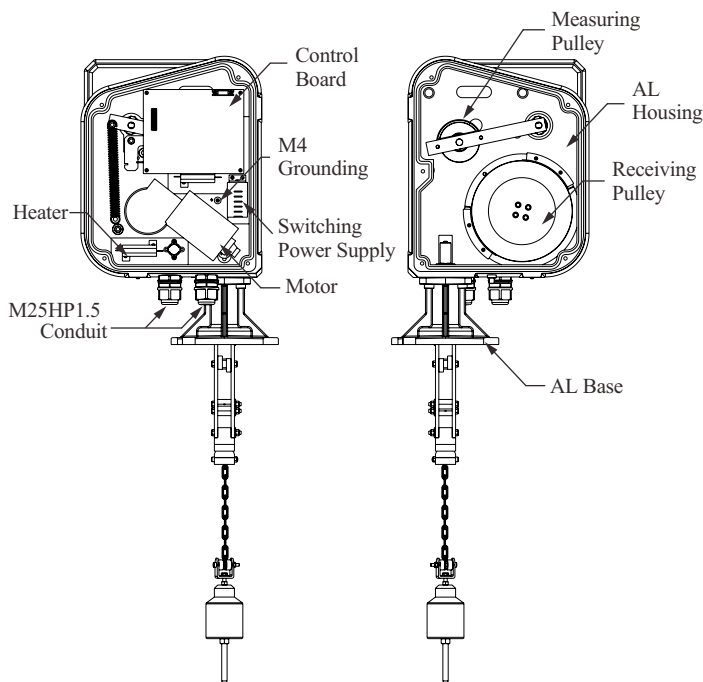
EE300

Features

- Measuring result immune from the interference of environment such as sound waves, dust, capacitance, or temperature change.
- User-friendly with microprocessor-based design.
- High level and low level alarm.
- LCD Dot matrix: 8 x 2.
- Analog output: 4-20mA dc.
- Pulse output: Transistor output(NPN/PNP), Relay output(3A/250Vac)
- Cable Break Alarm: System will detect cable broken during measuring.
- Plumb Buried Alarm: System will detect plumb buried by the medium.
- 4 Forms of Start Mode: auto start, manual start, intelligent(smart) start, and external start.
- Intelligent(Smart) Start: Measuring interval is inverse proportional to medium level.
- Auto Return Setup: Prevent sensing weight from sliding into the tank to damage the equipment when tank is empty.
- Material Fill-Up Protection: Reduce the possibility of plumb being buried.
- Measuring range of 30m.
- RS485 communication protocol.
- Various selections of plumb.

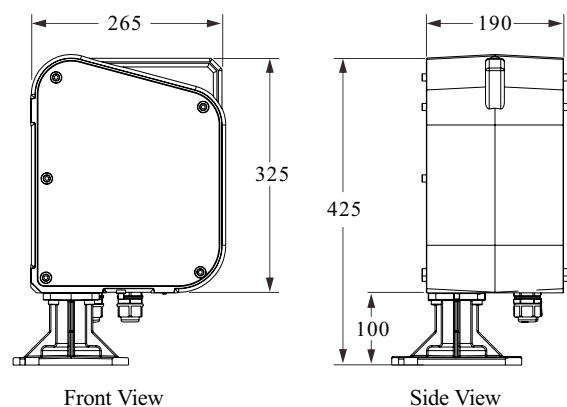
Specification

1. Power Supply: 88~264Vac, 50/60 Hz
2. Transistor Measuring Resolution: ± 3 pulse(version with 10mm/pulse)
3. Relay Output Measuring Resolution: ± 1 pulse(version with 100mm /pulse)
4. Measuring Speed: 0.23m/s
5. Analog Output: 0/4-20mA $\pm 1\%$
6. Pulse Output: 1. NPN 、PNP
2. Relay (3A/250Vac)
7. Display: LCD (Dot matrix , 8 X 2)
8. Ambient Temperature: -35~60°C
9. Operating Temperature: -35~ 80°C
10. Measuring Range: 30m Max
11. Protection Level: IP66
12. Relay Output: SPDT 3A/250Vac X 3
1. HI Alarm
2. LO Alarm
3. Buried 、 Break 、 Lock (Output mode as indicated)
13. Anti-Dew Heater: Start heating $< 16^{\circ}\text{C}$ (prevent frostbite, prevent dew)
110/220Vac max. PF 96.8W
14. Cable Break Detection: Yes
15. Sensing Weight Buried Detection: Yes
16. Manual/Auto Measuring Mode: Yes(0.1-99h)
17. Motor Protection: Yes
18. Malfunction Diagnosis Display: Yes
19. Material Fill-Up Protection: Yes
20. Communication Protocol(RS485): Yes
Frame: C8N1.C8N2.C801.C8E1.C7N2.C701.C7E1.C702. C7E2.
Baudrate: 1200.2400.4800.9600. 11520.14400.19200.28800.57600
21. Intelligent Start: Yes (Measuring interval is inverse proportional to medium level.)
22. Reset Output: Reset (3A/250Vac)
23. Cable Wire: $\phi 1.2\text{mm}$ (SUS304)



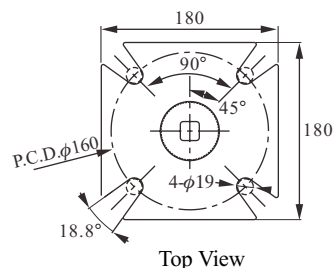
Front View: Electric Board & Motor

Rear View: Wiring Mechanism



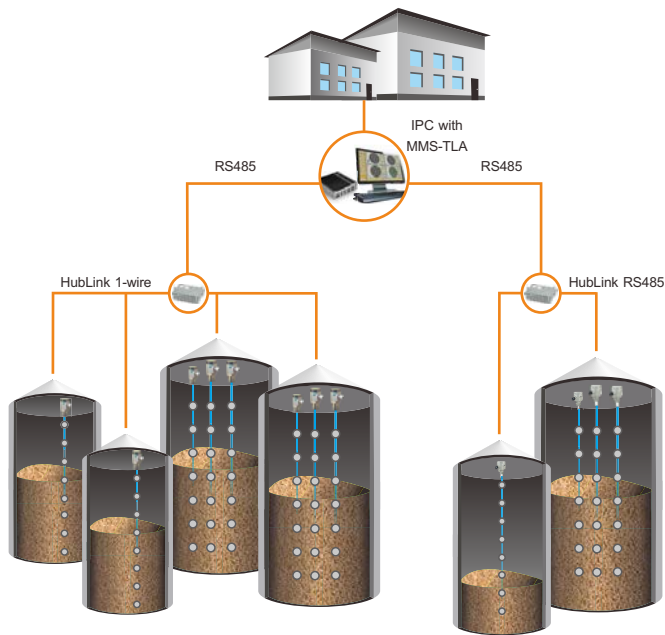
Front View

Side View



Top View

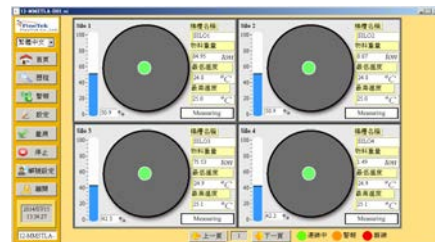
GRAIN SILO TEMPERATURE & LEVEL MONITORING SYSTEM



MMS-TLA

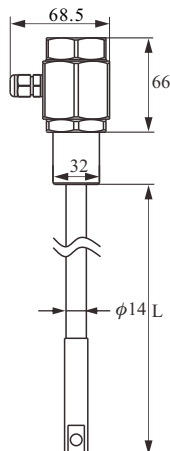
Materials Management System

The MMS-TLA is a grain monitoring materials management software package for PC's that can replace your current manual record keeping of both grain temperatures and grain level within your storage bins and silos. The MMS-TLA software is designed to interface to the EST110 and EST120 grain monitoring cables through the use of RS485 (MODBUS) digital communications. The MMS can be applied in a wide range of industries such as rice milling, flour production, feed milling, food production and in a range of grain processing facilities. MMS-TLA software monitors grain temperature changes within each silo in realtime to detect abnormal temperatures and prevent grain degradation and spoilage. The software can also be used to improve the management of grain inventory to increase profitability.



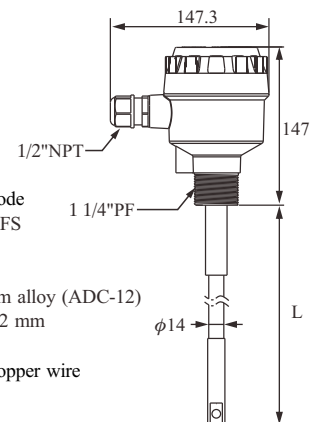
EST110

1. Measurement range: -10~85°C
2. Resolution: 0.1 °C
3. Accuracy: ± 0.5 °C
4. LengthMax.: Max. 30 m
5. Quantity of sensors: Max. 30 PCS
6. Cable material :
Coated with XLPE,
inner ring is copper wire (Standard)
7. Tensile load: 4000 KgF
8. Housing Material: SS41 Low-carbon steel
9. IP rating: IP67



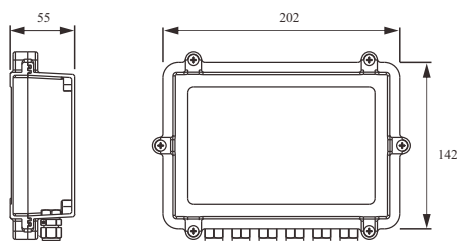
EST120

1. Power input: 9~30 Vdc
2. Measurement range: -10~85 °C
3. Resolution: 0.1°C
4. Accuracy: ± 0.5 °C
5. Length: Max.30 m
6. Quantity of sensors: Max.30 PCS
7. Sampling speed:
Grain level measurement: ≤ 1 sec
Temperature measurement: ≤ 1 sec/node
8. Non-linearity of grain level: ± 1 % FS
9. Output interface:
RS485; Baud Rate:9600~57600 bps
10. Material of junction box: Aluminum alloy (ADC-12)
11. Outgoing cable diameter: $\phi 5.5$ ~11.2 mm
12. Cable material:
Coated with XLPE, inner ring is copper wire
13. Tensile load: 4000 KgF
14. IP rating: IP 67



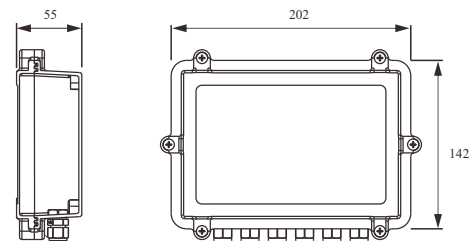
HubLink 1-wire

1. Supply voltage: 10~30Vdc
2. Ambient temperature: -40~80°C
3. Connection port: Max.4
4. Housing: Aluminum alloy (ADC-12)
5. Communication interface: RS485
7. RS-485 baud rate: 9600~115200
8. IP rating: IP67



HubLink RS485

1. Power input: 10~30Vdc
2. Working temperature: -40~80°C
3. Current input: 2A
4. Power input: 10~30Vdc
5. Current output: 400 mA / CH (under power input and current of 2A)
6. Output: RS-485
7. Input: Four sets of RS-485 (each set is independent and isolated)
8. Electrostatic protection: IEC61000-4-2 ESD 8kV Air, 4kV contact
9. IP rating: IP67

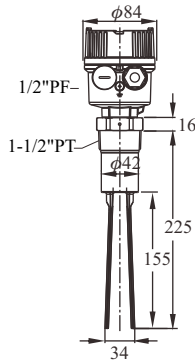


TUNING FORK LEVEL SWITCH

SC350

Standard

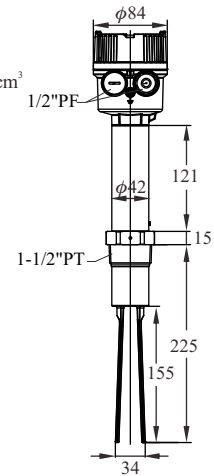
1. Power supply : 19~253 Vac/dc, 50/60 Hz
2. Storage temp.: -40~85°C
3. Operating temp.: -40~150°C
4. Material density : $\geq 0.01 \text{ g/cm}^3$ or $\geq 0.05 \text{ g/cm}^3$
5. Measuring frequency: 140Hz $\pm$ 5Hz
6. Pressure resistance: 25 Bar
7. Output signal:
 - 2 sets of SPDT relay output/
 - 2 sets of transistor output
8. Contact capacity:
 - Relay: 6A/250Vac, 6A/28Vdc
 - Transistor: 350mA, 60Vac/Vdc
9. Ex-proof certification :
 - Dust ex-proof
 - (DIP A20/21 T_A, T2~T6 IP66/67, optional)



SC350

High-temp.

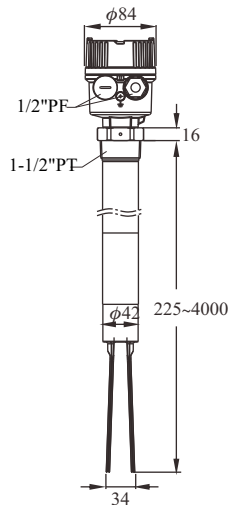
1. Power supply : 19~253 Vac/dc, 50/60 Hz
2. Storage temp.: -40~85°C
3. Operating temp.: -40~280°C
4. Material density : $\geq 0.01 \text{ g/cm}^3$ or $\geq 0.05 \text{ g/cm}^3$
5. Measuring frequency: 140Hz $\pm$ 5Hz
6. Pressure resistance: 25 Bar
7. Output signal:
 - 2 sets of SPDT relay output/
 - 2 sets of transistor output
8. Contact capacity:
 - Relay: 6A/250Vac, 6A/28Vdc
 - Transistor: 350mA, 60Vac/Vdc
9. Ex-proof certification :
 - Dust ex-proof
 - (DIP A20/21 T_A, T2~T6 IP66/67, optional)



SC351

Extension

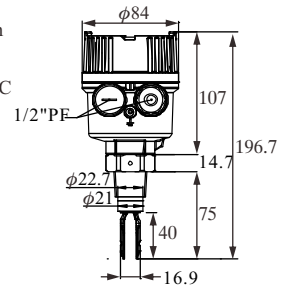
1. Power supply : 19~253 Vac/dc, 50/60 Hz
2. Storage temp.: -40~85°C
3. Operating temp.: -40~150°C
4. Material density : $\geq 0.01 \text{ g/cm}^3$ or $\geq 0.05 \text{ g/cm}^3$
5. Measuring frequency: 140Hz $\pm$ 5Hz
6. Pressure resistance: 25 Bar
7. Output signal:
 - 2 sets of SPDT relay output/
 - 2 sets of transistor output
8. Contact capacity:
 - Relay: 6A/250Vac, 6A/28Vdc
 - Transistor: 350mA, 60Vac/Vdc
9. Ex-proof certification :
 - Dust ex-proof
 - (DIP A20/21 T_A, T2~T6 IP66/67, optional)



SC380

Standard

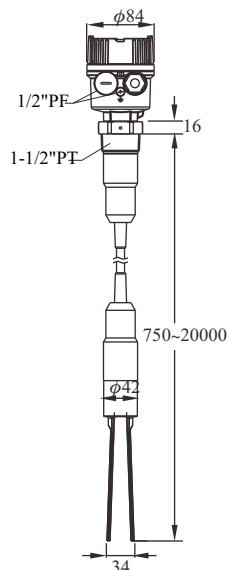
1. Working voltage: 11~36Vdc or 19~253 Vac/dc, 50/60Hz or 10~55Vdc
2. Output signal: Intrinsically safe signal 8/16mA or
 - 2 sets of SPDT relay output or Transistor output (NPN/PNP)
3. Power consumption : < 600mW / Max. 1.3W / 830mW
4. Input protection:
 - Reversed power supply protection function
5. Storage temp.: -40~85°C
6. Operating temp. in ambient air: -40~90°C
7. Applicable density liquid:
 - $\geq 0.5 \text{ g/cm}^3$ or $\geq 0.7 \text{ g/cm}^3$
8. Pressure resistance: Max. 40 Bar
9. Protection level: IP 66 / IP 67



SC352

Cable

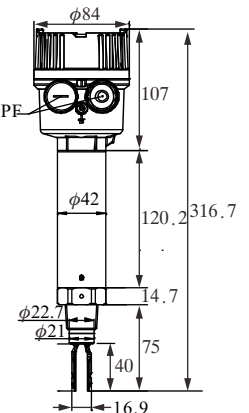
1. Power supply : 19~253 Vac/dc, 50/60 Hz
2. Storage temp.: -40~85°C
3. Operating temp.: -40~80°C
4. Material density : $\geq 0.01 \text{ g/cm}^3$ or $\geq 0.05 \text{ g/cm}^3$
5. Measuring frequency: 140Hz $\pm$ 5Hz
6. Pressure resistance: 2 Bar
7. Output signal:
 - 2 sets of SPDT relay output/
 - 2 sets of transistor output
8. Contact capacity:
 - Relay: 6A/250Vac, 6A/28Vdc
 - Transistor: 350mA, 60Vac/Vdc
9. Ex-proof certification :
 - Dust ex-proof
 - (DIP A20/21 T_A, T2~T6 IP66/67, optional)



SC380

High-temp.

