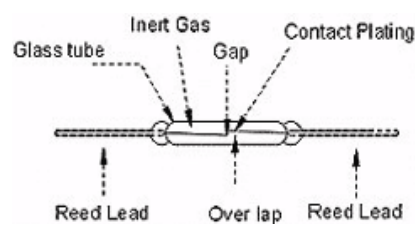




www.syntextech.com.tw

3-5

Reed switches



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Other productes

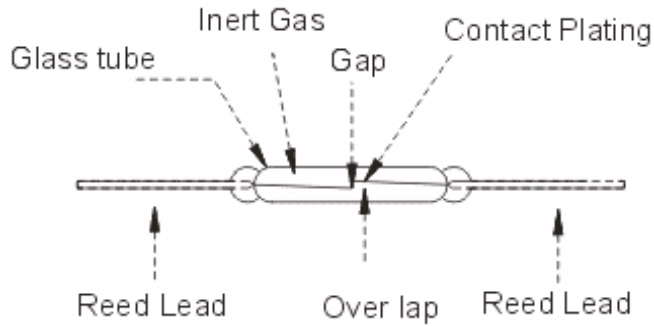


Other productes.....31

3

Reed Switches

1. Reed Switch Structure



2. Reed Switch Characteristics

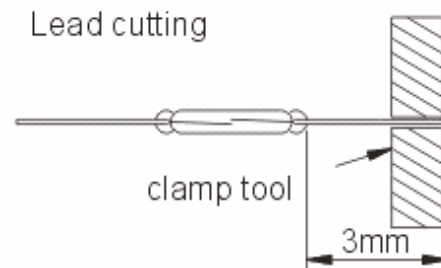
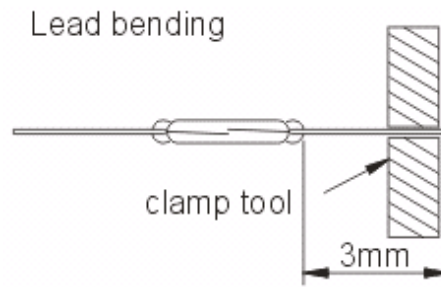
- ☐ Quick response operation
- ☐ Low cost
- ☐ Long life
- ☐ Immunity to mechanical effects
- ☐ Contacts isolated from the environment
- ☐ Low and stable contact resistance
- ☐ Assures stable switching operation

3. Applications

- ☐ Reed Relays
- ☐ Key Switch
- ☐ Float Switch
- ☐ Security Systems
- ☐ Consumer Electronic Equipment
- ☐ Proximity Switch
- ☐ Automatic Measuring Instruments

Special Precaution

1. Reed Switch lead forming



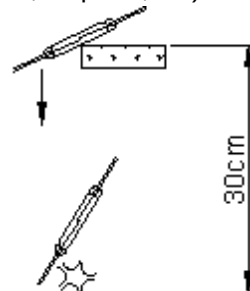
2. Mounting (soldering and welding)

- ☐ Excessive high temperature and exposure time may cause damage of the glass-to-metal seal (crack).
- ☐ Recommended soldering conditions are 280 to 300 deg. C for hand soldering
- ☐ When mounting a reed switch on a PCB, it is recommended to form the leads and provide adequate spacing between the PCB and the reed switch, or to drop the reed switch into an cutout on the PCB.



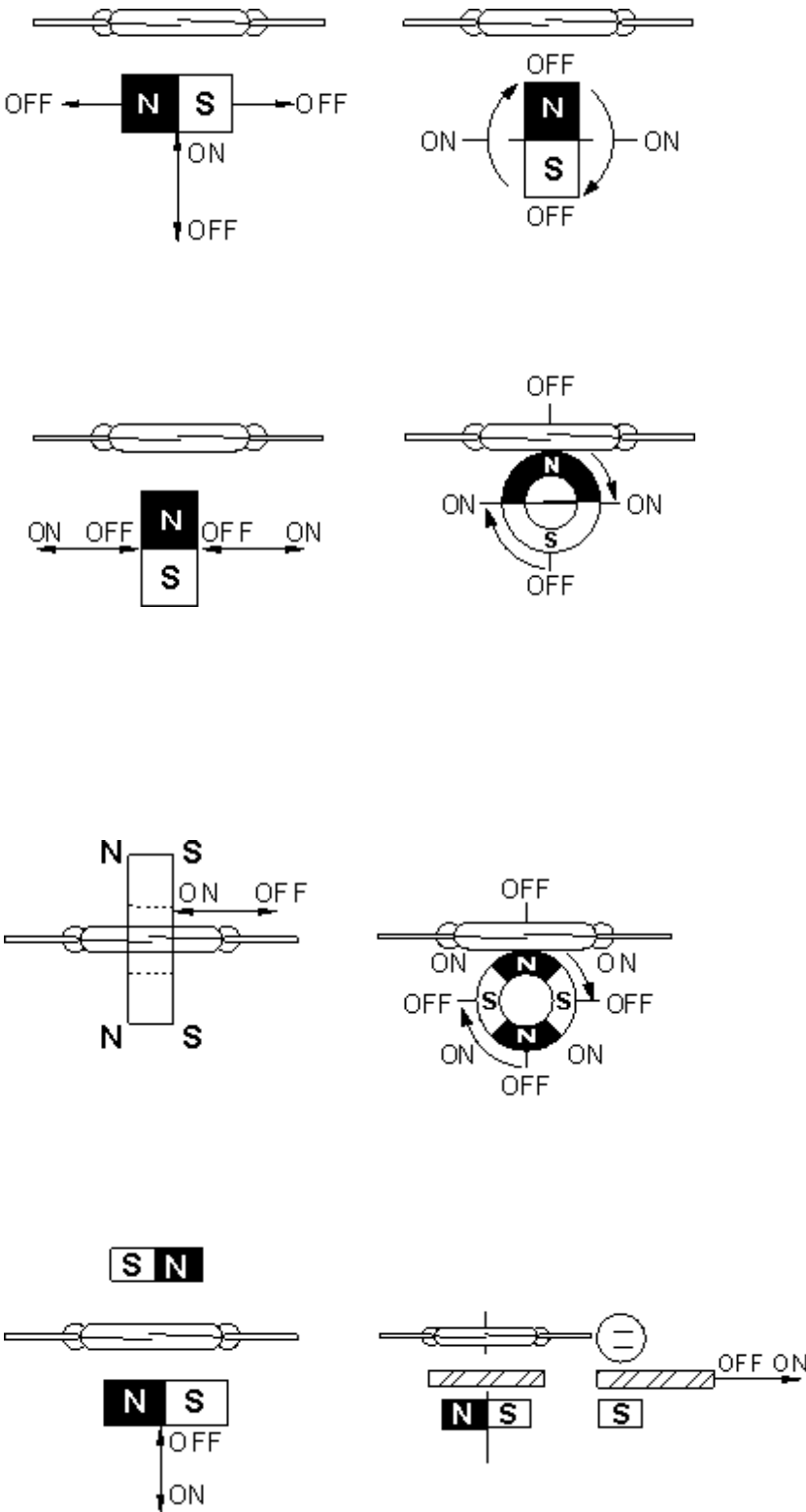
3. Shock and vibration.

- ☐ If a reed switch is dropped onto a hard surface from more than 30cm or subject to shock of more than 30G, it is possible to cause the characteristics to change (Pull-in, Drop-out, etc.).

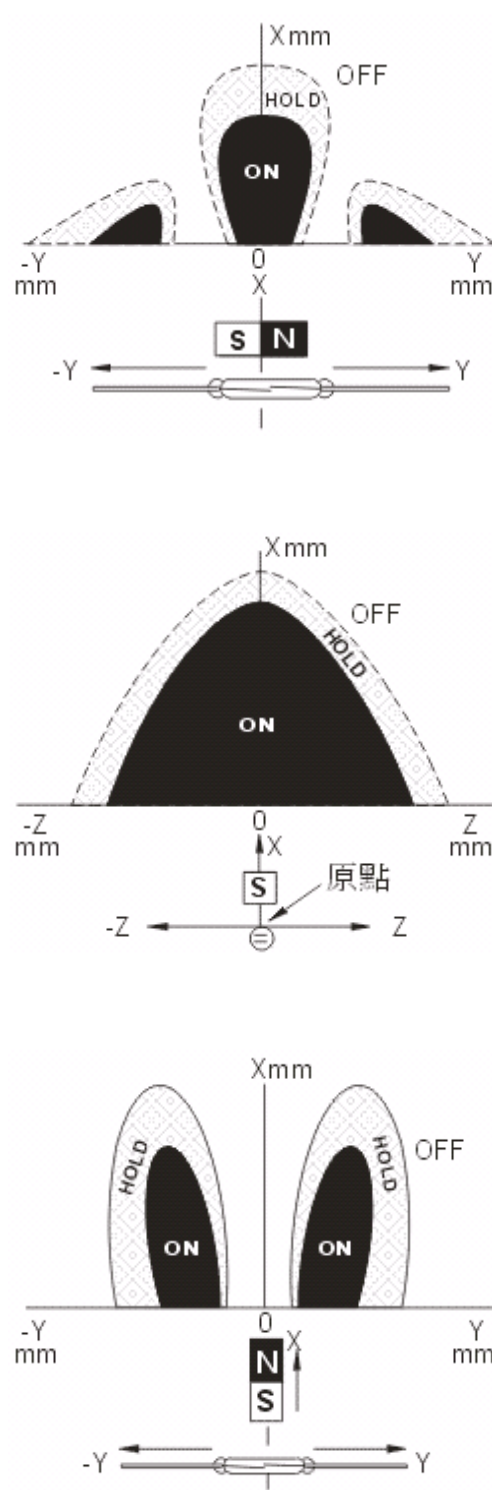


Reed Switches

Reed Switch and Permanent Magnets. Types of actuation.