1. Working voltage: 11~36Vdc or 19~253 Vac/dc, 50/60Hz or 10~55Vdc
2. Output signal: Intrinsically safe signal 8/16mA or
 - 2 sets of SPDT relay output or Transistor output (NPN/PNP)
3. Power consumption : < 600mW / Max. 1.3W / 830mW
4. Input protection:
 - Reversed power supply protection function
5. Storage temp.: -40~85°C
6. Operating temp. in ambient air: -40~150°C
7. Applicable density liquid:
 - $\geq 0.5 \text{ g/cm}^3$ or $\geq 0.7 \text{ g/cm}^3$
8. Pressure resistance: Max. 40 Bar
9. Protection level: IP 66 / IP 67

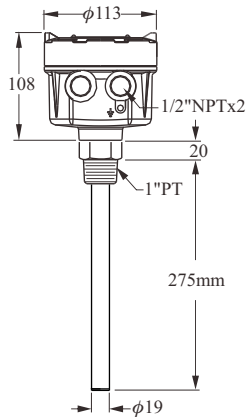


VIBRATING PROBE LEVEL SWITCH

SC2100

Standard

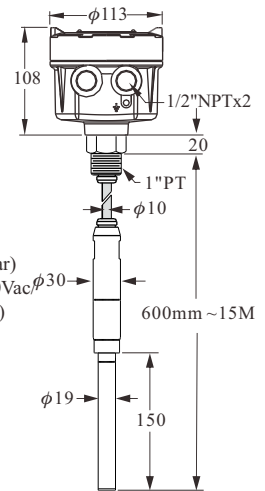
1. Housing material: Aluminum (IP65)
2. Probe construction: SUS304/316
3. Connection: 1"PT
4. Conduit: 1/2"NPT x 2
5. Supply voltage:
20~250Vac/Vdc, 50/60Hz
6. Min. material density sensed:
Solid: $\geq 0.32\text{g/cm}^3$
7. Operating temperatures: -40~80°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~150PSI (10Bar)
10. Relay Output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc
11. Vibrating Freq.:395~405Hz



SC2300

Cable extension

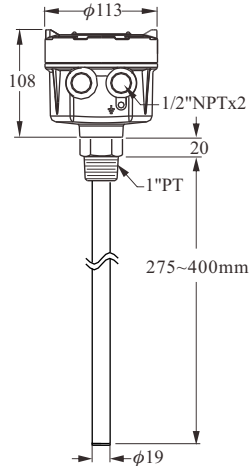
1. Housing material: Aluminum (IP65)
2. Probe construction: SUS304/316
3. Connection: 1"PT
4. Conduit: 1/2"NPT x 2
5. Supply voltage:
20~250Vac/Vdc, 50/60Hz
6. Min. material density sensed:
Solid: $\geq 0.32\text{g/cm}^3$
7. Operating temperatures: -40~80°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~150PSI (10Bar)
10. Relay Output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc
11. Vibrating Freq.:395~405Hz



SC2110

Solid extension

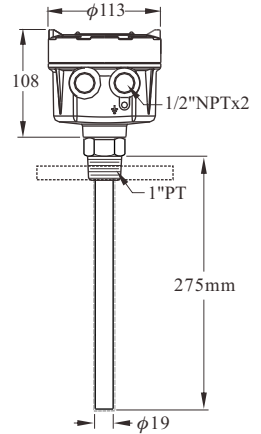
1. Housing material: Aluminum (IP65)
2. Probe construction: SUS304/316
3. Connection: 1"PT
4. Conduit: 1/2"NPT x 2
5. Supply voltage:
20~250Vac/Vdc, 50/60Hz
6. Min. material density sensed:
Solid: $\geq 0.32\text{g/cm}^3$
7. Operating temperatures: -40~80°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~150PSI (10Bar)
10. Relay Output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc
11. Vibrating Freq.:395~405Hz



SC2500

Corrosion-proof

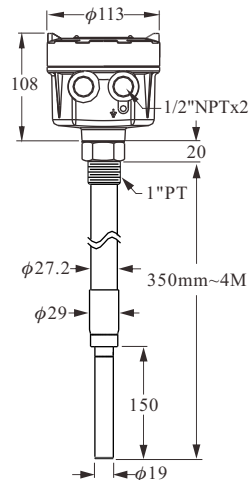
1. Housing material: Aluminum (IP65)
2. Probe construction:
SUS304/316 Coating TEFLON
3. Connection: flange 1"(min.)
4. Conduit: 1/2"NPT x 2
5. Supply voltage:
20~250Vac/Vdc, 50/60Hz
6. Min. material density sensed:
Solid: $\geq 0.32\text{g/cm}^3$
7. Operating temperatures: -40~80°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~150PSI (10Bar)
10. Relay Output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc
11. Vibrating Freq.:395~405Hz



SC2120

Ultra extension model

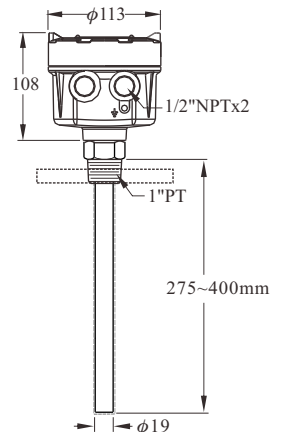
1. Housing material: Aluminum (IP65)
2. Probe construction: SUS304/316
3. Connection: 1"PT
4. Conduit: 1/2"NPT x 2
5. Supply voltage:
20~250Vac/Vdc, 50/60Hz
6. Min. material density sensed:
Solid: $\geq 0.32\text{g/cm}^3$
7. Operating temperatures: -40~80°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~150PSI (10Bar)
10. Relay Output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc
11. Vibrating Freq.:395~405Hz



SC2510

Corrosion-proof

1. Housing material: Aluminum (IP65)
2. Probe construction:
SUS304/316 Coating TEFLON
3. Connection: flange 1"(min.)
4. Conduit: 1/2"NPT x 2
5. Supply voltage:
20~250Vac/Vdc, 50/60Hz
6. Min. material density sensed:
Solid: $\geq 0.32\text{g/cm}^3$
7. Operating temperatures: -40~80°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~150PSI (10Bar)
10. Relay Output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc
11. Vibrating Freq.:395~405Hz

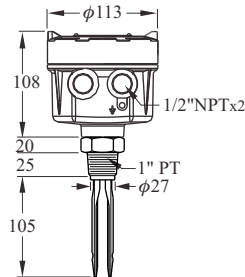


TUNING FORK LEVEL SWITCH

SC1400

Tuning Fork

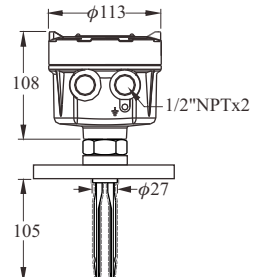
1. Housing material:
Aluminum (IP65)
2. Probe construction: SUS304/316/316L
3. Connection: 1"PT
4. Conduit: 1/2"NPTx2
5. Supply voltage:
20~250, 50/60Hz Vac/Vdc
6. Min. material density sensed:
Solid: $\geq 0.07\text{g/cm}^3$
Liquid: $\geq 0.7\text{g/cm}^3$
Viscosity: 1~10000 cSt
7. Operating temperatures: -40~130°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~600PSI (40Bar)
10. Relay output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc
11. Vibrating freq.: 350~370Hz



SC1540

Corrosion-proof

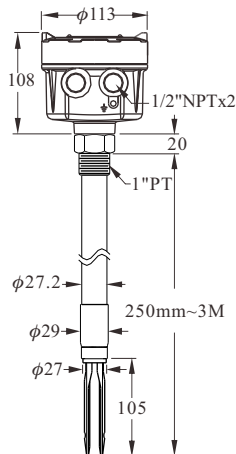
1. Housing material: Aluminum
2. Probe construction: SUS304/316 Coating TEFLON
3. Connection: flange 1"(min.)
4. Conduit: 1/2"NPTx2
5. Supply voltage:
20~250Vac/dc
6. Min. material density sensed:
Solid: $\geq 0.07\text{g/cm}^3$
Liquid: $\geq 0.7\text{g/cm}^3$
Viscosity: 1~10000 cSt
7. Operating temperatures: -40~130°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~600PSI (40Bar)
10. Relay output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc
11. Vibrating freq.: 350~370Hz



SC1410

Tuning Fork extension

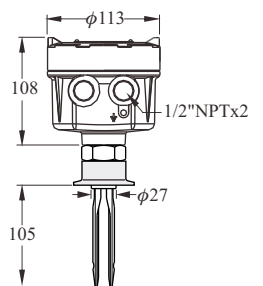
1. Housing material:
Aluminum (IP65)
2. Probe construction: SUS304/316/316L
3. Connection: 1"PT
4. Conduit: 1/2"NPTx2
5. Supply voltage:
20~250Vac/dc
6. Min. material density sensed:
Solid: $\geq 0.07\text{g/cm}^3$
Liquid: $\geq 0.7\text{g/cm}^3$
Viscosity: 1~10000 cSt
7. Operating temperatures: -40~130°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~600PSI (40Bar)
10. Relay output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc.
11. Vibrating Freq.: 350~370Hz



SC1600

Sanitary Type

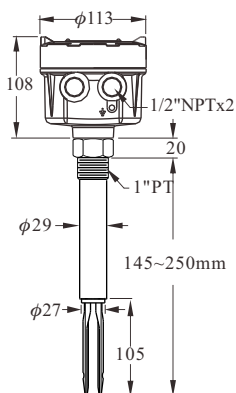
1. Housing material: Aluminum
2. Probe construction: SUS304/316/316L
3. Connection: 2" Sanitary
4. Conduit: 1/2"NPTx2
5. Supply voltage:
20~250Vac/dc
6. Min. material density sensed:
Solid: $\geq 0.07\text{g/cm}^3$
Liquid: $\geq 0.7\text{g/cm}^3$
Viscosity: 1~10000 cSt
7. Operating temperatures: -40~130°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~600PSI (40Bar)
10. Relay output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc
11. Vibrating Freq.: 350~370Hz



SC1420

Tuning Fork extension

1. Housing material:
Aluminum (IP65)
2. Probe construction: SUS304/316/316L
3. Connection: 1"PT
4. Conduit: 1/2"NPTx2
5. Supply voltage:
20~250Vac/dc
6. Min. material density sensed:
Solid: $\geq 0.07\text{g/cm}^3$
Liquid: $\geq 0.7\text{g/cm}^3$
Viscosity: 1~10000 cSt
7. Operating temperatures: -40~130°C
8. Ambient temperatures: -40~60°C
9. Operating pressure: -1~600PSI (40Bar)
10. Relay output: Relay, SPDT, 5A/250Vac/
PNP/NPN(MOSFET)
400mA/60 Vac/Vdc
11. Vibrating freq.: 350~370Hz

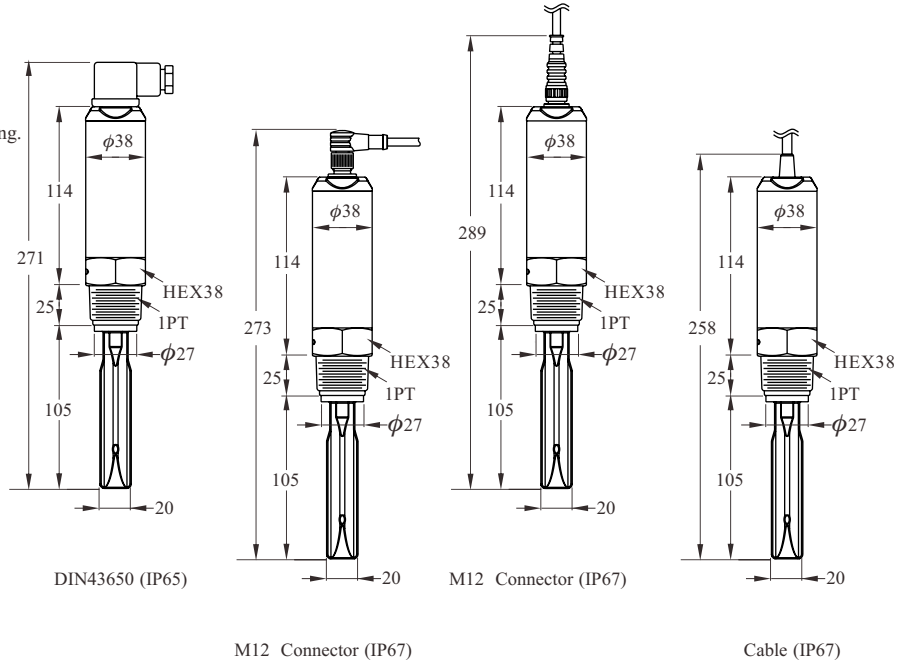


TUNING FORK LEVEL SWITCH

SC24□□□

100mm

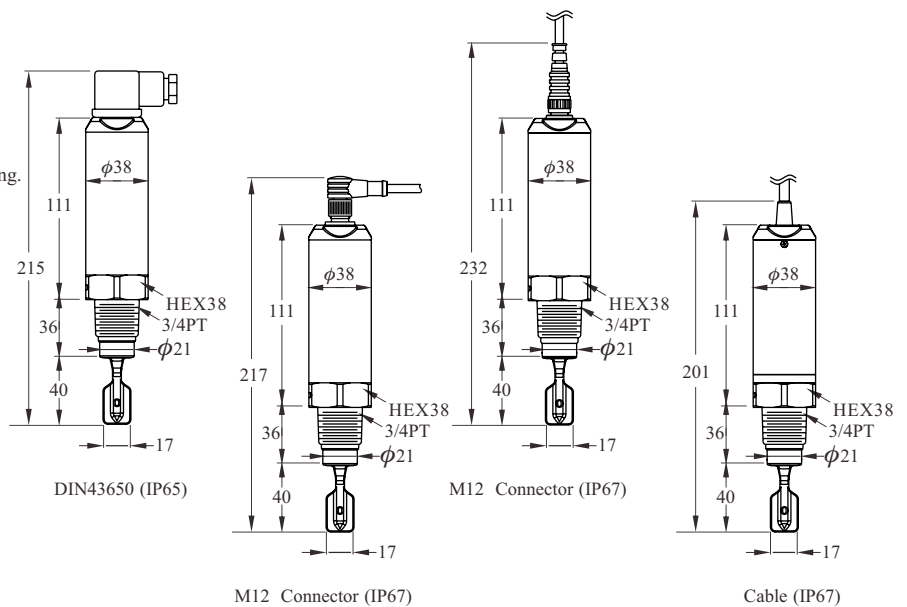
1. Housing material: SUS 304
2. Fork material: SUS 304, SUS 316, SUS 316L
3. Connection: 1" PT
4. Conduit: Valve plug DIN 43650
Cable connector
M12 connector(180°/90°)
5. Supply voltage & output:
SC240□: 20~250Vac / Vdc 2 wire Direct load Switching.
SC241□: 12~55 Vdc 3 wire PNP/ NPN Output.
6. Fork length: 100mm
7. Min. material density sensed:
Solid: $\geq 0.07\text{g/cm}^3$
Liquid: $\geq 0.7\text{g/cm}^3$
Viscosity: 1~10000 cSt
8. Operating temperatures: -40~100°C (T: -40~150°C)
9. Ambient temperatures: -40~80°C
10. Storage temperatures: -40~85°C
11. Operation pressure: 40Bar (Max.)
12. Vibrating frequency: 350~370Hz



SC28□□□

40mm

1. Housing material: SUS 304
2. Fork material: SUS 304, SUS 316, SUS 316L
3. Connection: 3/4" PT
4. Conduit: Valve plug DIN 43650
Cable connector
M12 connector(180°/90°)
5. Supply voltage & output:
SC280□: 20~250Vac / Vdc 2 wire Direct load Switching.
SC281□: 12~55 Vdc 3 wire PNP/ NPN Output.
6. Fork length: 100mm
7. Min. material density sensed:
Liquid: $\geq 0.7\text{g/cm}^3$
Viscosity: 1~10000 cSt
8. Operating temperatures: -40~100°C (T: -40~150°C)
9. Ambient temperatures: -40~80°C
10. Storage temperatures: -40~85°C
11. Operation pressure: 40Bar (Max.)
12. Vibrating frequency: 1KHz $\pm 10\%$



FEATURES

- No calibration needed, using friendly as well as sturdy and durable design.
- Shed off build-up material. No fear about accumulated material on sensor.
- High / Low fail safe modes offer safety and reliability.
- According to different density, its adjustable sensitivity when button can be set even for finest material.

Vibrating Probe Level Switch

NEPSI PROOF No.GYJ111212 Ex d IIC T3~T6
PTB PROOF No. 05 ATEX 1026 Ex II 2G Ex d IIB T6 Gb
Ex II 2D Ex tb IIIC
T85°C Db IP65

Tuning Fork Level Switch

NEPSI PROOF No.GYJ111212 Ex d IIC T3~T6
PTB PROOF No. 09 ATEX 1058 Ex II 2G Ex d IIB T4 Gb
Ex II 2D Ex tb IIIC
T80°C ~ T130°C Db IP65

SPECIFICATION

Housing: Aluminum

Material of probe: SUS 304 /316/316L

Connection: 1"PT or PF" Screw, Flange: 1"~6"

Conduit: 1/2"NPT x 2

The max vertical load on probe: 177in.Lbs(20Nm)

Ambient temp.: -20°C~70°C

Vibrating freq.: 395~405Hz (Vibrating Probe)

350~370Hz (Tuning Fork)

Vibrating Probe Level Switch

Power supply: 20~250Vac/dc

Consumption: 15W

Operating temp.: -40°C~80°C

Output: Relay, SPDT, 3A/250Vac/28Vdc, SSR(MOSFET) 400mA/60 Vac/ Vdc

Min. material density sensed: $\geq 0.32\text{g/cm}^3$

Tuning Fork Level Switch

Power supply: 20~250Vac/dc

Consumption: 10VA

Operating temp.: -40°C~130°C

Output: Relay, SPDT, 3A/250Vac/28Vdc

SSR(MOSFET) 400mA/60 Vac/ Vdc

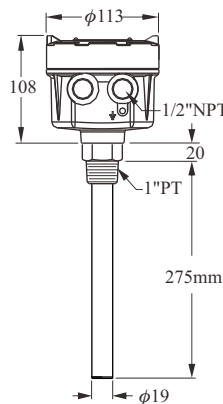
Min. material density sensed: powder: $\geq 0.07\text{g/cm}^3$

liquid: $\geq 0.7\text{g/cm}^3$

Viscosity: 1~10000 cSt

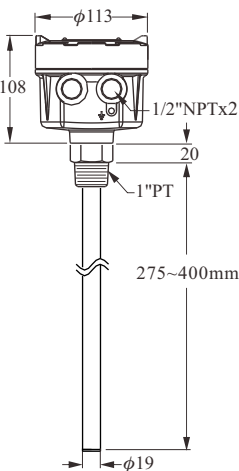
► SC1700

[Standard Type]



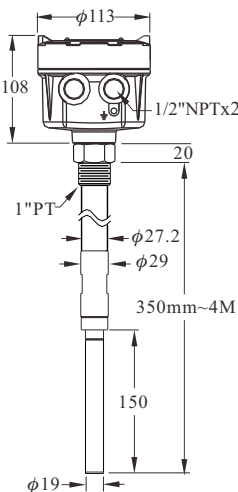
► SC1701

[Shaft extension Type]



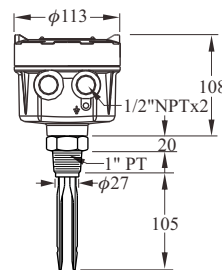
► SC1710

[Shaft extension Type]



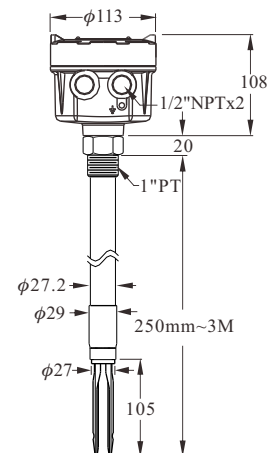
► SC1740

[Tuning Forks]



► SC1741

[Tuning Forks extension]



※Cable Conduit (Optional Part)

29-1108: 1/2"NPT

29-1104: 3/4"NPT

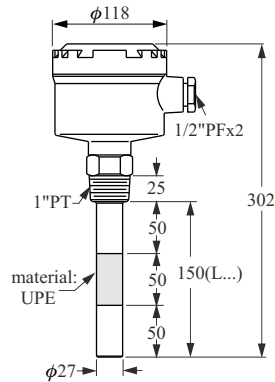
Please refer to page 45

CAPACITANCE LEVEL SWITCH

SA110A/B/C

Standard

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 5A/250Vac or 5A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Delay time: 0~6 sec.
11. Weight: Approx. 1.9kg

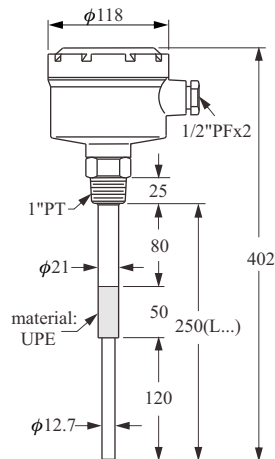


CE

SA111A/B/C

Standard

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 5A/250Vac or 5A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Delay time: 0~6 sec.
11. Weight: Approx. 1.9kg

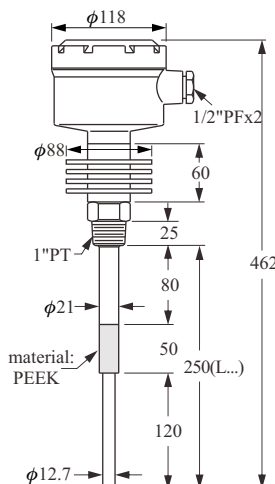


CE

SA120A/B/C

Hi-temp

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: PEEK
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 5A/250Vac or 5A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~200°C
9. Sensitivity range:
10pF (std.)
10. Delay time: 0~6 sec.
11. Weight: Approx. 2.4kg

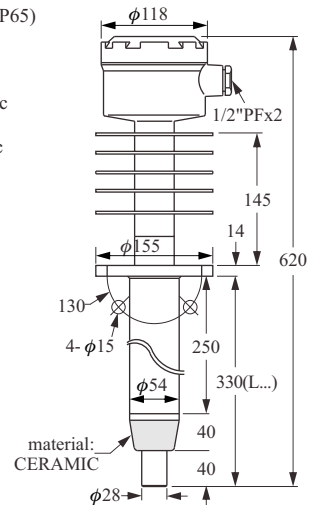


CE

SA128A/B/C

Supper Hi-temp

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: CERAMIC
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 5A/250Vac or 5A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
2-1/2"x5kg/cm² flange(SUS)
8. Operating Temp.: -20~800°C
9. Sensitivity range:
10pF (std.)
10. Delay time: 0~6 sec.
11. Weight: Approx. 6.5kg

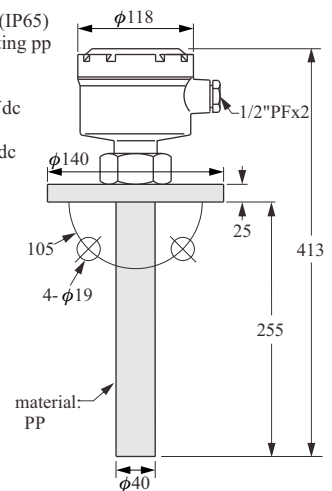


CE

SA130A/B/C

Corrosion-proof

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304 Coating pp
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 5A/250Vac or 5A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
1-1/2"x10kg/cm² flange(PP)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Delay time: 0~6 sec.
11. Weight: Approx. 2kg

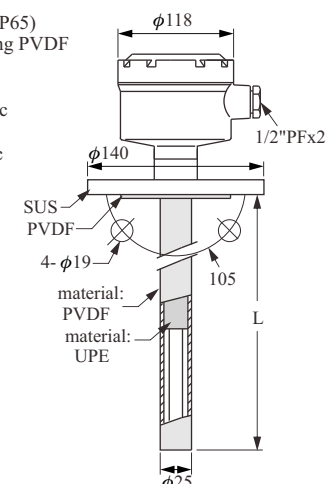


CE

SA132A/B/C

Corrosion-proof

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304 Coating PVDF
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 5A/250Vac or 5A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
1-1/2"x10kg/cm² flange(SUS)
(5mm PVDF)
8. Operating Temp.: -20~120°C
9. Sensitivity range:
10pF (std.)
10. Delay time: 0~6 sec.



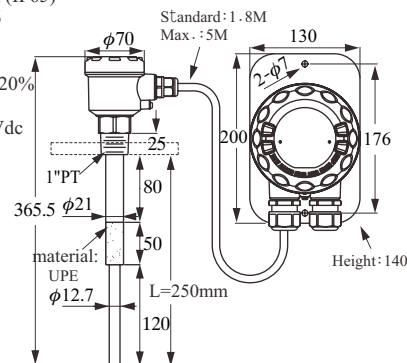
CE

CAPACITANCE LEVEL SWITCH

SA140A/B/C

Remote Probe

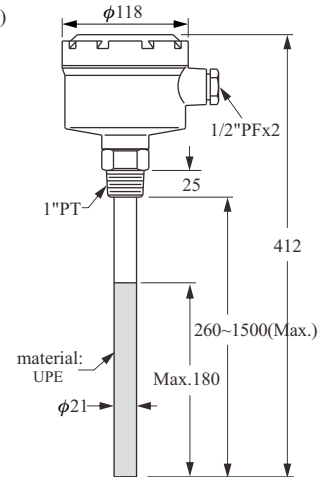
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 24V $\pm 20\%$
5. Output rating:
Relay: 5A/250Vac or 5A/30Vdc
NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Delay time: 0~8 sec.
11. Weight : Approx. 3kg



SA180A/B/C

Anti-static

1. Housing material: Aluminum (IP65)
2. Probe material: UPE Coating
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 5A/250Vac or 5A/30Vdc
NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Delay time: 0~6 sec.
11. Weight : Approx. 2kg



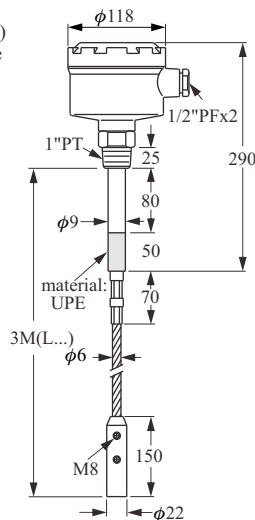
CE

CE

SA150A/B/C

Wire-probe

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316 Cable
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 5A/250Vac or 5A/30Vdc
NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Delay time: 0~6 sec.
11. Weight : Approx. 4.1kg



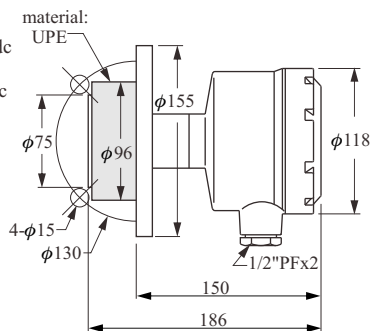
CE

CE

SA160A/B/C

Plate

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 5A/250Vac or 5A/30Vdc
NPN 100mA
6. Power consumption: 2W
7. Connection:
2-1/2"x5kg/cm² flange(PP)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Delay time: 0~6 sec.
11. Weight : Approx. 3.2kg

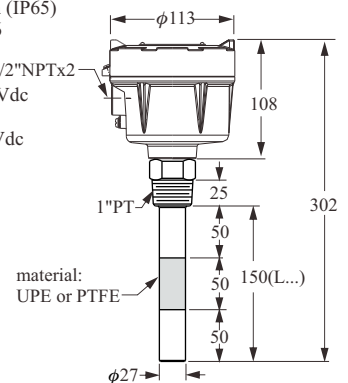


CE

SA270A/B/C

Standard

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 3A/250Vac or 3A/30Vdc
NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex d/ia II C T4~T6,
DIP A21 T4, T3~T6
11. Weight : Approx. 1.9kg

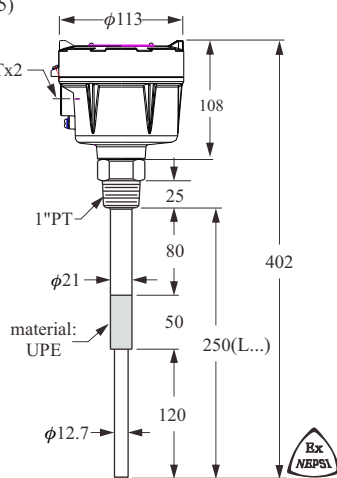


CAPACITANCE LEVEL SWITCH

SA271A/B/C

Standard

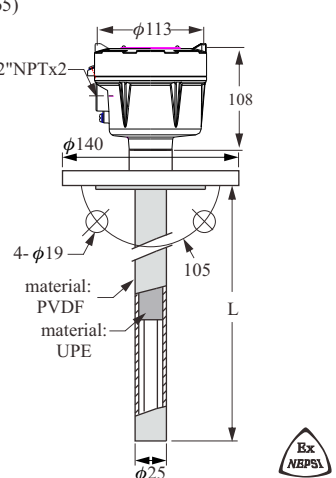
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 3A/250Vac or 3A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex d/ia II C T4~T6,
DIP A21 T_A, T3~T6
11. Weight : Approx. 2.4kg



SA274A/B/C

Corrosion-proof

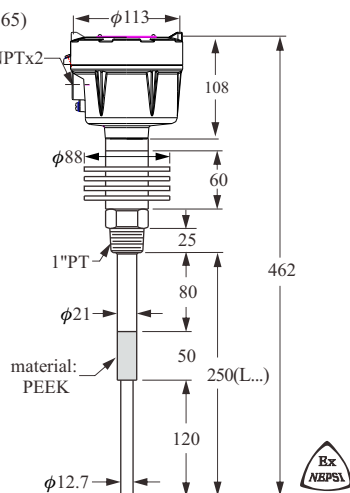
1. Housing material: Aluminum (IP65)
2. Probe material:
SUS 304/316 coating PVDF
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 3A/250Vac or 3A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
1-1/2"x10kg/cm² (SUS)
8. Operating Temp.: -20~120°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex d/ia II C T4~T6,
DIP A21 T_A, T3~T6