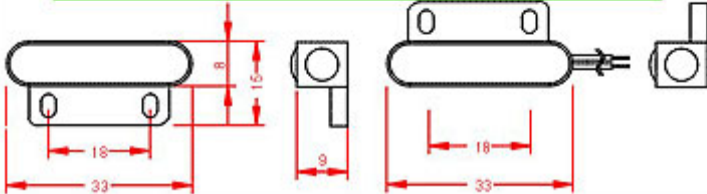


Permanent Magnet Actuation Patterns.

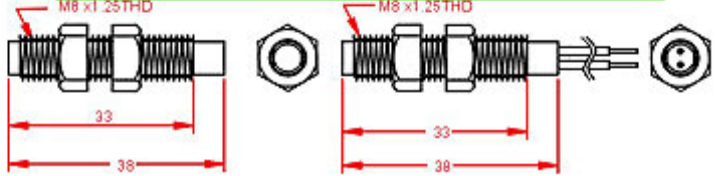


Proximity sensors

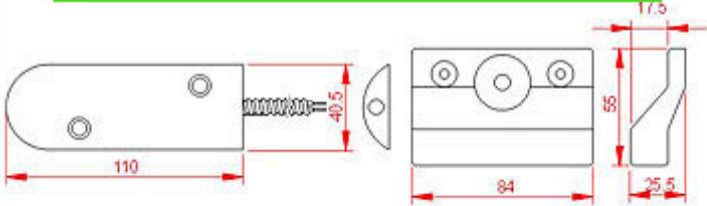
SPS-330



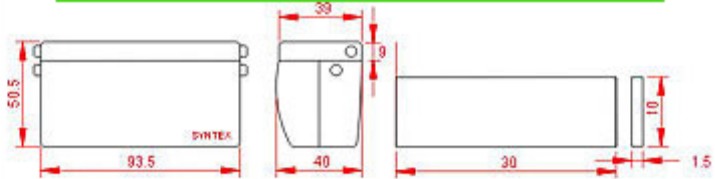
SPS-380



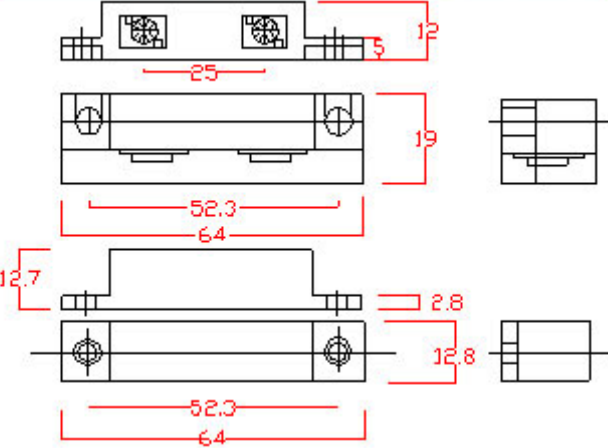
SPS-1100



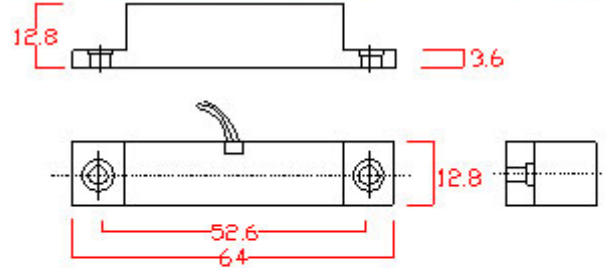
SPS-930



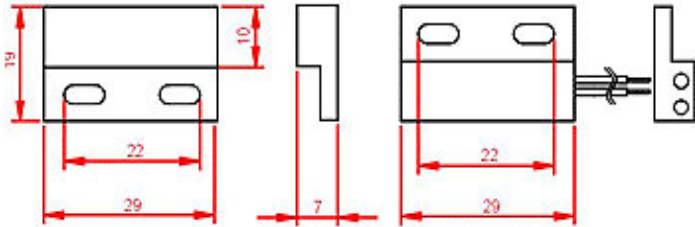
SPS-310



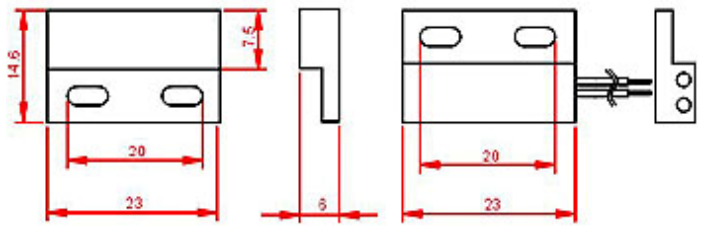
SPS-320



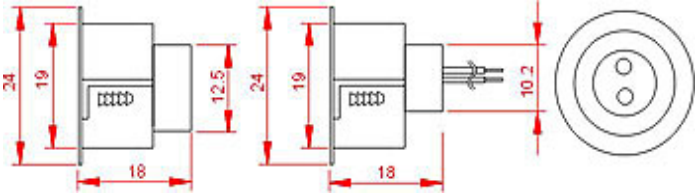
SPS-290



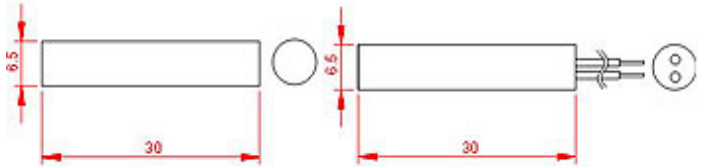
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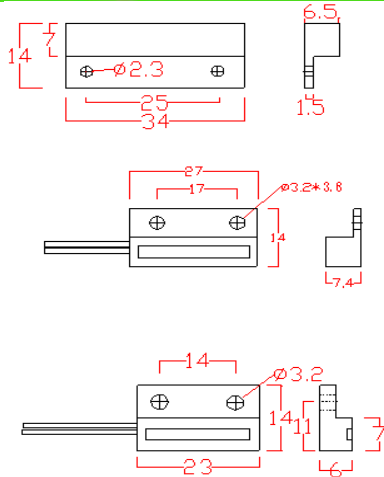
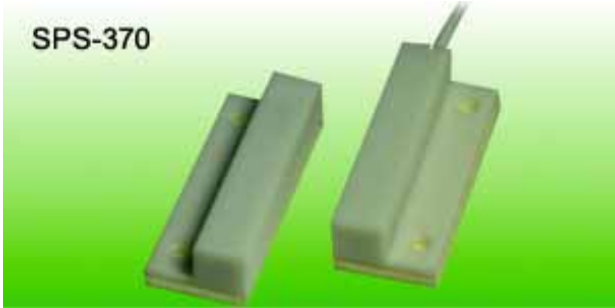
SPS-130



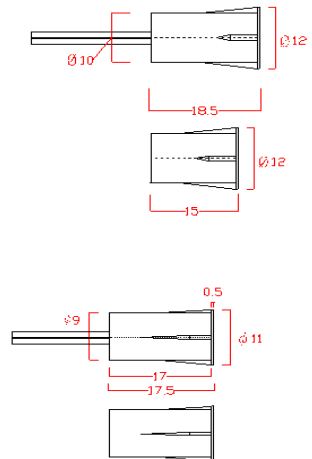
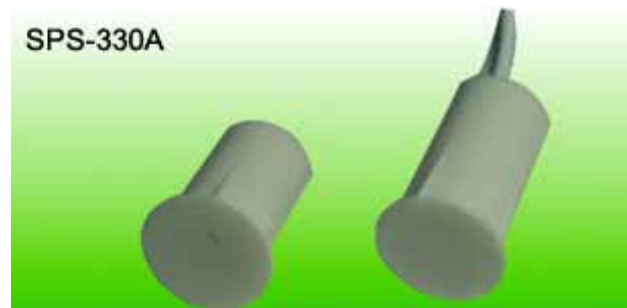
SPS-300