SA272A/B/C

Hi-temp

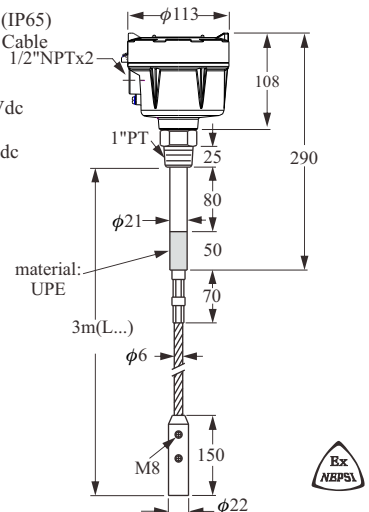
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: PEEK
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 3A/250Vac or 3A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~200°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex d/ia II C T4~T6,
DIP A21 T_A, T3~T6
11. Weight : Approx. 4.1kg



SA275A/B/C

Wire-probe

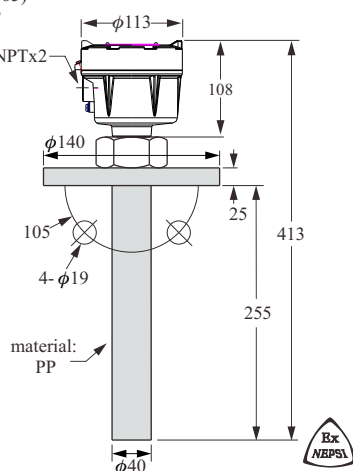
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316 Cable
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 3A/250Vac or 3A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex d/ia II C T4~T6,
DIP A21 T_A, T3~T6
11. Weight : Approx. 4.1kg



SA273A/B/C

Corrosion-proof

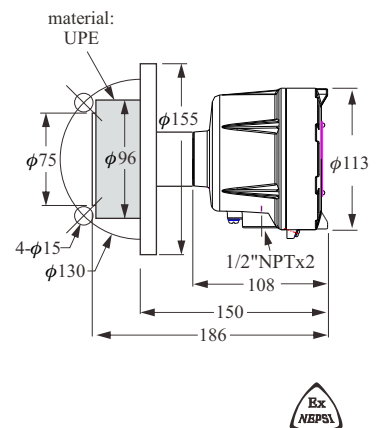
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316(PP Coating)
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 3A/250Vac or 3A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
1-1/2"x10kg/cm² flange(PP)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex d/ia II C T4~T6,
DIP A21 T_A, T3~T6
11. Weight : Approx. 1.9kg



SA276A/B/C

Platic

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: UPE
4. Supply voltage:
110/220Vac $\pm 10\%$ or 19~24Vdc
5. Output rating:
Relay: 3A/250Vac or 3A/30Vdc
,NPN 100mA
6. Power consumption: 2W
7. Connection:
2-1/2"x5kg/cm² flange(SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex d/ia II C T4~T6,
DIP A21 T_A, T3~T6
11. Weight : Approx. 3.2kg

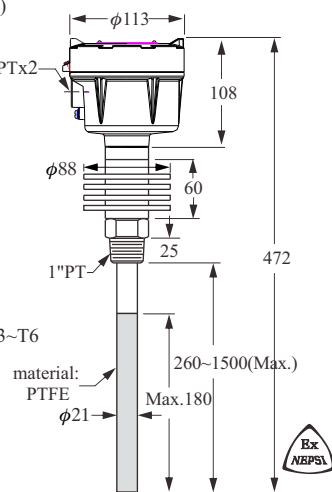


CAPACITANCE LEVEL SWITCH

SA277A/B/C

Hi-temp Anti-static

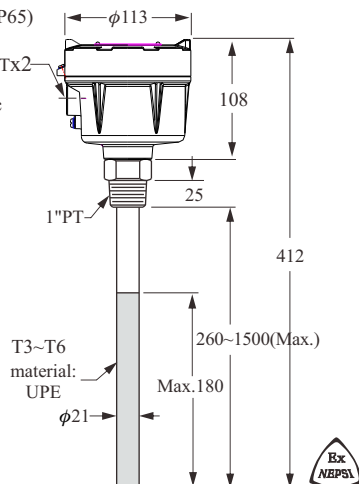
1. Housing material: Aluminum (IP65)
2. Probe material: PTFE Coating
3. Insulated material: PTFE
4. Supply voltage:
110/220Vac $\pm$ 10% or 19~24Vdc
5. Output rating:
Relay: 3A/250Vac or 3A/30Vdc
NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~200°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex d/ia II C T4~T6 Dip A21 T T3~T6
11. Weight : Approx. 3.1kg



SA278A/B/C

Anti-static

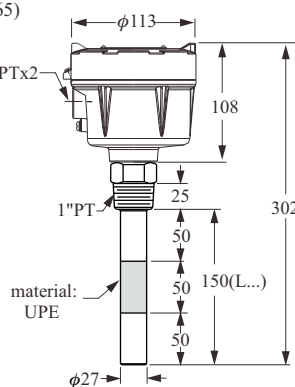
1. Housing material: Aluminum (IP65)
2. Probe material: UPE Coating
3. Insulated material: UPE 1/2"NPTx2
4. Supply voltage:
110/220Vac $\pm$ 10% or 19~24Vdc
5. Output rating:
Relay: 3A/250Vac or 3A/30Vdc
NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex d/ia II C T4~T6 Dip A21 T T3~T6
11. Weight : Approx. 2kg



SA370

Standard

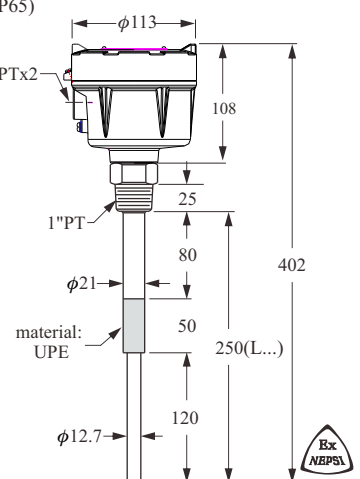
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: UPE
4. Supply voltage:
16~24Vdc
5. Output rating: NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex ia II C T3~T6
11. Weight : Approx. 1.9kg



SA371

Standard

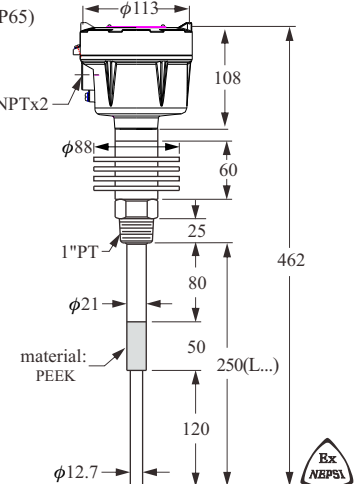
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: UPE
4. Supply voltage:
16~24Vdc
5. Output rating: NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex ia II C T3~T6
11. Weight : Approx. 2.4kg



SA372

Hi-temp

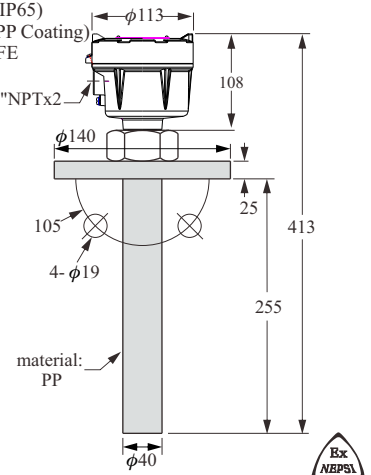
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: PEEK
4. Supply voltage:
16~24Vdc
5. Output rating: NPN 100mA
6. Power consumption: 2W
7. Connection:
1"PT screw (SUS)
8. Operating Temp.: -20~200°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex ia II C T3~T6
11. Weight : Approx. 4.1kg



SA373

Corrosion-proof

1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316 (PP Coating)
3. Insulated material: UPE or PTFE
4. Supply voltage:
16~24Vdc
5. Output rating: NPN 100mA
6. Power consumption: 2W
7. Connection:
1-1/2"x10kg/cm² flange (PP)
8. Operating Temp.: -20~80°C
9. Sensitivity range:
10pF (std.)
10. Enclosure Protection:
Ex ia II C T3~T6
11. Weight : Approx. 1.9kg

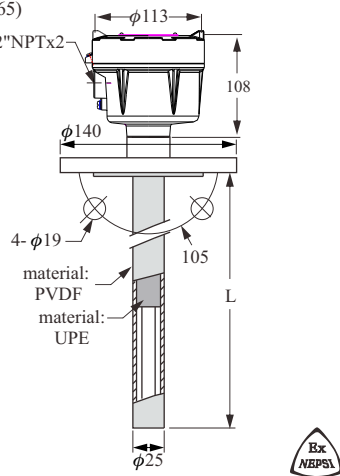


CAPACITANCE LEVEL SWITCH

SA374

Corrosion-proof

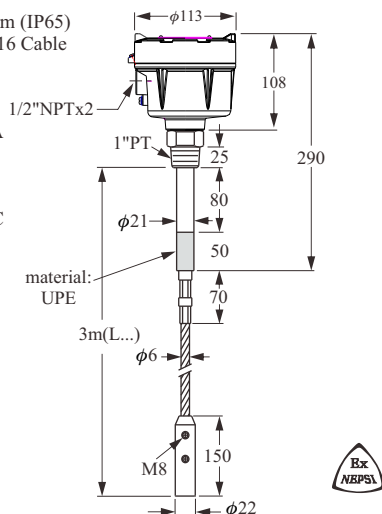
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316 coating PVDF
3. Insulated material: UPE
4. Supply voltage: 16~24Vdc
5. Output rating: NPN 100mA
6. Power consumption: 2W
7. Connection: 1-1/2"x10kg/cm² (SUS)
8. Operating Temp.: -20~120°C
9. Sensitivity range: 10pF (std.)
10. Enclosure Protection: Ex ia II C T3~T6



SA375

Wire-probe

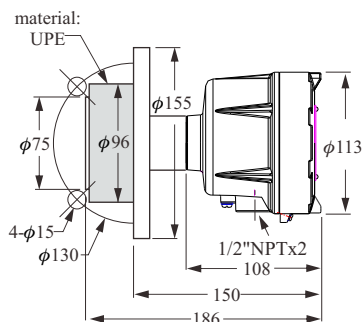
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316 Cable
3. Insulated material: UPE
4. Supply voltage: 16~24Vdc
5. Output rating: NPN 100mA
6. Power consumption: 2W
7. Connection: 1\"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range: 10pF (std.)
10. Enclosure Protection: Ex ia II C T3~T6
11. Weight: Approx. 4.1kg



SA376

Platic

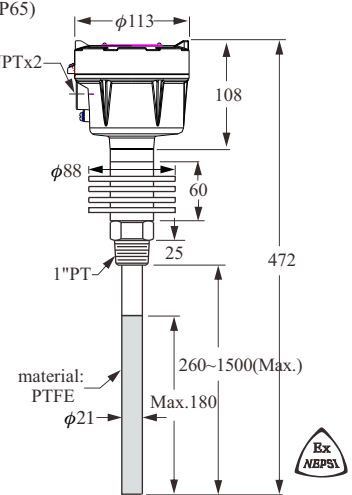
1. Housing material: Aluminum (IP65)
2. Probe material: SUS 304/316
3. Insulated material: UPE
4. Supply voltage: 16~24Vdc
5. Output rating: NPN 100mA
6. Power consumption: 2W
7. Connection: 2-1/2"x5kg/cm² flange(SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range: 10pF (std.)
10. Enclosure Protection: Ex ia II C T3~T6
11. Weight: Approx. 3.2kg



SA377

Hi-temp Anti-static

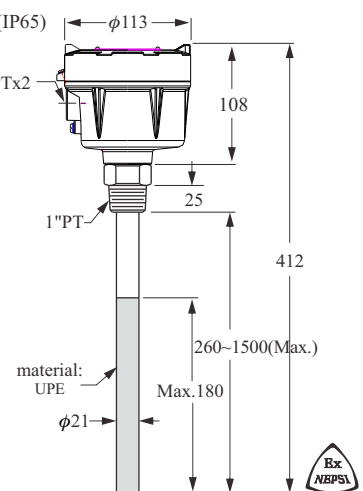
1. Housing material: Aluminum (IP65)
2. Probe material: PTFE Coating
3. Insulated material: PTFE
4. Supply voltage: 16~24Vdc
5. Output rating: NPN 100mA
6. Power consumption: 2W
7. Connection: 1\"PT screw (SUS)
8. Operating Temp.: -20~200°C
9. Sensitivity range: 10pF (std.)
10. Enclosure Protection: Ex ia II C T3~T6
11. Weight: Approx. 3.1kg



SA378

Anti-static

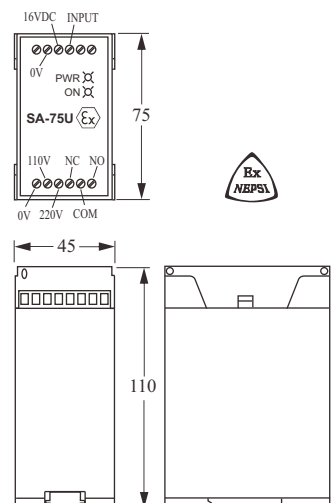
1. Housing material: Aluminum (IP65)
2. Probe material: UPE coating
3. Insulated material: UPE
4. Supply voltage: 16~24Vdc
5. Output rating: NPN 100mA
6. Power consumption: 2W
7. Connection: 1\"PT screw (SUS)
8. Operating Temp.: -20~80°C
9. Sensitivity range: 10pF (std.)
10. Enclosure Protection: Ex ia II C T3~T6
11. Weight: Approx. 2kg



SA-75U Explosio-no-prwf barrier

NEPSI PROOF
NO.GYB111594

1. Supply voltage: 110V/220Vac ± 3%, 50/60Hz
2. Power consumption: 2W
3. Input signal: NPN transistor resistance Ri= 500Ω
4. Output voltage: 16Vdc
5. Short circuit current: 25mA max.
6. Relay output: SPDT, 10A/30Vdc, 10A/220Vac
7. Operating temp.: 0~60°C
8. Weight: approx. 0.3kg
9. Explosion proof rating: Ex ia II C T3~T6

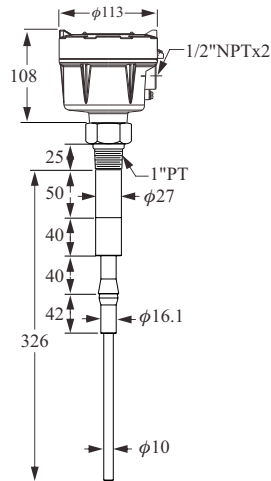


RF-ADMITTANCE LEVEL SWITCH

SB2100

Standard

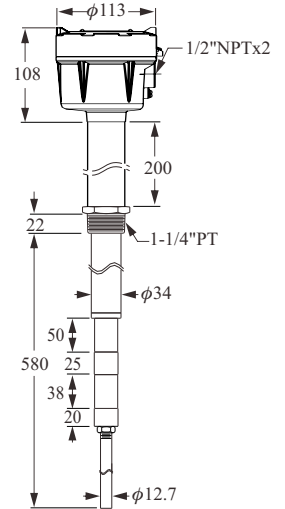
1. Housing: Aluminum (IP65)
2. Probe Material: SUS304 or 316
3. Insulated Material: PTFE
4. Connection: 1" PT
5. Sensitivity: 0.3PF
6. Supply Voltage:
24Vdc $\pm$ 20% or 115/230Vac $\pm$ 10%
, 50/60HZ
7. Power Consumption: Max. 2W
8. Contact Rating: 5A/250Vac, DPDT
9. Operating Temp: -40~150°C
10. Ambient Temp: -40~70°C
11. Delay Time: 0~30 sec.
12. Fail safe mode:
High / low Fail safe mode
13. Conduit: 1/2" NPT x2 hole
14. Operation Pressure: 20kg/cm²