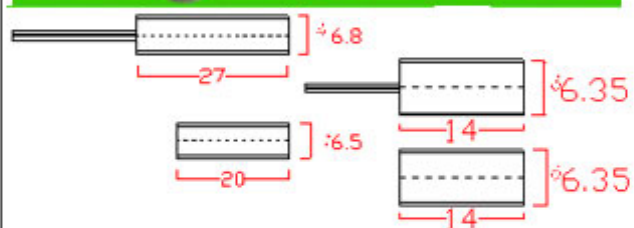
SPS-370



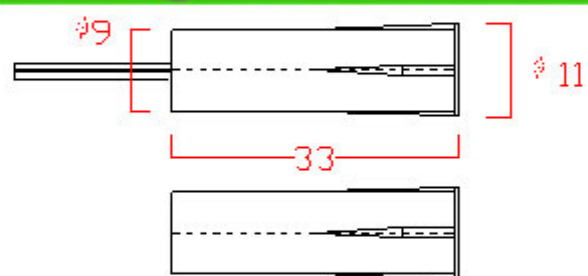
SPS-330A



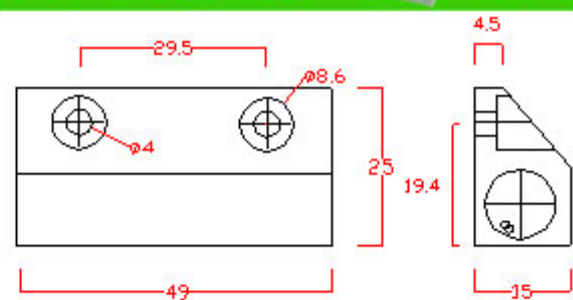
SPS-340



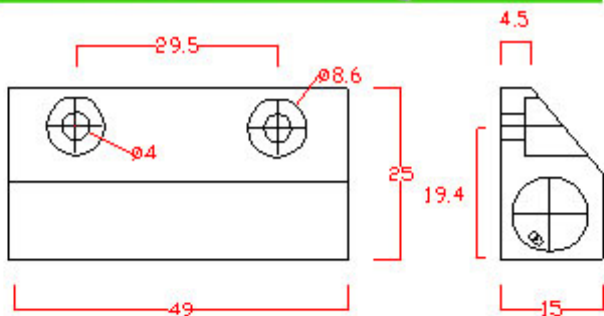
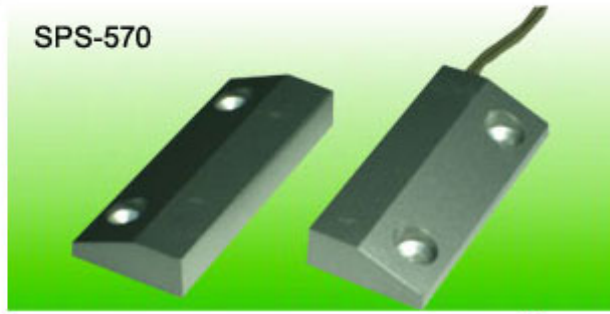
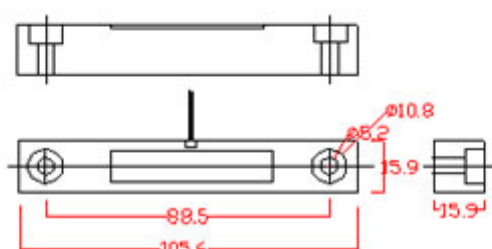
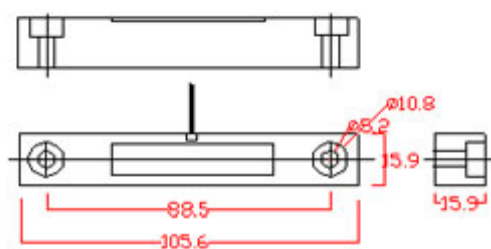
SPS-350



SPS-560



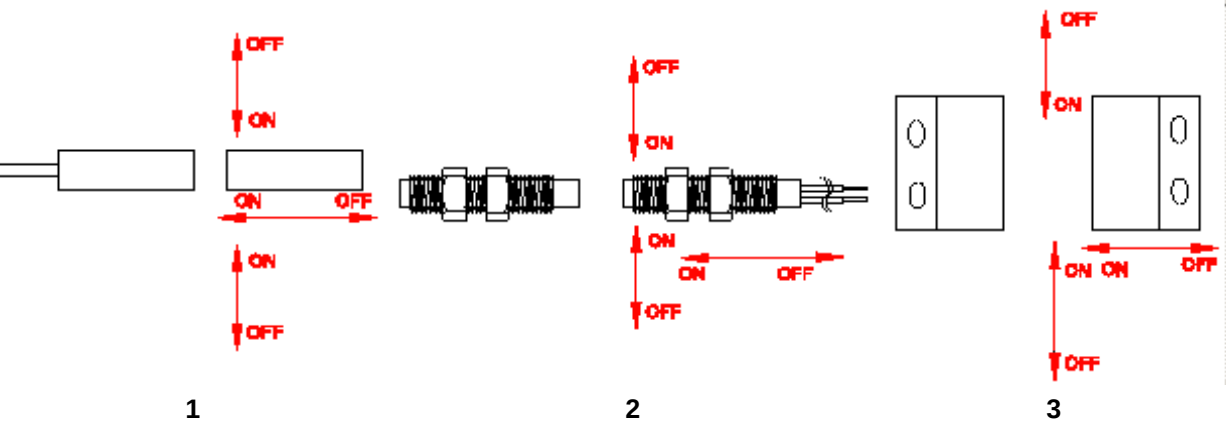
SPS-570

SPS-580
SPS-590

Proximity sensores

Electrical Specifications	Form A	Form B	Form C	Form A(H)
Max.Contact Rating	10W	3W	3W	50W
Max.Switching Voltage	100VDC	100VDC	100VDC	100VDC
Max.Switching Current	0.5A	0.25A	0.25A	1A
Max.Breakdown Voltage	150VDC	200VDC	200VDC	200VDC
Max.Contact Resistance	200mOhms	200mOhms	200mOhms	200mOhms

Mode of Operation:

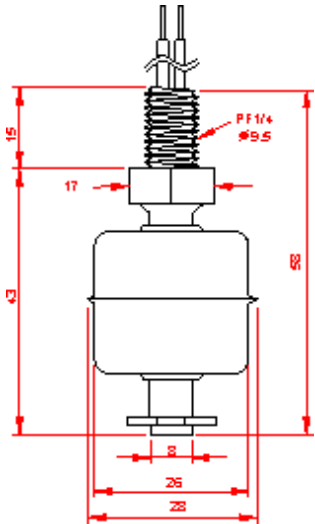
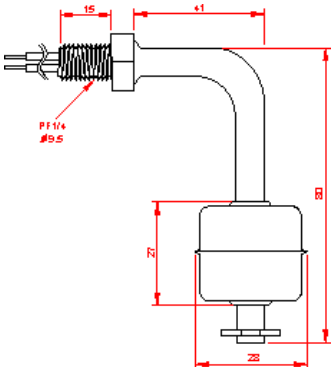
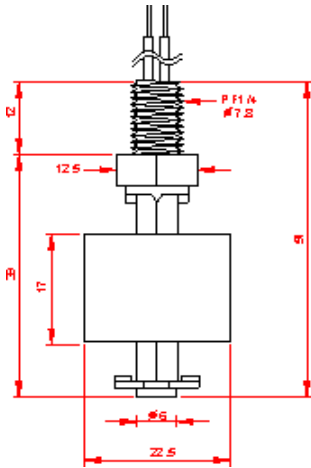
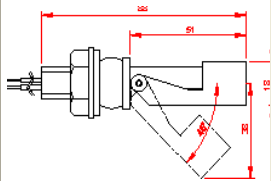


Application:

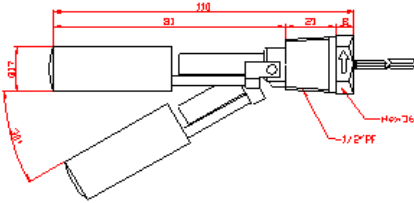
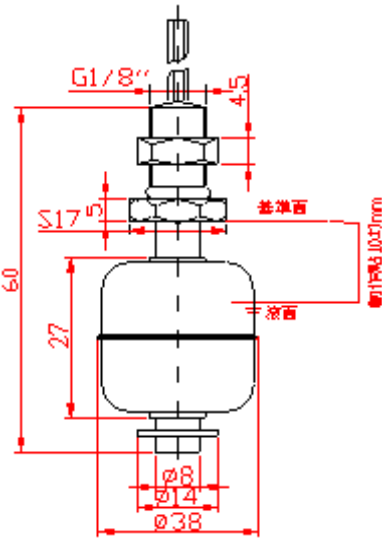
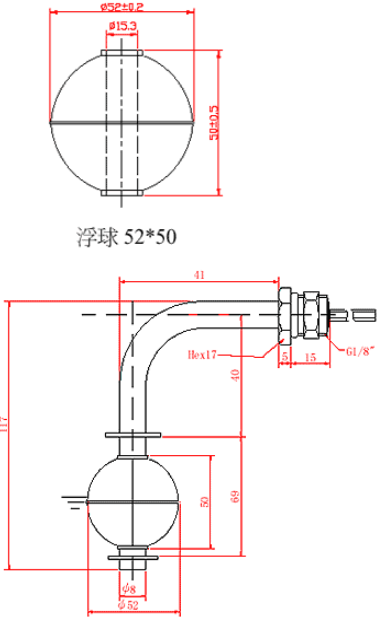
- 1.Position sensing
- 2.Security system
- 3.Rotating speed sensing
- 4.Proximity sensing

Special structure and size can be custom made to meet specific customer's requirements.
Proximity Sensor.

Float sensors

FLOAT SENSOR								
SENSOR TYPE	SFS-SUF-H		SFS-SUF-L		SFS-HF39		SFS-VF	
SPECIFICATION S								
Operation	ON for float rise	OFF for float rise	ON for float rise	OFF for float rise	ON for float rise	OFF for float rise	ON for float rise	OFF for float rise
Max. Switching Capacity	50W		50W		10W		50W	
Max. Switching Voltage	200 VDC		200 VDC		100 VDC		200 VDC	
Max. Switching Current	1.0A		1.0A		0.5A		1.0A	
Max. Contact Resistance	0.2Ω		0.2Ω		0.2Ω		0.2Ω	
Reversible Switch Action	Yes		Yes		Yes		Yes	
Operating Temperature	-20~+120°C		-20~+120°C		0~+80°C		0~+105°C	
Material	Float: SUS304, SUS316 Case: SUS304, SUS316		Float: SUS304, SUS316 Case: SUS304, SUS316		Float:P.P foam		Float:P.P resin	
					Case:P.P resin		Case:P.P resin	
Float Gravity	0.8		0.8		0.64		0.65	
Dimension Unit:mm								

Float sensors

FLOAT SENSOR						
SENSOR TYPE	SFS-SUF-100-1/2		SFS-HUF-27H		SFS-SUF-L(50X52)	
SPECIFICATIONS						
Operation	ON for float rise	OFF for float rise	ON for float rise	OFF for float rise	ON for float rise	OFF for float rise
Max. Switching Capacity	50W		50W		50W	
Max. Switching Voltage	200 VDC		200 VDC		200 VDC	
Max. Switching Current	1.0A		1.0A		1.0A	
Max. Contact Resistance	0.2Ω		0.2Ω		0.2Ω	
Reversible Switch Action	Yes		Yes		Yes	
Operating Temperature	-20~+120°C		-20~+120°C		-20~+120°C	
Material	Float: SUS304, SUS316 Case: SUS304, SUS316		Float: SUS304, SUS316 Case: SUS304, SUS316		Float: SUS304, SUS316 Case: SUS304, SUS316	
Float Gravity	0.8		0.8		0.8	
Dimension Unit:mm						

Float sensors

Mode of operation:

When the float ball rises or falls with the liquid to the level of the switch (Inside the bar), the magnetic force of the magnet will cause the reed switch to turn ON. As the float ball moves away from the reed switch, the loss of magnetic force will cause the reed switch to turn OFF.



Features:

- ▣ Non contact sensing avoids false action due to complicated mechanism.
- ▣ Low cost ▣ Long life.
- ▣ Simple installation. ▣ Wide applications.

Application:

1. Electric appliances

- ▣ Humidifier ▣ Drinking water dispenser.
- ▣ Water tank control of micon toilet.
- ▣ Water displacing system of air conditioner.

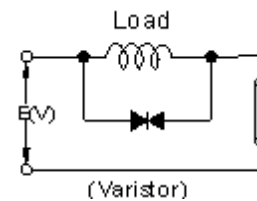
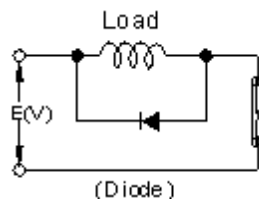
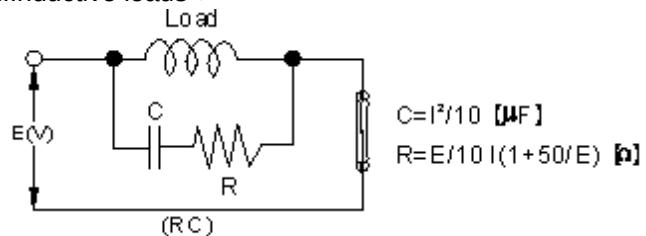
2. Automatic control

- ▣ Environmental control equipment.
- ▣ Cooling water tank.

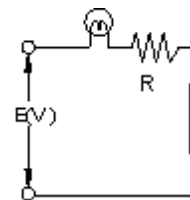
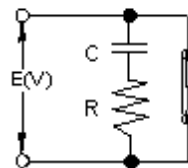
Contact protection circuit:

When a reed switch is connected to an inductive load (such as magnetic valve, electromagnetic relay, motor, etc.), a protective circuit is required to prolong its operating life.

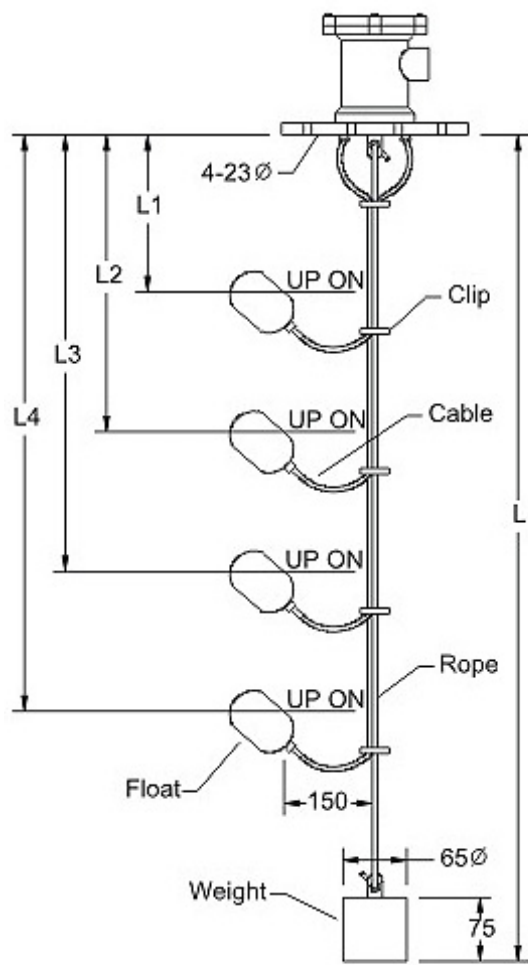
1. Inductive loads :



2. Capacitive loads:



Level switches

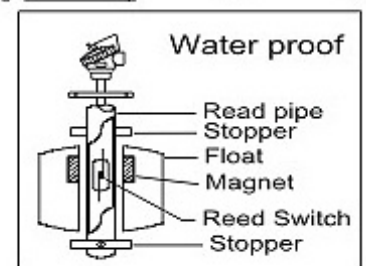
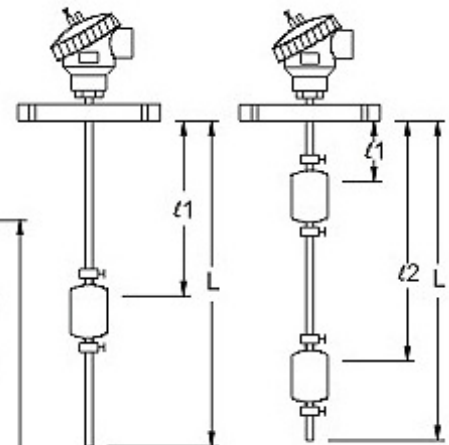
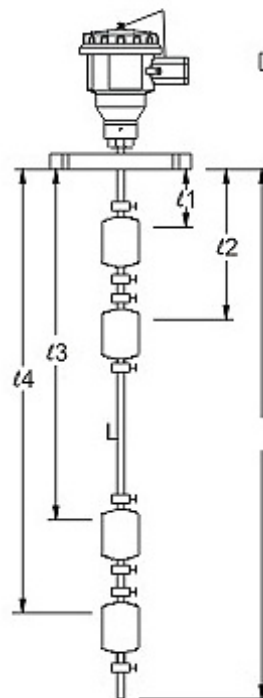


Explosion proof

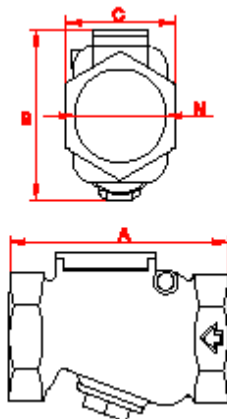
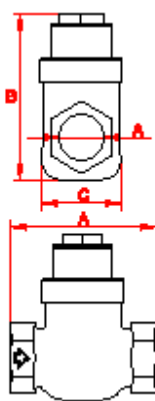
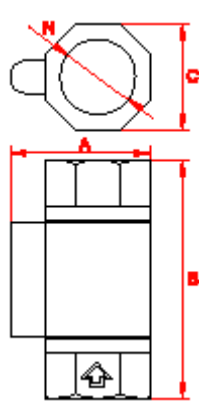
L-104