SB2280

Super Hi-temp

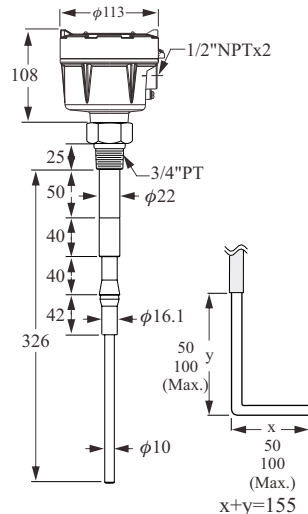
1. Housing: Aluminum (IP65)
2. Probe Material: SUS304 or 316
3. Insulated Material: CERAMIC
4. Connection: 1-1/4" PT
5. Sensitivity: 0.3PF
6. Supply Voltage:
24Vdc $\pm$ 20% or 115/230Vac $\pm$ 10%
, 50/60HZ
7. Power Consumption: Max. 2W
8. Contact Rating: 5A/250Vac, DPDT
9. Operating Temp: -40~550°C
10. Ambient Temp: -40~70°C
11. Delay Time: 0~30 sec.
12. Fail safe mode:
High / low Fail safe mode
13. Conduit: 1/2" NPT x2 hole
14. Operation Pressure: ATM



SB2120/SB2110

Standard / Standard "L" Type

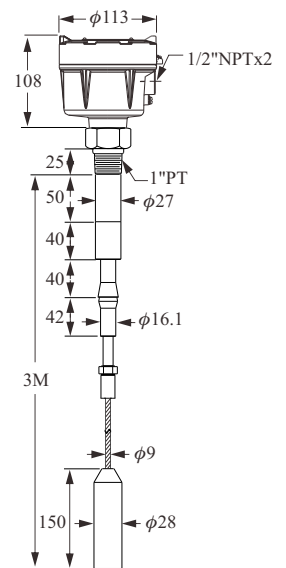
1. Housing: Aluminum (IP65)
2. Probe Material: SUS304 or 316
3. Insulated Material: PTFE
4. Connection: 3/4" PT
5. Sensitivity: 0.3PF
6. Supply Voltage:
24Vdc $\pm$ 20% or 115/230Vac $\pm$ 10%
, 50/60HZ
7. Power Consumption: Max. 2W
8. Contact Rating: 5A/250Vac, DPDT
9. Operating Temp: -40~150°C
10. Ambient Temp: -40~70°C
11. Delay Time: 0~30 sec.
12. Fail safe mode:
High / low Fail safe mode
13. Conduit: 1/2" NPT x2 hole
14. Operation Pressure: 20kg/cm²



SB2500

Cable

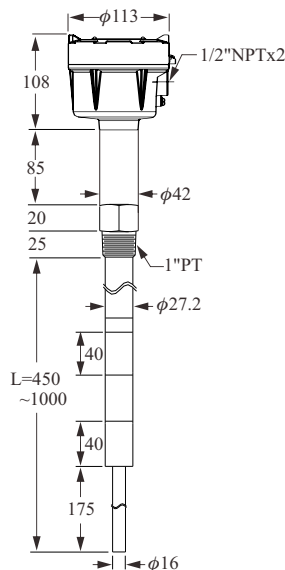
1. Housing: Aluminum (IP65)
2. Probe Material: SUS304 or 316
3. Insulated Material: PTFE
4. Connection: 1" PT
5. Sensitivity: 0.3PF
6. Supply Voltage:
24Vdc $\pm$ 20% or 115/230Vac $\pm$ 10%
, 50/60HZ
7. Power Consumption: Max. 2W
8. Contact Rating: 5A/250Vac, DPDT
9. Operating Temp: -40~150°C
10. Ambient Temp: -40~70°C
11. Delay Time: 0~30 sec.
12. Fail safe mode:
High / low Fail safe mode
13. Conduit: 1/2" NPT x2 hole
14. Operation Pressure: 20kg/cm²



SB2200

Hi-temp

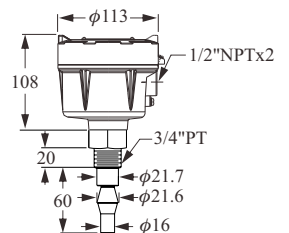
1. Housing: Aluminum (IP65)
2. Probe Material: SUS304 or 316
3. Insulated Material: PEEK
4. Connection: 3/4" PT
5. Sensitivity: 0.3PF
6. Supply Voltage:
24Vdc $\pm$ 20% or 115/230Vac $\pm$ 10%
, 50/60HZ
7. Power Consumption: Max. 2W
8. Contact Rating: 5A/250Vac, DPDT
9. Operating Temp: -40~232°C
10. Ambient Temp: -40~70°C
11. Delay Time: 0~30 sec.
12. Fail safe mode:
High / low Fail safe mode
13. Conduit: 1/2" NPT x2 hole
14. Operation Pressure: 20kg/cm²



SB2600

Mini

1. Housing: Aluminum (IP65)
2. Probe Material: SUS304 or 316
3. Insulated Material: PTFE
4. Connection: 3/4" PT
5. Sensitivity: 0.3PF
6. Supply Voltage:
24Vdc $\pm$ 20% or 115/230Vac $\pm$ 10%
, 50/60HZ
7. Power Consumption: Max. 2W
8. Contact Rating: 5A/250Vac, DPDT
9. Operating Temp: -40C~150°C
10. Ambient Temp: -40~70°C
11. Delay Time: 0~30 sec.
12. Fail safe mode:
High / low Fail safe mode
13. Conduit: 1/2" NPT x2 hole
14. Operation Pressure: 20kg/cm²





EXPLOSION PROOF TYPE

RF-ADMITTANCE LEVEL SWITCH

PTB PROOF No. 09 ATEX 1057 $\text{II 2G Ex d IIB T6~T1 Gb}$

$\text{II 2D Ex tb IIC T80°C~T445°C Db IP65}$

FEATURES

- Easy Installation
- Stable; Not affected by temperature
- Time delay function from 0-30 seconds
- 3A/250Vac output DPDT
- Highest temperature tolerance of 450°C
- High / low failsafe
- Applicable in liquid, syrup, solid, powder, and interface detection
- Alarm testing

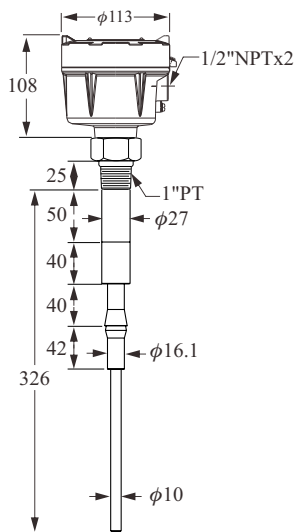
► SB1710

[STANDARD TYPE]

Insulated Material: PTFE

Connection: 1"PT

Operating Temp.: -40~150°C



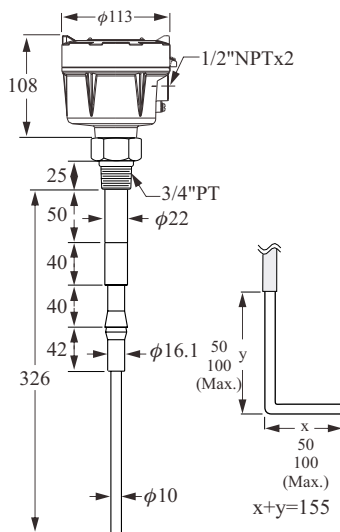
► SB1711/1712

[STANDARD TYPE/ L TYPE]

Insulated Material: PTFE

Connection: 3/4"PT

Operating Temp.: -40~150°C



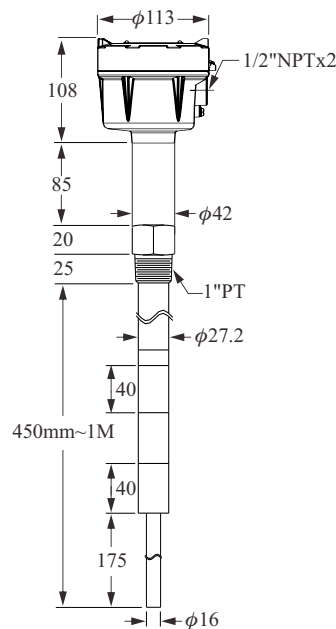
► SB1720

[HI-TEMP TYPE]

Insulated Material: PEEK

Connection: 1"PT

Operating Temp.: -40~232°C



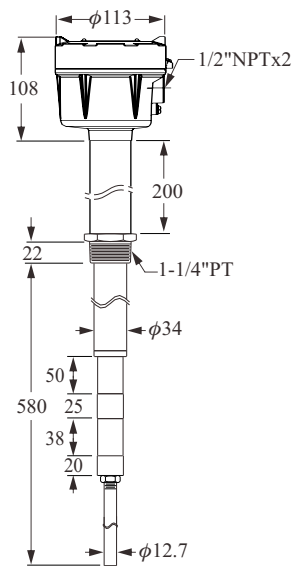
► SB1728

[SUPER HI-TEMP TYPE]

Insulated Material: Cermaic

Connection: 1-1/4"PT

Operating Temp.: -40~450°C



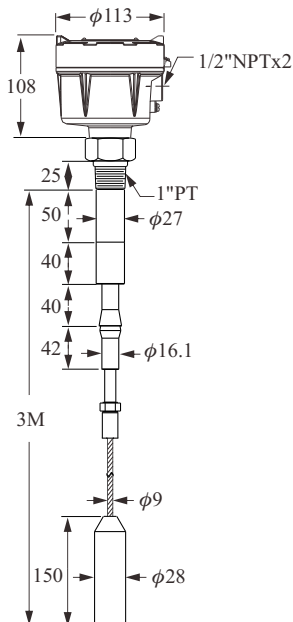
► SB1750

[CABLE TYPE]

Insulated Material: PTFE

Connection: 1"PT

Operating Temp.: -40~150°C



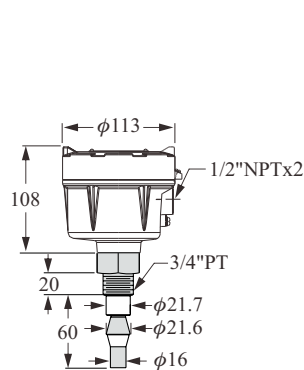
► SB1760

[MINI TYPE]

Insulated Material: PTFE

Connection: 3/4"PT

Operating Temp.: -40~150°C



SPECIFICATION

Housing: Aluminum (IP65)

Probe Material: SUS304 or 316

Sensitivity: 0.3PF

Supply Voltage:

24Vdc $\pm$ 20% or 115/230Vac $\pm$ 10%, 50/60Hz

Power Consumption: Max. 2W

Contact Rating: 3A/250Vac, DPDT

Ambient Temp: -20~70°C

Delay Time: 0~30 sec.

Fail safe mode:

High / low Fail safe mode

Conduit: 1/2" NPT x2 hole

Operation Pressure: 20kg/cm²



※Cable Conduit (Optional Part)

29-1108: 1/2"NPT

29-1104: 3/4"NPT

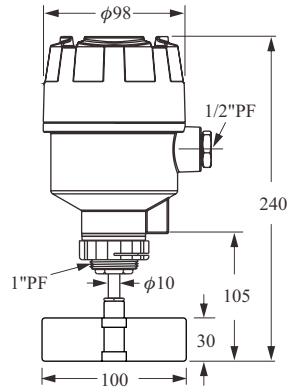
Please refer to page 45

ROTARY PADDLE LEVEL SWITCH

SE110A/B/C/D/E

Thread Type

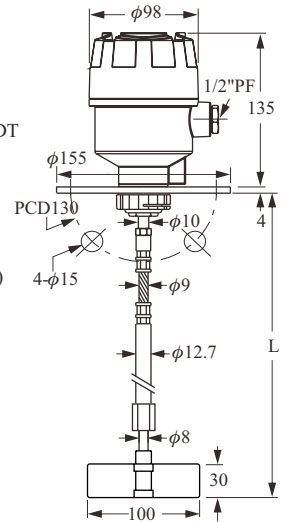
1. Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
2. Power Consumption : 3W
3. Contact rating : AC 250V, 5A, 1SPDT
4. Rotary speed : 1 R.P.M.
5. Torque : 0.5~1.0 kg-cm
6. Connection : 1"PF screw
7. Operation temperature : -20~70°C
(Tank inside temp.)
8. Housing material : Aluminum (IP65)
9. Conduit : 1/2"PF
10. Weight : approx. 1.2 kg



SE130A/B/C/D/E

Shaft Adjustable

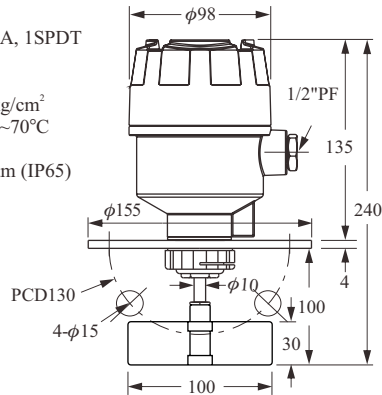
1. Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
2. Power Consumption : 3W
3. Contact rating : AC 250V, 5A, 1SPDT
4. Rotary speed : 1 R.P.M.
5. Torque : 0.5~1.0 kg-cm
6. Connection : JIS 2-1/2"x 5kg/cm²
7. Operation temperature : -20~70°C
(Tank inside temp.)
8. Housing material: Aluminum (IP65)
9. Conduit : 1/2"PF
10. Weight :
L-- 460~ 630mm: approx. 2.5kg
L-- 650~1000mm: approx. 2.8kg
L-- 760~1200mm: approx. 3.0kg



SE111A/B/C/D/E

Flange Type

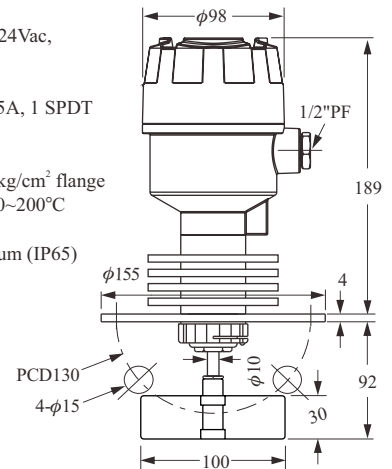
1. Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
2. Power Consumption : 3W
3. Contact rating : AC 250V, 5A, 1SPDT
4. Rotary speed : 1 R.P.M.
5. Torque : 0.5~1.0 kg-cm
6. Connection : JIS 2-1/2"x 5kg/cm²
7. Operation temperature : -20~70°C
(Tank inside temp.)
8. Housing material : Aluminum (IP65)
9. Conduit : 1/2"PF
10. Weight : approx. 1.7 kg



SE140A/B/C/D/E

High Temp.

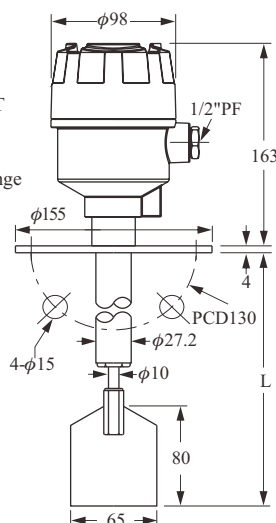
1. Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
2. Power Consumption : 3W
3. Contact rating : AC 250V, 5A, 1 SPDT
4. Rotary speed : 1 R.P.M.
5. Torque : 0.5~1.0 kg-cm
6. Connection : JIS 2-1/2"x 5kg/cm² flange
7. Operation temperature : -20~200°C
(Tank inside temp.)
8. Housing material : Aluminum (IP65)
9. Conduit : 1/2"PF
10. Weight : approx. 2.1 kg



SE120A/B/C/D/E

Shaft Protective Type

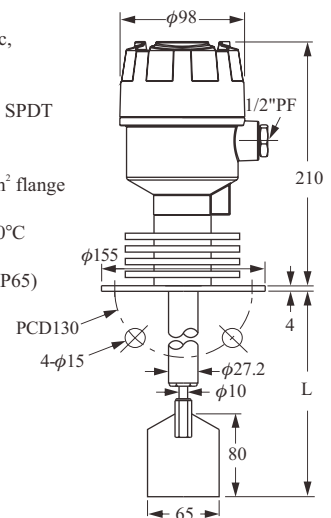
1. Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
2. Power Consumption : 3W
3. Contact rating : AC 250V, 5A, 1SPDT
4. Rotary speed : 1 R.P.M.
5. Torque : 0.5~1.0 kg-cm
6. Connection : JIS 2-1/2"x 5kg/cm² flange
SUS 304
7. Operation temperature : -20~70°C
(Tank inside temp.)
8. Housing material : Aluminum (IP65)
9. Conduit : 1/2"PF
10. Weight :
L-- 250mm: approx. 2.2kg
L-- 500mm: approx. 2.5kg
L-- 750mm: approx. 2.8kg



SE141A/B/C/D/E

High Temp. Shaft Protective Tube

1. Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
2. Power Consumption : 3W
3. Contact rating : AC 250V, 5A, 1 SPDT
4. Rotary speed : 1 R.P.M.
5. Torque : 0.5~1.0 kg-cm
6. Connection : JIS 2-1/2"x 5kg/cm² flange
SUS 304
7. Operation temperature : -20~200°C
(Tank inside temp.)
8. Housing material : Aluminum (IP65)
9. Conduit : 1/2"PF
10. Weight :
L--250mm : approx. 2.6kg
L--500mm : approx. 2.9kg
L--750mm : approx. 3.2kg

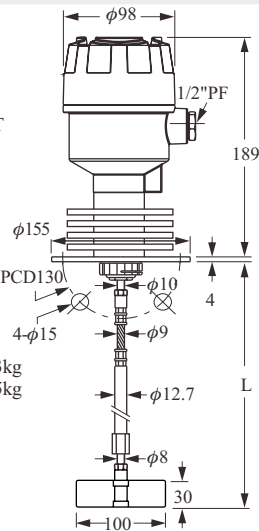


ROTARY PADDLE LEVEL SWITCH

SE146A/B/C/D/E

High Temp. Shaft Adjustable

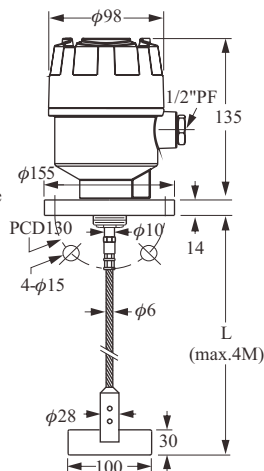
- Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
- Power Consumption : 3W
- Contact rating : AC 250V, 5A, 1SPDT
- Rotary speed : 1 R.P.M.
- Torque : 0.5~1.0 kg-cm
- Connection : JIS 2-1/2"x 5 kg/cm²
flange
- Operation temperature : -20~200°C
(Tank inside temp.)
- Housing material : Aluminum (IP65)
- Conduit : 1/2" PF
- Suitable S.G.:0.5
- Length: L~450~630mm: approx 3kg
L~650~1000mm: approx 3.3kg
L~760~1200mm: approx 3.5kg



SE160A/B/C/D/E

Cable Wire

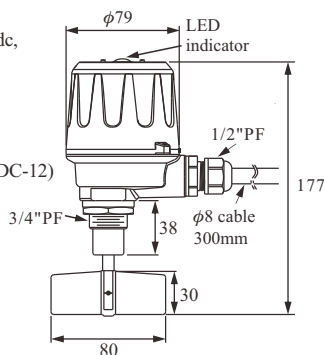
- Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
- Power Consumption : 3W
- Contact rating : AC 250V, 5A,
1SPDT
- Rotary speed : 1 R.P.M.
- Torque : 0.5~1.0 kg-cm
- Connection : JIS 2-1/2"x 5 kg/cm² flange
(Tank inside temp.)
- Operation temperature : -20~70°C
(Tank inside temp.)
- Housing material : Aluminum (IP65)
- Conduit : 1/2"PF
- Suitable S.G.:0.5
- Length: L~450mm: approx 2.5kg
L~650mm: approx 2.8kg
L~750mm: approx 3.0kg



SE3810A/B/C/D/E

Standard

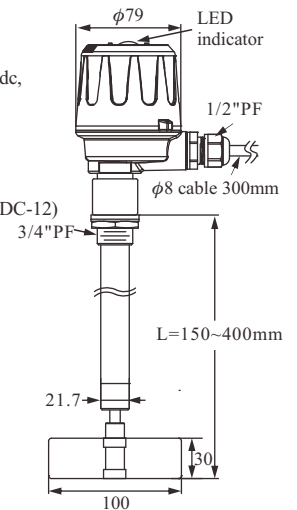
- Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
- Output Capacity: 5A/250Vac, 5A/30Vdc,
- Display status:
Green: High Level
Red: Low Level
- Ambient temperature: -40~85°C
- Operating Temperature: -40~85°C
- Housing material: Aluminum alloy (ADC-12)
- IP rating: IP65
- Connection: 3/4 "PF
- Speed: 1 RPM
- Applicable S.G.: 0.3~1g / cm³
- Power Consumption: Max. 1. 5W
- Paddle material: PC



SE3812A/B/C/D/E

Shaft Protective Tube

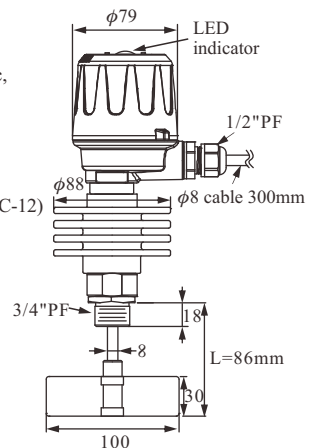
- Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
- Output Capacity: 5A/250Vac, 5A/30Vdc,
- Display status:
Green: High Level
Red: Low Level
- Ambient temperature: -40~85°C
- Operating Temperature: -40~85°C
- Housing material: Aluminum alloy (ADC-12)
- IP rating: IP65
- Connection: 3/4 "PF
- Speed: 1 RPM
- Applicable S.G.: 0.3~1g / cm³
- Power Consumption: Max. 1. 5W
- Paddle material : SUS304



SE3814A/B/C/D/E

High Temperature

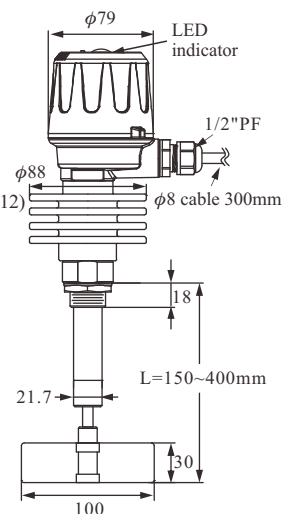
- Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
- Output Capacity: 5A/250Vac, 5A/30Vdc,
- Display status:
Green: High Level
Red: Low Level
- Ambient temperature: -40~85°C
- Operating Temperature: -40~200°C
- Housing material: Aluminum alloy (ADC-12)
- IP rating: IP65
- Connection: 3/4 "PF
- Speed: 1 RPM
- Applicable S.G.: 0.3~1g / cm³
- Power Consumption: Max. 1. 5W
- Paddle material : SUS304



SE3815A/B/C/D/E

High Temperature Shaft Protective Tube

- Supply voltage :
(A)110/(B)220/(C)240/(D)24Vac,
(E)24Vdc, 50/60Hz
- Output Capacity: 5A/250Vac, 5A/30Vdc,
- Display status:
Green: High Level
Red: Low Level
- Ambient temperature: -40~85°C
- Operating Temperature: -40~200°C
- Housing material: Aluminum alloy (ADC-12)
- IP rating: IP65
- Connection: 3/4 "PF
- Speed: 1 RPM
- Applicable S.G.: 0.3~1g / cm³
- Power Consumption: Max. 1. 5W
- Paddle material : SUS304



NEPSI PROOF No. GYJ111214 Ex d IIC T3~T6

PTB PROOF No. 05 ATEX 1029 Ex II 2G Ex d IIB T6~T3 Gb

Ex II 2D Ex tb IIC T85°C~T200°C Db IP65

FEATURES

- Airtight sealing device, outdoor application is available. Unique sealing ring design, it can perform good dust protection to avoid the dust permeate into housing body along with the shaft.
- The torque force is adjustable.
- The performance of torsion is stable and reliable.
- If the rotary paddle bears an extra overload, the motor will be appeared slide to prevent the inside mechanism damaged.
- It is rationally designed, the inside mechanisms are easily tore down for checking, maintenance and replacement.

SPECIFICATION

Supply voltage :

(A)110/(B)220/(C)240 Vac

Power Consumption : 3W

Contact rating : SPDT 3A/250Vac

Rotary speed : 1 R.P.M.

Insulation test voltage : AC 1500V X 1minute

Torque : 0.5~1.0 kg-cm

Connection :

1"PF screw or flange 1"~6", 2-1/2"x5kg/cm² (std.)

Operation temperature : -20~70°C (Tank inside temp.)

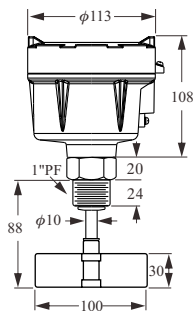
Housing material : AL Alloy, ADC-12

Suitable S.G.: 0.5



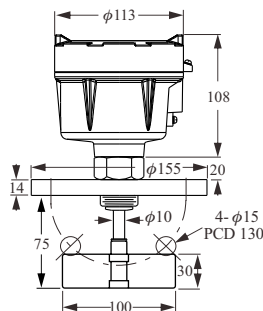
► SE170A/B/C

[SCREW TYPE]

Horizontal mounting
Temp. (-20°C ~ 70°C)

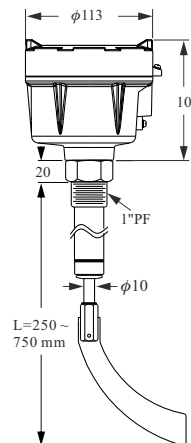
► SE171A/B/C

[FLANGE TYPE]

Horizontal mounting
Temp. (-20°C ~ 70°C)

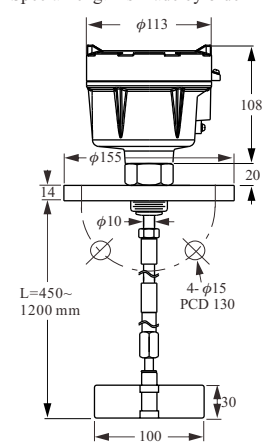
► SE172A/B/C

[SHAFT PROTECTIVE TUBE TYPE]

Horizontal / Vertical mounting
Temp. (-20°C ~ 70°C)
Standard Length (option):
L-- 250mm, 500mm, 750mm
Special length is made by order

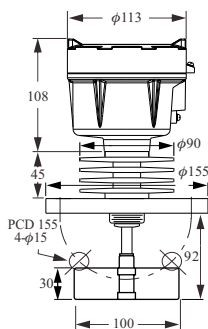
► SE173A/B/C

[SHAFT LENGTH ADJUSTABLE TYPE]

Vertical mounting
Temp. (-20°C ~ 70°C)
Standard Length (option):
L-- 460~630mm, 650~1000mm
L-- 760~1200mm
Special length is made by order

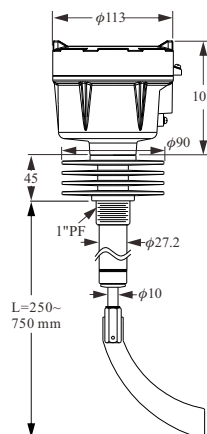
► SE174A/B/C

[HI-TEMP TYPE]

Horizontal mounting
Temp. (-20°C ~ 200°C)

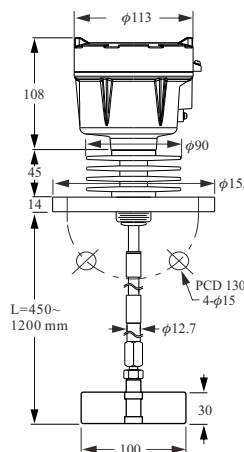
► SE175A/B/C

[HI-TEMP SHAFT PROTECTIVE TUBE TYPE]

Horizontal / Vertical mounting
Temp. (-20°C ~ 200°C)
Special length is made by order

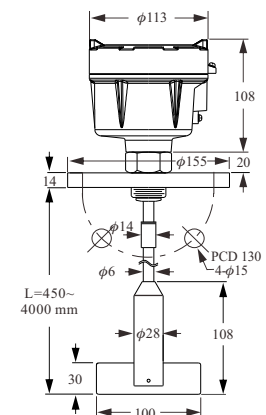
► SE176A/B/C

[HI-TEMP SHAFT LENGTH ADJUSTABLE TYPE]

Vertical mounting
Temp. (-20°C ~ 200°C)
Special length is made by order

► SE177A/B/C

[CABLE WIRE TYPE]

Vertical mounting
Temp. (-20°C ~ 70°C)
Special length is made by order

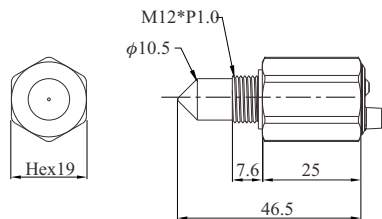
OPTICAL LEVEL SWITCH



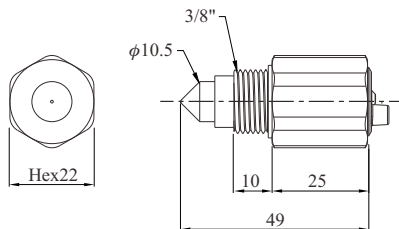
SD 20

1. Housing Material: PC, PES, SUS304, SUS316
Sensible Tip Material: PC, PES
2. Protection Rating : IP67
3. Operation Temperature: -10~125°C
4. Ambient Temperature: -10~80°C
5. Operation Pressure:
Max.10kg/cm²(PC,PES)
Max.40kg/cm²(SUS304/316)
6. Power Supply: 10~28 Vdc with reverse charge protection
7. Load Current: 100mA Max.
8. Overload Current Protection: 100mA
9. Connection Thread:
M12 x 1 (PC, PES only)
3/8"PF, 3/8"PT, 3/8"NPT
1/2"G (SD204BR□□-A only)
10. Lead Wire:
2m CABLE(dia. 3.8) 3C PVC 24 AWG;
custom made if over 2m

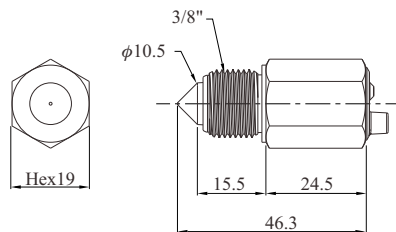
PC、PES



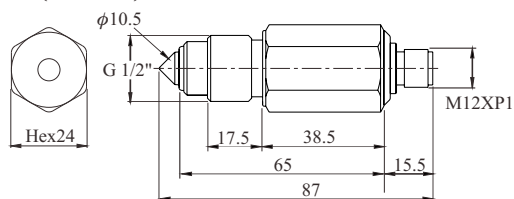
PC、PES



SUS304、SUS316



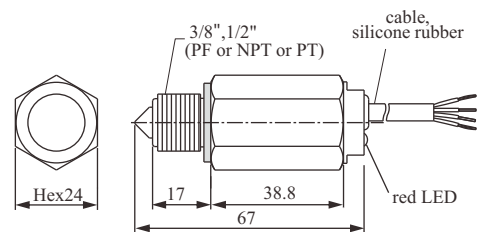
SUS304(M12x1)



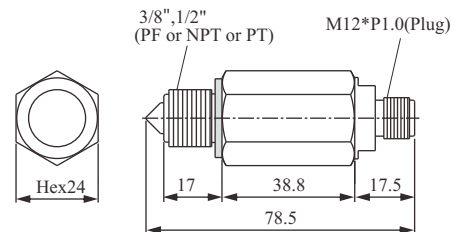
SD 21

1. Tip material: Glass
2. Body material: SUS304/SUS316
3. Supply voltage: 10~28 Vdc
4. Load current: ≤200 mA
5. Output mode: NPN / PNP
6. Output function: NO+NC
7. Delay time: 5 sec ± 1 sec (optional)
8. Ambient Temperature: -20~80°C
9. Operation Temperature: -20~100°C
10. Operation Pressure: <60 bar
11. Anti-ambient light interference: <500 lux
12. Protection Rating: IP67
13. Cable specifications: Silicone rubber jacket,
24 AWG, L=2 m, 4C (blue, green, black, and brown)
14. Thread options: PT / PF / NPT