L-101

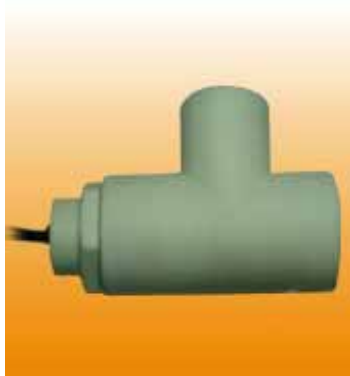
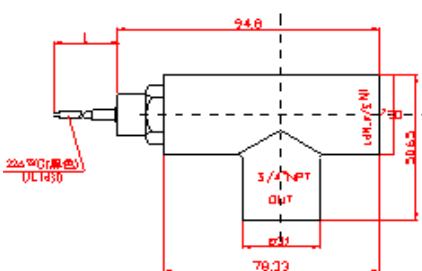
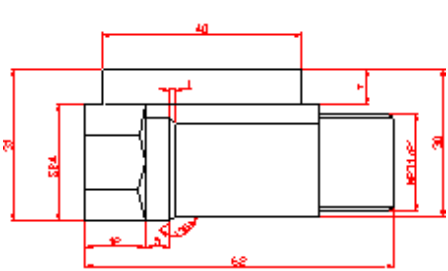
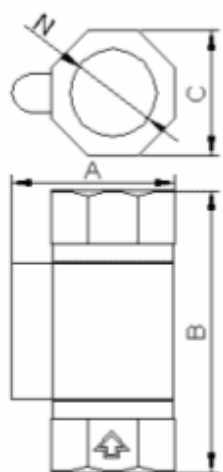
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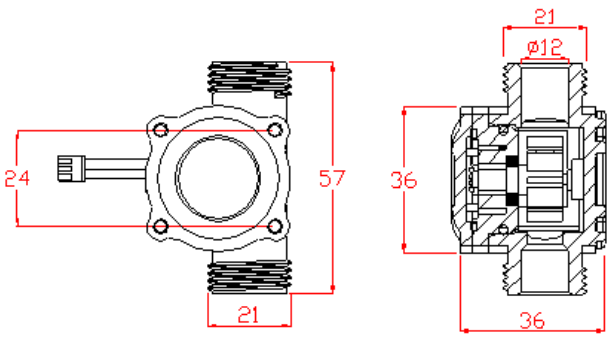
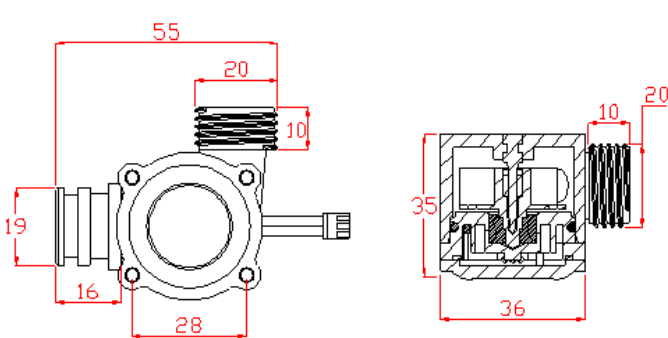
Flow sensors

FLOW SENSOR						
STYLE NO.	FS-200	FS-100	FS-075	FS-050	FS-075V	FS-050V
SPECIFICATIONS						
Max. Switching Capacity	50W					
Max. Switching Voltage	220VDC					
Max. Switching Current	0.5A					
I.D.(N)	2"	1"	3/4"	1"	3/4"	1/2"
L(A)	134	101	76	72	43	43
M(B)	103	78	87	83	75	74
W(C)	68	47	45	45	35	32
Min.Sensing Rate	16LPM	16LPM	12LPM	10LPM	3LPM	1LPM
Material	Copper					
In let / Out let	BSP Thread					
Mounting Angle	Horizontal		Horizontal		Vertical	
Dimension Unit:mm						

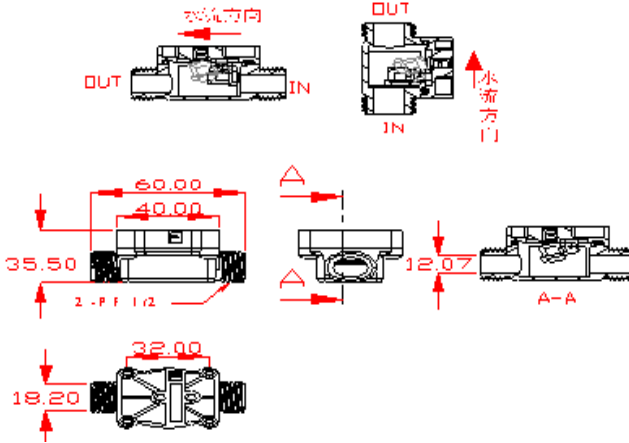
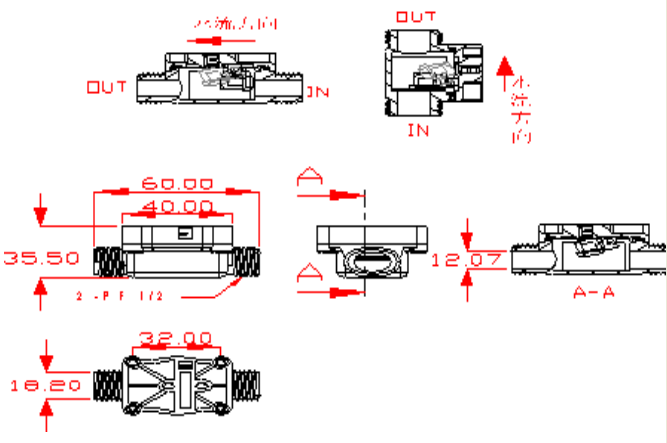
Flow sensors

FLOW SENSOR						
STYLE NO.	FS-100-120-P(FS036)		FS-900-60-P(FS9011)		FS-075V	
SPECIFICATIONS						
	Max. Switching Capacity					
	50W					
	Max. Switching Voltage					
	220VDC					
Max. Switching Current						
0.5A						
I.D.(N)	2"	1"	3/4"	1"	3/4"	1/2"
L(A)	134	101	76	72	43	43
M(B)	103	78	87	83	75	74
W(C)	68	47	45	45	35	32
Min.Sensing Rate	16LPM	16LPM	12LPM	10LPM	3LPM	1LPM
Material	Copper					
In let / Out let	BSP Thread					
Mounting Angle	Horizontal		Horizontal		Vertical	
Dimension Unit:mm						

Flow sensors

FLOW SENSOR		
STYLE NO.	FS-G5720	FS-G5520
SPECIFICATIONS		
Max.Switching Voltage	3.5~24VDC	3.5~24VDC
Max.Switching Current	0.5~0.15mA	0.5~0.15mA
Min.Sensing Rate	<1.0 L/min	<1.0 L/min
Operating Range	1~30 L/min	1~15 L/min
Min.Operating Pressure	≤ 0.2 MPA	≤ 0.2 MPA
Max.Operating Pressure	1.2 MPA	1.2 MPA
Min. Breakdown Pressure	1.6 MPA	1.6 MPA
Electrical Life	10^6 (5VDC 1mA)	10^6 (5VDC 1mA)
Dimension Unit:mm		

Flow sensors

FLOW SENSOR				
STYLE NO.	FS-G6020-10	FS-G6020-50	FS-B7820-10	FS-B7820-50
SPECIFICATIONS				
Max.Switching Voltage	100	250	100	250
Max.Switching Current	0.5~1.0 mA		0.5~1.0 mA	
Min.Sensing Rate	≤ 0.2 L/min		≤ 0.2 L/min	
Operating Range	1~30 L/min		1~30L/min	
Min.Operating Pressure	≤ 0.1 MPA		≤ 0.1 MPA	
Max.Operating Pressure	1.2 MPA		1.2 MPA	
Min Breakdown Pressure	1.6 MPA		1.6 MPA	
Electrical Life	10^8 (5VDC 1mA)		10^8 (5VDC 1mA)	
Dimension Unit:mm				

Flow sensors

Features :

1. Low defective rate due to non-contact sensing provided by reed switches.
2. Operation by low flow rate (volume).
3. Simple construction with small contact surface of moving parts.
4. Suitable also for water flow with low particle contents.
5. Blockage can be removed on the spot.



Optional Accessories:

1. Time Delay Relay (P/N SFR-1)

- ☐ For indirect activation of load
- ☐ Adjustable delay time

2. Pump protection controller (P/N PID-201)

- ☐ Dual timer setting
- ☐ Automatic re-start after no-load cut-off
- ☐ Forced starting for 0-30 seconds.
- ☐ Waiting time of 0-60 minutes.

Applications:

1. Synchronous activation of water pump.
2. Activate water heater.
3. Monitor water flow (e.g. air conditioner).
4. Monitor ice water in cooler.
5. Protect pump (e.g. in wells) against no-load operation.