Cable type



M12 connection type



OPTICAL LEVEL SWITCH



SD 22

Typical

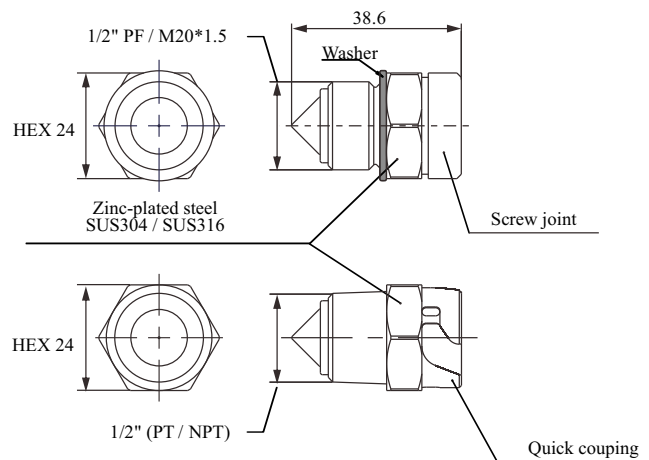
1. Tip material: Glass/Zinc-plated steel / SUS304 / SUS316
2. Body material: PA66 glass fiber reinforced
3. Supply voltage: AC 50/60Hz 115V $\pm 20\%$
AC 50/60Hz 230V $\pm 20\%$
4. Relay specifications: AC 240V, 2.5A, C300
5. Ambient temp.: -40~85°C
6. Operating temp.: -40~100°C or 120°C (<1h)
7. Delay time(customization):
Relay ON after applying the supply voltage (3s $\pm$ 1s)
Relay OFF after level continue missing (5s $\pm$ 1s)
8. process pressure: 65 bar
9. Anti-ambient light interference: <500 lux
10. IP rating: IP65
11. Cable specifications: PVC, 18 AWG, L=1m, 5C color coded
12. Connecting screw: 1/2" (PT, PF, NPT) / M20X1.5 mm

SD 22

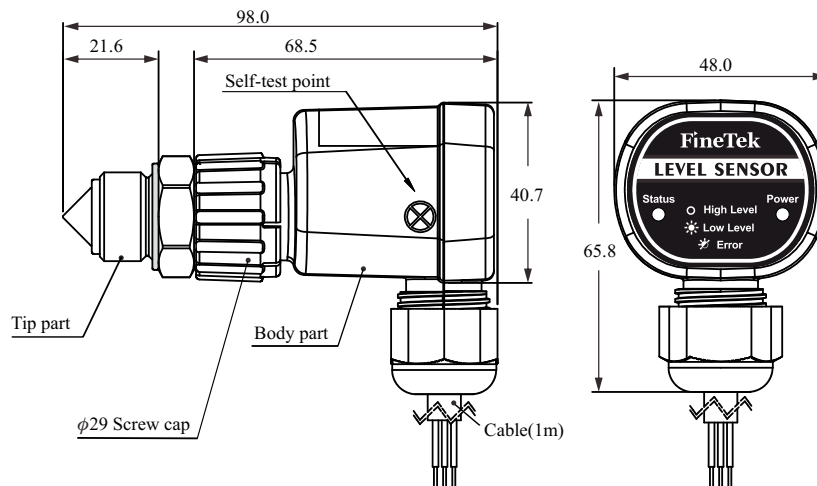
Motor power detection

1. Tip material: Glass/Zinc-plated steel / SUS304 / SUS316
2. Body material: PA66 glass fiber reinforced
3. Supply voltage: AC 50/60Hz 115V $\pm 20\%$
AC 50/60Hz 230V $\pm 20\%$
4. Relay specifications: AC 240V, 2.5A, C300
5. Ambient temp.: -40~85°C
6. Operating temp.: -40~100°C or 120°C (<1h)
7. Delay time(customization):
Relay ON after applying the supply voltage (3s $\pm$ 1s)
Level monitoring after relay ON (30s $\pm$ 1s)
Relay OFF after level continue missing(5s $\pm$ 1s)
8. process pressure: 65 bar
9. Anti-ambient light interference: <500 lux
10. IP rating: IP65
11. Cable specifications: PVC, 18 AWG, L=1m, 6C color coded
12. Connecting screw: 1/2" (PT, PF, NPT) / M20X1.5 mm

Tip



Body



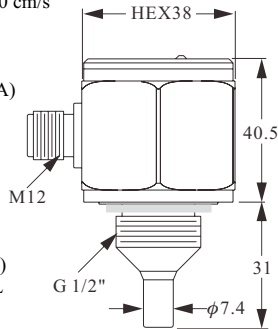
THERMAL DISPERSION FLOW SWITCH



SP200-□-□□-□-□

Standard

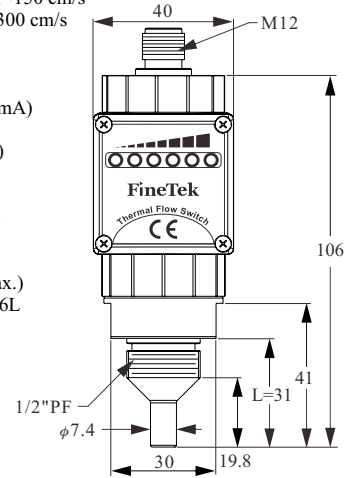
1. Measuring Range(Speed): water:1~150 cm/s
Oil:3~300 cm/s
2. Ambient temp.: -20~80°C
3. Liquid temperature: -20~80°C
4. Alarm output:
Open collector---NPN/PNP(<400mA)
Relay---1A/30Vdc, 0.3A/125Vac
5. Operating pressure:100 bar (max.)
6. Housing: SUS304/316/316L
7. Protection Rating: IP67
8. Warm-up time: approx. 15 second
9. Connection: G1/2, NPT1/2, 1/4G
10. Supply voltage: 19~30Vdc
11. Power Consumption : 50mA (max.)
12. Wetted material: SUS304/316/316L



SP220-□-□□-□-□

Economy

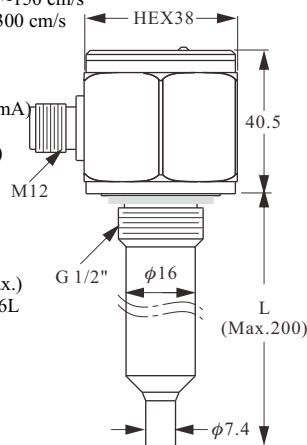
1. Measuring Range(Speed): water:1~150 cm/s
Oil:3~300 cm/s
2. Ambient temp.: -20~80°C
3. Liquid temperature: -20~80°C
4. Alarm output:
Open collector---NPN/PNP(<400mA)
Relay---1A/30Vdc, 0.3A/125Vac
5. Operating pressure:100 bar (max.)
6. Housing: PC
7. Protection Rating: IP65
8. Warm-up time: approx. 15 second
9. Connection: G1/2, NPT1/2
10. Supply voltage: 19~30Vdc
11. Power Consumption : 50mA (max.)
12. Wetted material: SUS304/316/316L



SP201-□-□□-□-□

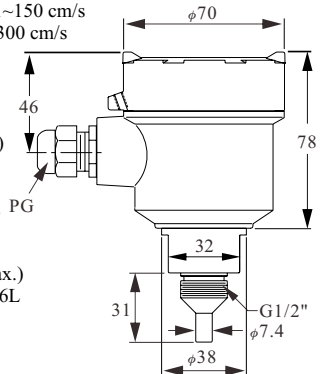
Extension

1. Measuring Range(Speed): water:1~150 cm/s
Oil:3~300 cm/s
2. Ambient temp.: -20~80°C
3. Liquid temperature: -20~80°C
4. Alarm output:
Open collector---NPN/PNP(<400mA)
Relay---1A/30Vdc, 0.3A/125Vac
5. Operating pressure:100 bar (max.)
6. Housing: SUS304/316/316L
7. Protection Rating: IP67
8. Warm-up time: approx. 15 second
9. Connection: G1/2, NPT1/2
10. Supply voltage: 19~30Vdc
11. Power Consumption : 50mA (max.)
12. Wetted material: SUS304/316/316L



SP210

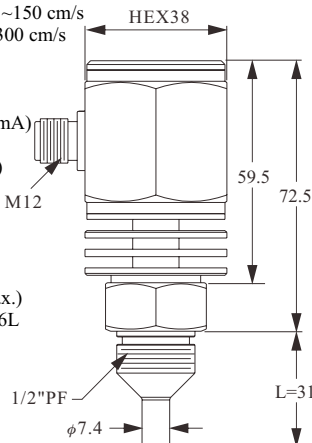
1. Measuring Range(Speed): water:1~150 cm/s
Oil:3~300 cm/s
2. Ambient temp.: -20~80°C
3. Liquid temperature: -20~80°C
4. Alarm output:
Relay---5A/250Vac
5. Operating pressure:100 bar (max.)
6. Housing: SUS316
7. Protection Rating: IP67
8. Warm-up time: approx. 15 second
9. Connection: G1/2, NPT1/2
10. Supply voltage: 19~30Vdc
11. Power Consumption : 60mA (max.)
12. Wetted material: SUS304/316/316L



SP202-□-□□-□-□

Hight Temperature

1. Measuring Range(Speed): water:1~150 cm/s
Oil:3~300 cm/s
2. Ambient temp.: -20~80°C
3. Liquid temperature: -20~120°C
4. Alarm output:
Open collector---NPN/PNP(<400mA)
Relay---1A/30Vdc, 0.3A/125Vac
5. Operating pressure:100 bar (max.)
6. Housing: SUS304/316/316L
7. Protection Rating: IP67
8. Warm-up time: approx. 15 second
9. Connection: G1/2, NPT1/2, 1/4G
10. Supply voltage: 19~30Vdc
11. Power Consumption : 50mA (max.)
12. Wetted material: SUS304/316/316L



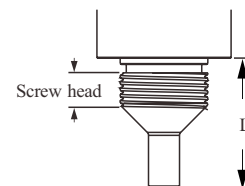
SCREW TABLE

Standard

	PF,BSP		PT,NPT	
	Screw head	L	Screw head	L
1/4"	8.5mm	25mm	10mm	25mm
1/2"	10.5mm	31mm	19mm	40mm
1"	16mm	36mm	20mm	40mm

Extension

	PF,BSP		PT,NPT	
	Screw head		Screw head	
1/2"	11.5mm	16mm	16mm	20mm
1"	16mm		20mm	



THERMAL DISPERSION FLOW SWITCH

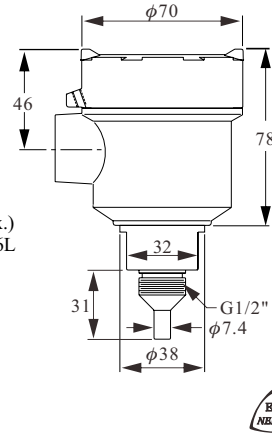
PADDLE FLOW SWITCH

SP170-□-□□-□

Explosion-Proof

1. Measuring Range(Speed): water:1~150 cm/s
Oil:3~300 cm/s
2. Ambient temp.: -20~80°C
3. Liquid temperature: -20~80°C
4. Alarm output:
Relay---3A/250Vac
5. Operating pressure:100 bar (max.)
6. Housing: SUS316
7. Protection Rating: IP67
8. Warm-up time: approx. 15 second
9. Connection: G1/2, NPT1/2
10. Supply voltage: 19~30Vdc
11. Power Consumption : 60mA (max.)
12. Wetted material: SUS304/316/316L
13. Explosion-proof cable connectors are optional.

GYJ12.1521X

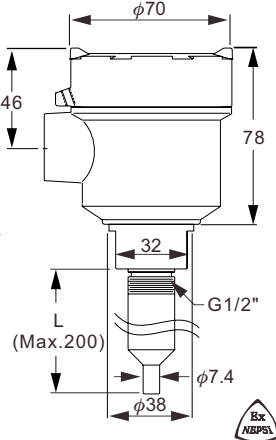


SP171-□-□□-□

Explosion-Proof Explosion

1. Measuring Range(Speed): water:1~150 cm/s
Oil:3~300 cm/s
2. Ambient temp.: -20~80°C
3. Liquid temperature: -20~80°C
4. Alarm output:
Relay---3A/250Vac
5. Operating pressure:100 bar (max.)
6. Housing: SUS316
8. Warm-up time: approx. 15 second
9. Connection: G1/2, NPT1/2
10. Supply voltage: 19~30Vdc
11. Power Consumption : 60mA (max.)
12. Wetted material: SUS304/316/316L
13. Explosion-proof cable connectors are optional.

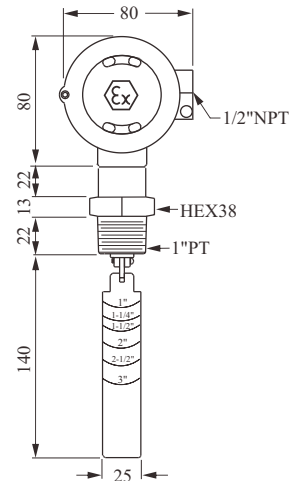
GYJ12.1521X



SF1710

Paddle Type

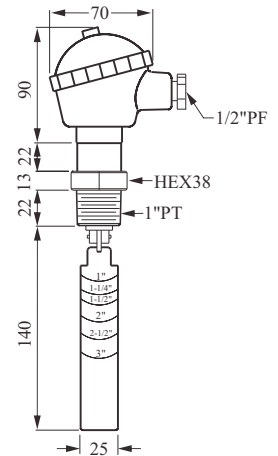
1. Material:
Housing material: Aluminum
Ex d IIC T6~T4
2. Operating temperature: -30~100°C
3. Operating pressure max.: 355 PSIG
4. Pressure drop allowance: 3 PSIG
5. Set point tolerance: $\pm 25\%$
6. Repeatability difference: $\pm 5\%$
7. Contact rating: SPDT, 1A 60W
220Vac /200Vdc
8. Connection: 1"PT screw
9. Weight: approx. 1kg
10. Explosion-proof cable connectors are optional.