Flow switches

BRASS

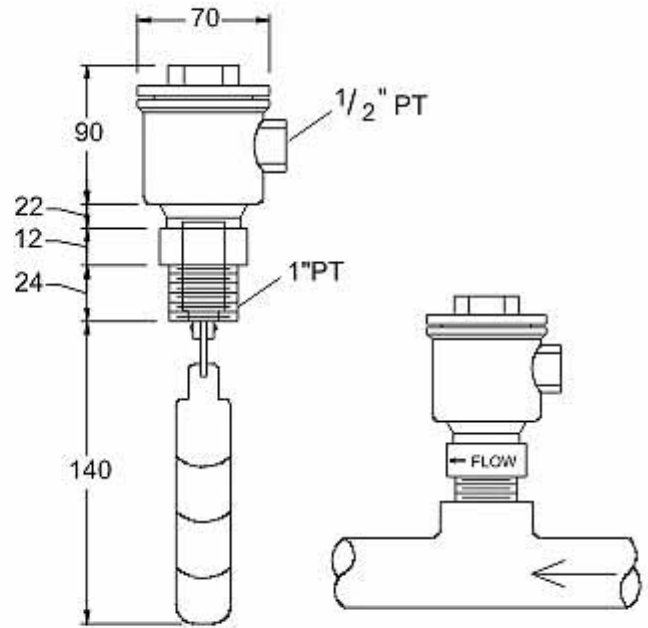
316SS,304SS



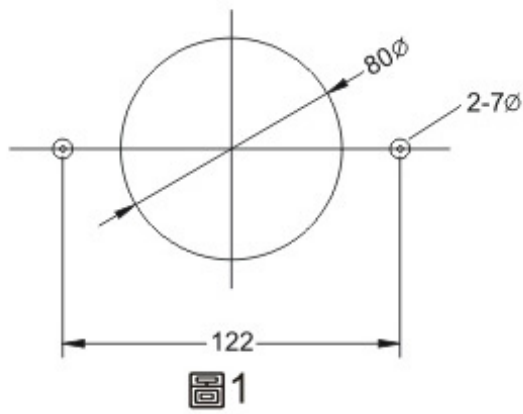
規格
1/2"PT
3/4"PT
1"PT



規格
1"PT
1"NPT



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►擊掛鏈

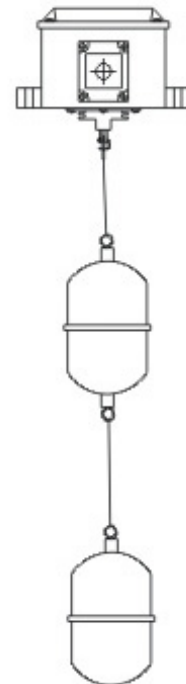
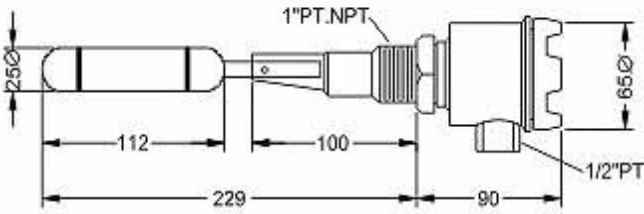
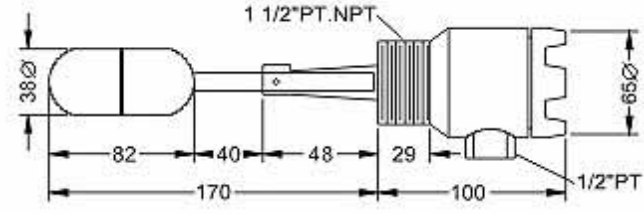


圖2

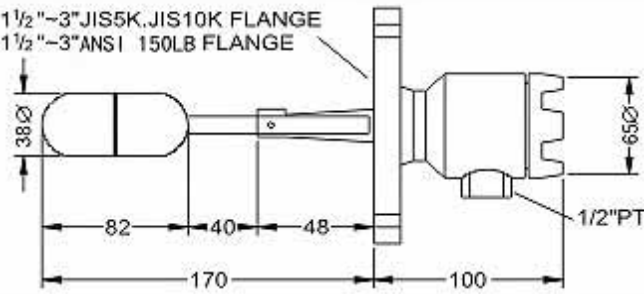
LT-204



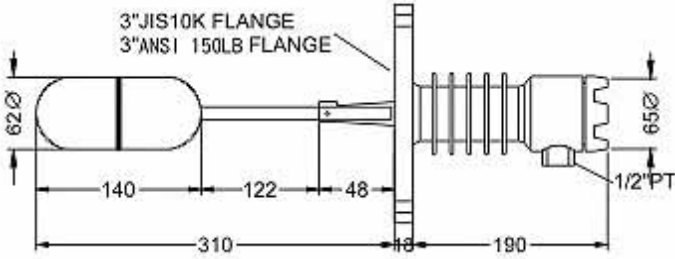
LT-205



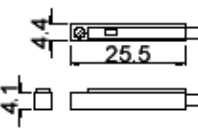
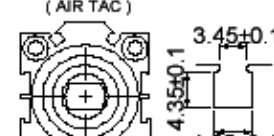
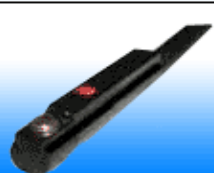
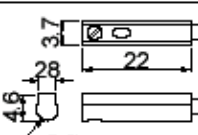
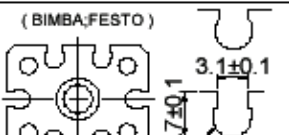
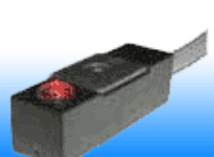
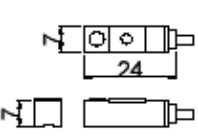
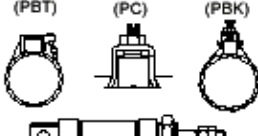
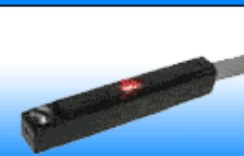
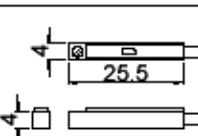
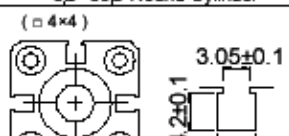
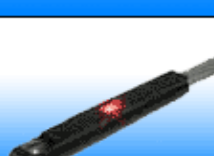
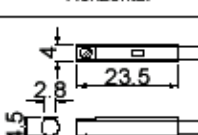
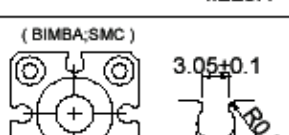
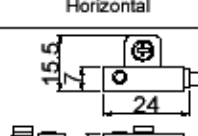
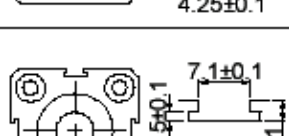
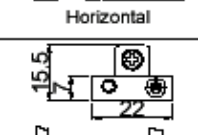
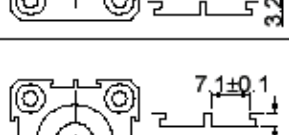
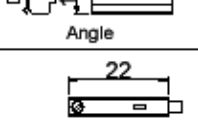
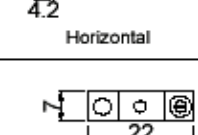
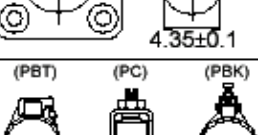
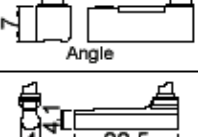
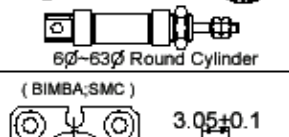
LT-206

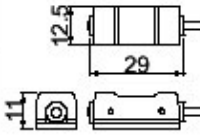
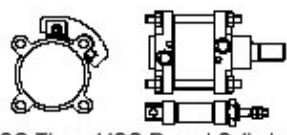
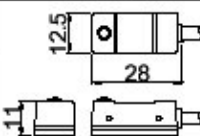
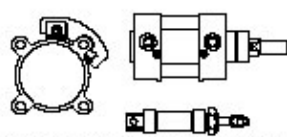
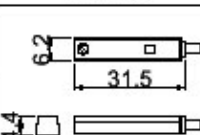
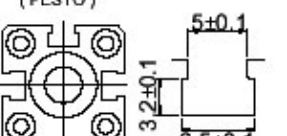
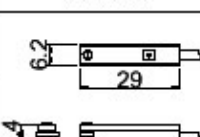
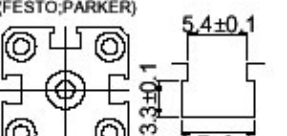
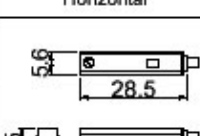
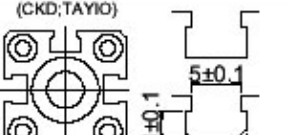
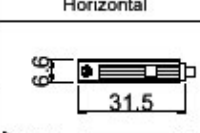
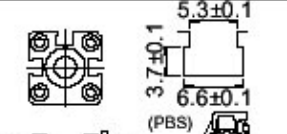
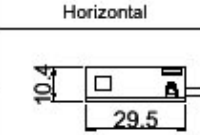
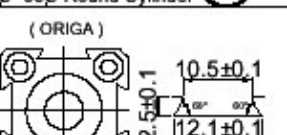
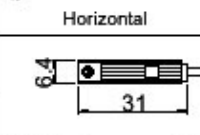
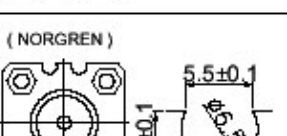
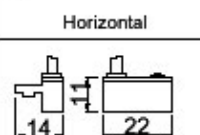
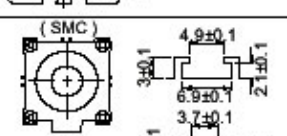
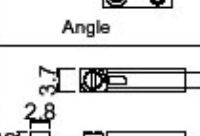
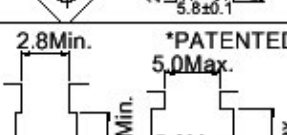
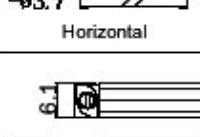
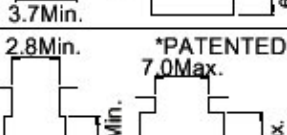


LT-207



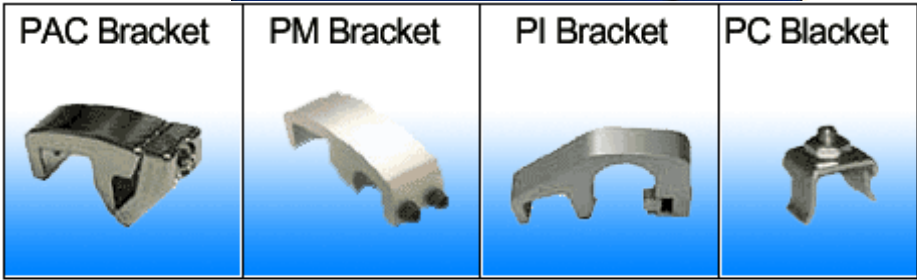
Cylinder sensors

MODEL	FIGURES	TYPE	VOLTAGE	RATING	DIMENSIONS	GROOVE & CYLINDER
SD-01R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 (AIR TAC) 3.45±0.1 4.35±0.1 4.55±0.1
SD-01N		NPN/N.O.	5~28V DC	6W , 200mA		
SD-01P		PNP/N.O.				
SD-02R		REED/N.O.	5~120V DC/AC	10W , 100mA	 Horizontal	 (BIMBA,FESTO) 3.1±0.1 4.7±0.1 φ3.8±0.1
SD-02N		NPN/N.O.	5~28V DC	6W , 200mA		
SD-02P		PNP/N.O.				
SD-03R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 (PBT) (PC) (PBK) 6φ~63φ Round Cylinder
SD-03N		NPN/N.O.	5~28V DC	6W , 200mA		
SD-03P		PNP/N.O.				
SD-06R		REED/N.O.	5~120V DC/AC	10W , 100mA	 Horizontal	 (□ 4×4) 3.05±0.1 4.2±0.1
SD-06N		NPN/N.O.	5~28V DC	6W , 200mA		
SD-06P		PNP/N.O.				
SD-07R		REED/N.O.	5~120V DC/AC	10W , 100mA	 Horizontal	 (BIMBA,SMC) 3.05±0.1 4.25±0.1 R0.5
SD-07N		NPN/N.O.	5~28V DC	6W , 200mA		
SD-07P		PNP/N.O.				
SD-10R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 7.1±0.1 1.5±0.1 3.2±0.1
SD-10N		NPN/N.O.	5~28V DC	6W , 200mA		
SD-10P		PNP/N.O.				
SD-11R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Angle	 7.1±0.1 3.2±0.1
SD-11N		NPN/N.O.	5~28V DC	6W , 200mA		
SD-11P		PNP/N.O.				
SD-12R		REED/N.O.	5~120V DC/AC	10W , 100mA	 Horizontal	 (KOGONEI) 2.5±0.1 135° 4.35±0.1
SD-12N		NPN/N.O.	5~28V DC	6W , 200mA		
SD-12P		PNP/N.O.				
SD-15R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Angle	 (PBT) (PC) (PBK) 6φ~63φ Round Cylinder
SD-15N		NPN/N.O.	5~28V DC	6W , 200mA		
SD-15P		PNP/N.O.				
SD-16R		REED/N.O.	5~120V DC/AC	10W , 100mA	 Angle	 (BIMBA,SMC) 3.05±0.1 4.25±0.1 R0.5
SD-16N		NPN/N.O.	5~28V DC	6W , 200mA		
SD-16P		PNP/N.O.				

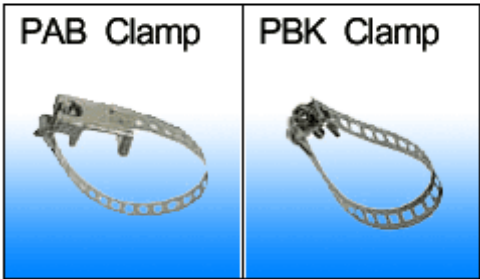
SD-20R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 ISO, Tie-rod, ISO, Round Cylinder		
SD-20N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-20P		PNP/N.O.						
SD-21R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 ISO, Tie-rod, ISO, Round Cylinder		
SD-21N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-21P		PNP/N.O.						
SD-30R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 (FESTO) ISO, Tie-rod, ISO, Round Cylinder		
SD-30N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-30P		PNP/N.O.						
SD-31R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 (FESTO; PARKER) ISO, Tie-rod, ISO, Round Cylinder		
SD-31N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-31P		PNP/N.O.						
SD-32R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 (CKD; TAYIO) ISO, Tie-rod, ISO, Round Cylinder		
SD-32N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-32P		PNP/N.O.						
SD-33R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 (CKD; TAYIO) ISO, Tie-rod, ISO, Round Cylinder		
SD-33N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-33P		PNP/N.O.						
SD-40R		REED/N.O.	5~240V DC/AC	10W , 500mA	 Horizontal	 (ORIGA) ISO, Tie-rod, ISO, Round Cylinder		
SD-40N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-40P		PNP/N.O.						
SD-50R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 (NORGREN) ISO, Tie-rod, ISO, Round Cylinder		
SD-50N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-50P		PNP/N.O.						
SD-72R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Angle	 (SMC) ISO, Tie-rod, ISO, Round Cylinder		
SD-72N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-72P		PNP/N.O.						
SD-75R		REED/N.O.	5~120V DC/AC	10W , 100mA	 Horizontal	 *PATENTED ISO, Tie-rod, ISO, Round Cylinder		
SD-75N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-75P		PNP/N.O.						
SD-76R		REED/N.O.	5~240V DC/AC	10W , 100mA	 Horizontal	 *PATENTED ISO, Tie-rod, ISO, Round Cylinder		
SD-76N		NPN/N.O.	5~28V DC	6W , 200mA				
SD-76P		PNP/N.O.						



Sensor Connector



Mounting and Accessories



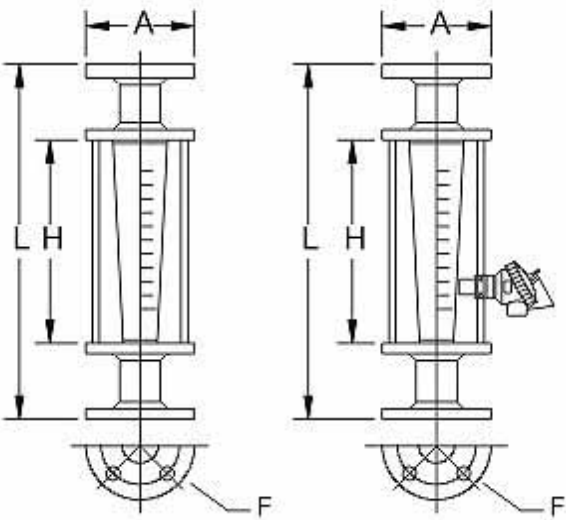
Mounting and Clamp

Flow meter

MODEL H-100-F

316SS,304SS

PP,PVC

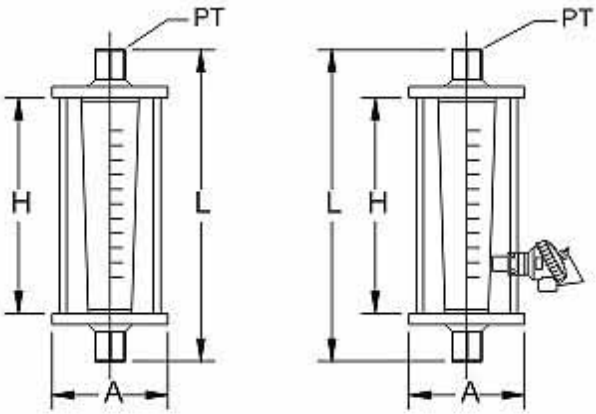


MODEL H-100-AF

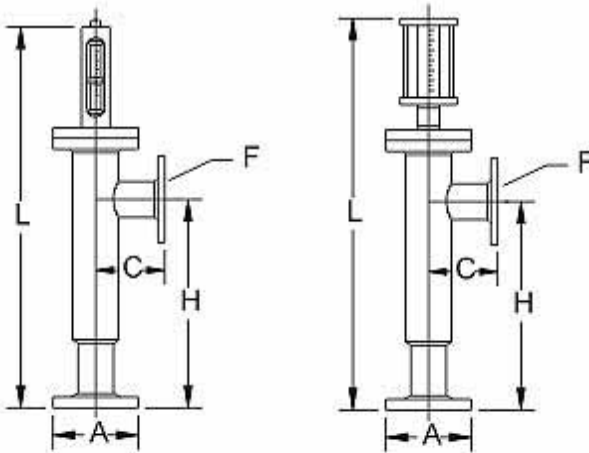
316SS,304SS

PP,PVC

食品級 (AC)