SF1800

Standard Type

1. Material:
Housing Aluminum (IP65)
Paddle material: SUS 304
2. Operating temperature: -30~150°C
3. Operating pressure max.: 355 PSIG
4. Pressure drop allowance: 3 PSIG
5. Set point tolerance: $\pm 25\%$
6. Repeatability difference: $\pm 5\%$
7. Contact rating: SPDT, 1A 60W
220Vac /200Vdc
8. Connection: 1"PT screw
9. Weight: approx. 0.85kg



FLOW CONTROL RANGE TABLE

Paddle Length	Size Flow Volume Gallon Min.	1"		1-1/2"		2"		2-1/2"		3"	
		Act.	De-Act.	Act.	De-Act.	Act.	De-Act.	Act.	De-Act.	Act.	De-Act.
1"		4.7	3.9	10.9	8.3	19.9	16.1				
1-1/4"				7.7	6.1	16.5	12.3	31.3	22.8		
1-1/2"				5.7	4.5	13.4	9.5	25.2	18.5		
2"						8.4	6.3	15.1	12.8	29.7	21.9
2-1/2"								13.9	10	20.4	15.4
3"										17.1	12.8

※1 Gallon=3.872 Litter

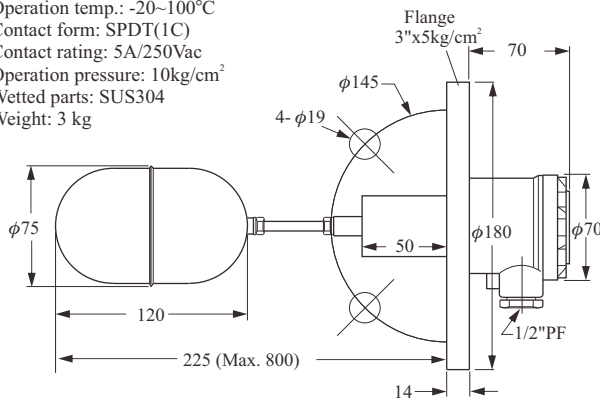
SIDE MOUNTING FLOAT LEVEL SWITCH



FF10BHM

Light Specific Gravity

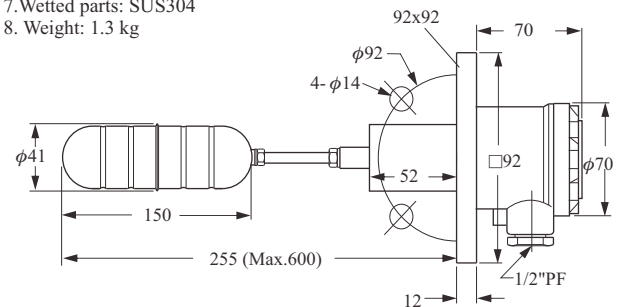
1. Housing material: Aluminum (IP65)
2. Suitable S.G.: 0.25
3. Operation temp.: -20~100°C
4. Contact form: SPDT(1C)
5. Contact rating: 5A/250Vac
6. Operation pressure: 10kg/cm²
7. Wetted parts: SUS304
8. Weight: 3 kg



FF10CLO

Square Flange 92x92

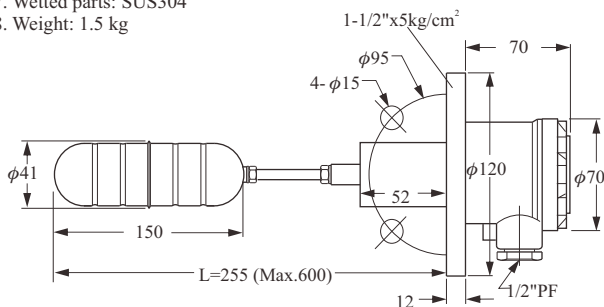
1. Housing material: Aluminum (IP65)
2. Suitable S.G.: 0.65
3. Operation temp.: -20~100°C
4. Contact form: SPDT(1C)
5. Contact rating: 5A/250Vac
6. Operation pressure: 15kg/cm²
7. Wetted parts: SUS304
8. Weight: 1.3 kg



FF10CEM

Standard

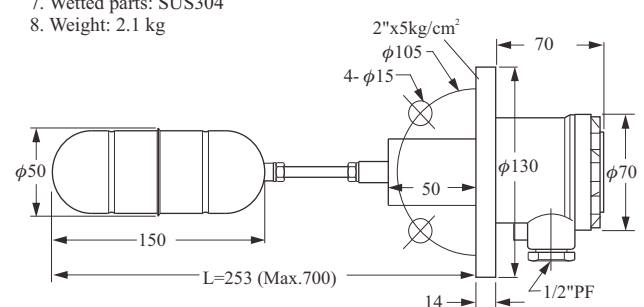
1. Housing material: Aluminum (IP65)
2. Suitable S.G.: 0.65
3. Operation temp.: -20~100°C
4. Contact form: SPDT(1C)
5. Contact rating: 5A/250Vac
6. Operation pressure: 15kg/cm²
7. Wetted parts: SUS304
8. Weight: 1.5 kg



FF10DFM

Standard

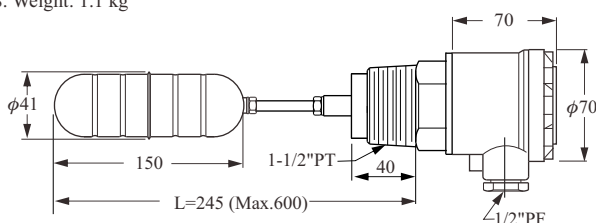
1. Housing material: Aluminum (IP65)
2. Suitable S.G.: 0.55
3. Operation temp.: -20~100°C
4. Contact form: SPDT(1C)
5. Contact rating: 5A/250Vac
6. Operation pressure: 30kg/cm²
7. Wetted parts: SUS304
8. Weight: 2.1 kg



FF10CEQ

Standard Screw

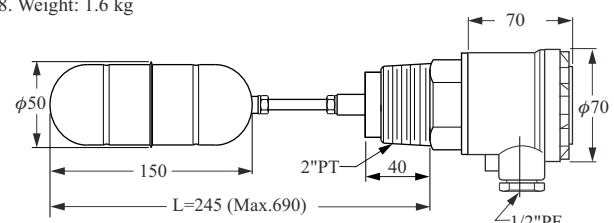
1. Housing material: Aluminum (IP65)
2. Suitable S.G.: 0.65
3. Operation temp.: -20~100°C
4. Contact form: SPDT(1C)
5. Contact rating: 5A/250Vac
6. Operation pressure: 15kg/cm²
7. Wetted parts: SUS304
8. Weight: 1.1 kg



FF10DFQ

Standard Screw

1. Housing material: Aluminum (IP65)
2. Suitable S.G.: 0.55
3. Operation temp.: -20~100°C
4. Contact form: SPDT(1C)
5. Contact rating: 5A/250Vac
6. Operation pressure: 30kg/cm²
7. Wetted parts: SUS304
8. Weight: 1.6 kg



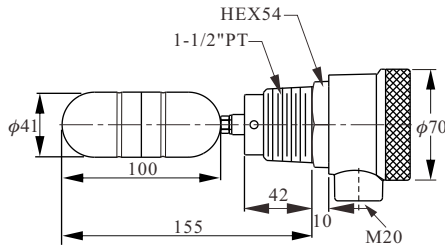
SIDE MOUNTING FLOAT LEVEL SWITCH



FF15HEQ

Mini Type

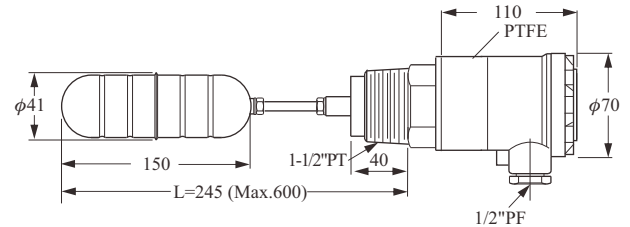
1. Housing material: SUS304(IP65)
2. Suitable S.G.: 0.8
3. Operation temp.: -20~100°C
4. Contact form: SPDT(1C)
5. Contact rating: 5A/250Vac
6. Operation pressure: 15kg/cm²
7. Wetted parts: SUS304



FF20CEQ

High Temperature

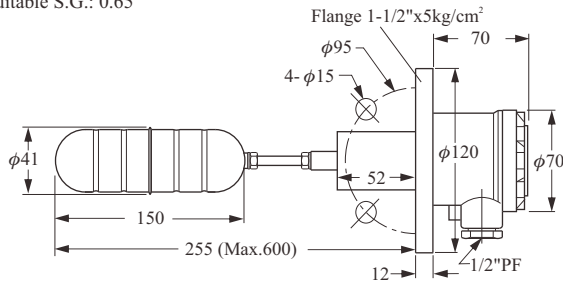
1. Housing material: Aluminum (IP65)
2. Suitable S.G.: 0.65
3. Operation temp.: -40~200°C
4. Contact form: SPDT(1C)
5. Contact rating: 1A, 60W 220Vac
6. Operation pressure: 15kg/cm²
7. Wetted parts: SUS304
8. Weight: approx. 1.4 kg



FF12CEM

Dual Switch

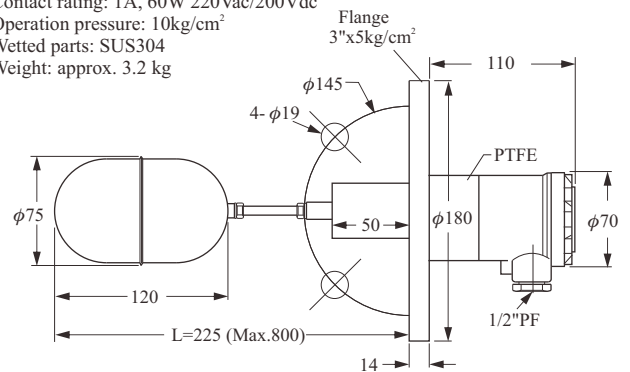
1. Housing material: Aluminum (IP65)
2. Connection: 1-1/2"x5kg/cm² Flange
3. Operation temp.: -40~100°C
4. Operation pressure: 15kg/cm²
5. Material: SUS304
6. Contact rating: 5A/250Vac SPDT(1Cx2)
7. Float: 41x150
8. Suitable S.G.: 0.65



FF20BHM

Light Specific Gravity High Temp.

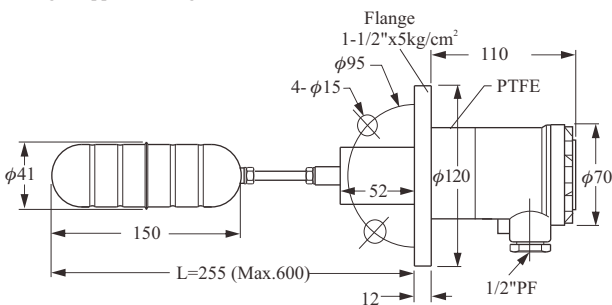
1. Housing material: Aluminum (IP65)
2. Suitable S.G.: 0.25
3. Operation temp.: -40~200°C
4. Contact form: SPDT(1C)
5. Contact rating: 1A, 60W 220Vac/200Vdc
6. Operation pressure: 10kg/cm²
7. Wetted parts: SUS304
8. Weight: approx. 3.2 kg



FF20CEM

High Temperature

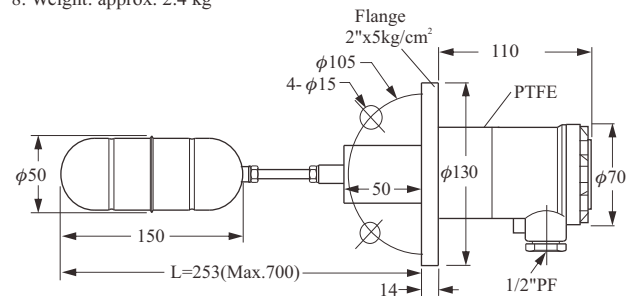
1. Housing material: Aluminum (IP65)
2. Suitable S.G.: 0.65
3. Operation temp.: -40~200°C
4. Contact form: SPDT(1C)
5. Contact rating: 1A, 60W 220Vac/200Vdc
6. Operation pressure: 15kg/cm²
7. Wetted parts: SUS304
8. Weight: approx. 1.8 kg



FF20DFM

High Temperature

1. Housing material: Aluminum (IP65)
2. Suitable S.G.: 0.55
3. Operation temp.: -40~200°C
4. Contact form: SPDT(1C)
5. Contact rating: 1A, 60W 220Vac/200Vdc
6. Operation pressure: 30kg/cm²
7. Wetted parts: SUS304
8. Weight: approx. 2.4 kg



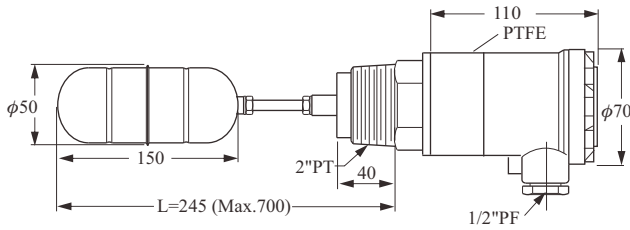
SIDE MOUNTING FLOAT LEVEL SWITCH



FF20DFQ

High Temperature

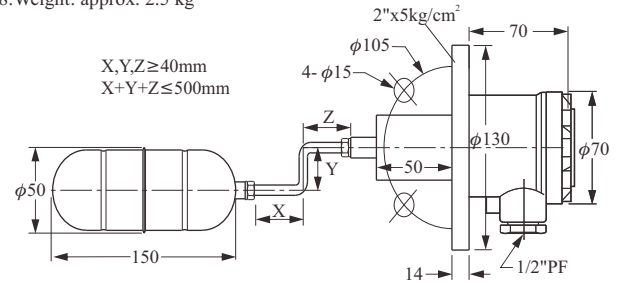
1. Housing material:
Aluminum (IP65)
2. Suitable S.G.: 0.55
3. Operation temp.: -40~200°C
4. Contact form: SPDT(1C)
5. Contact rating: 1A, 60W 220Vac/200Vdc
6. Operation pressure: 30kg/cm²
7. Wetted parts: SUS304
8. Weight: approx. 1.9 kg



FF40DFM

Double Angle Standard

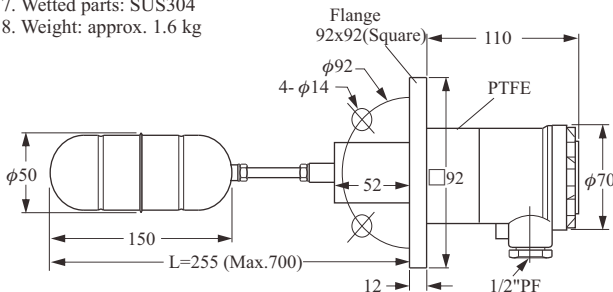
1. Housing material:
Aluminum (IP65)
2. Suitable S.G.: 0.55
3. Operation temp.: -20~100°C
4. Contact form: SPDT(1C)
5. Contact rating: 5A/250Vac
6. Operation pressure: 30kg/cm²
7. Wetted parts: SUS304
8. Weight: approx. 2.5 kg



FF20DLO

Square Flange 92x92

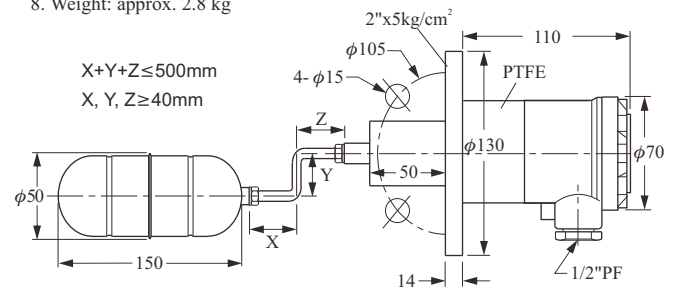
1. Housing material:
Aluminum (IP65)
2. Suitable S.G.: 0.55
3. Operation temp.: -40~200°C
4. Contact form: SPDT(1C)
5. Contact rating: 1A, 60W 220Vac/200Vdc
6. Operation pressure: 30kg/cm²
7. Wetted parts: SUS304
8. Weight: approx. 1.6 kg



FF45DFM

Double Angle High Temp.

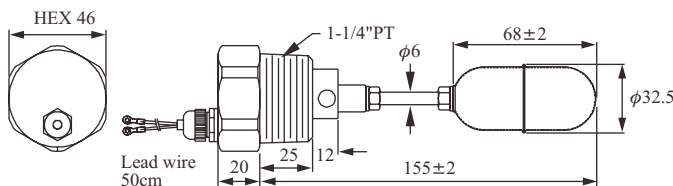
1. Housing material:
Aluminum (IP65)
2. Suitable S.G.: 0.55
3. Operation temp.: -40~200°C
4. Contact form: SPDT(1C)
5. Contact rating: 1A, 60W 220Vac/200Vdc
6. Operation pressure: 30kg/cm²
7. Wetted parts: SUS304
8. Weight: approx. 2.8 kg



FF30A3Q

Mini Type

1. Contact rating: 50W 240Vac/200Vdc
2. Contact form: SPST(1A)
3. Operation pressure: 15kg/cm²
4. Operation temp.: -20~100°C
5. Wetted parts: SUS304
6. Lead wire: PVC Cable 22AWG
7. Suitable S.G.: 0.65
8. Weight: approx. 0.51kg



FF50DFM

Vertical Standard

1. Housing material:
Aluminum (IP65)
2. Suitable S.G.: 0.55
3. Operation temp.: -20~100°C
4. Contact form: SPDT(1C)
5. Contact rating: 5A/250VAC
6. Operation pressure: 30kg/cm²
7. Wetted parts: SUS304
8. Weight: approx. 2.5 kg