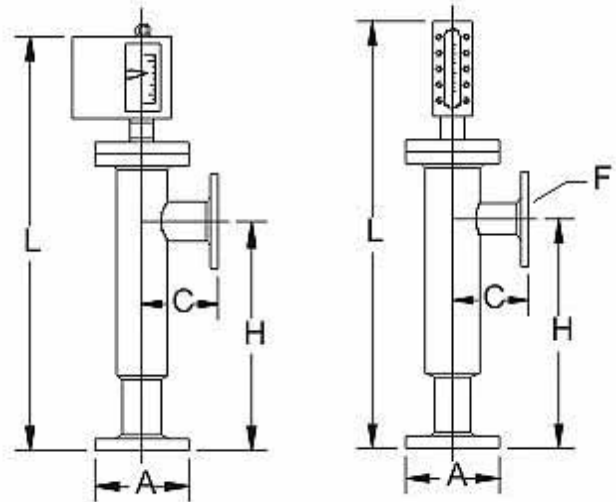


MODEL H-200-A-K H-200B-K

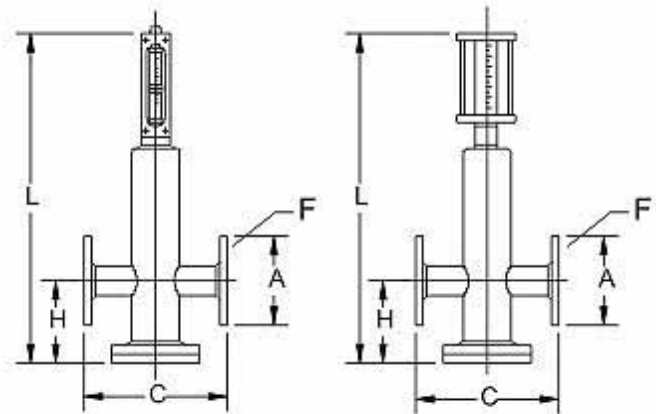


Flow meter

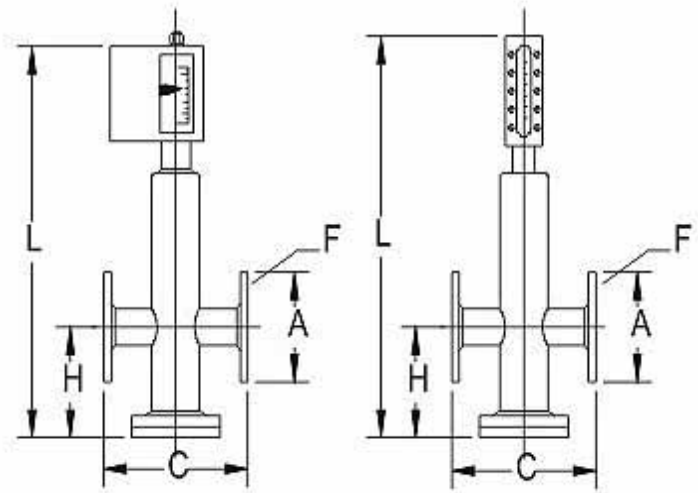
MODEL H-200C-K H-200D-K



MODEL H-300A-H H-300B-H

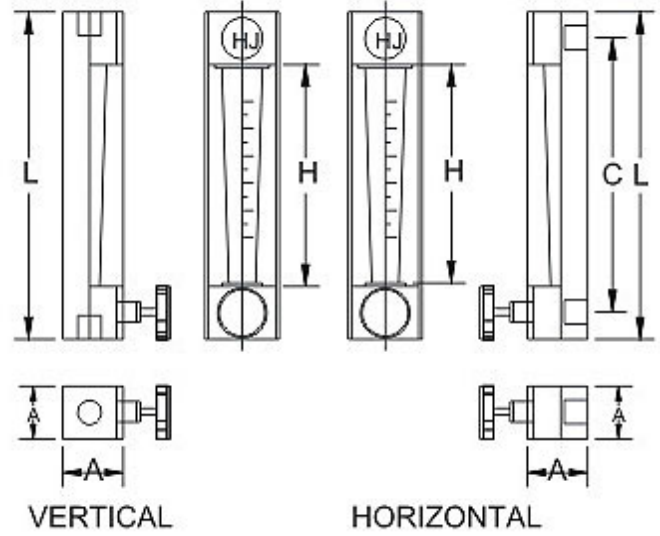


MODEL H-300C-H H-300D-H

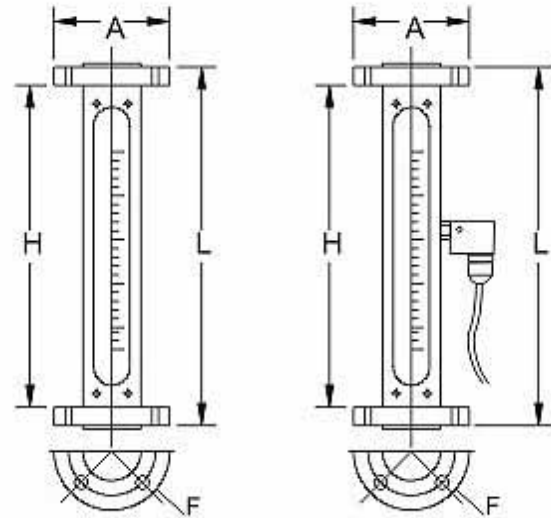


Flow meter

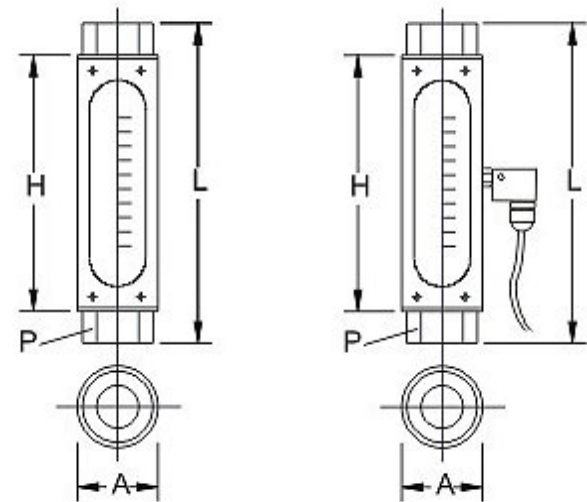
MODEL H-400-M



MODEL H-500-FP



MODEL H-600-P



Flow meter

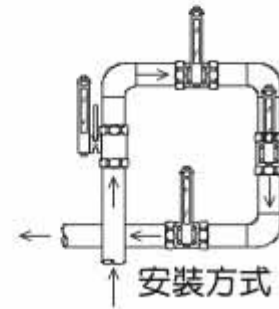
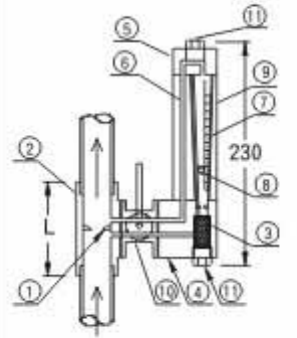
MODEL H-700-DPP

316SS,CS

PP,PVC



H-700-DPP



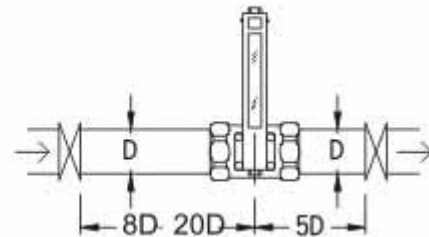
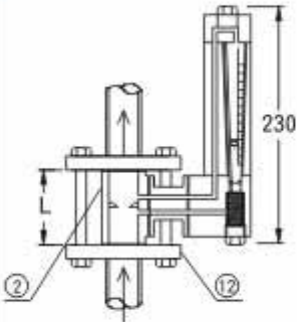
MODEL H-700-DPF

316SS,304SS,CS

PP,PVC,PVDF



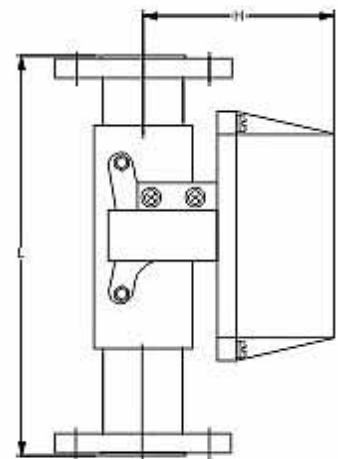
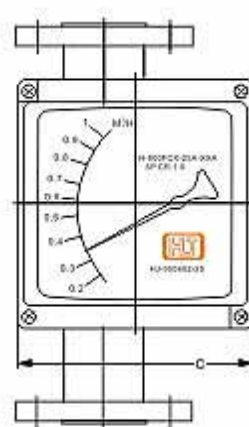
H-700-DPF



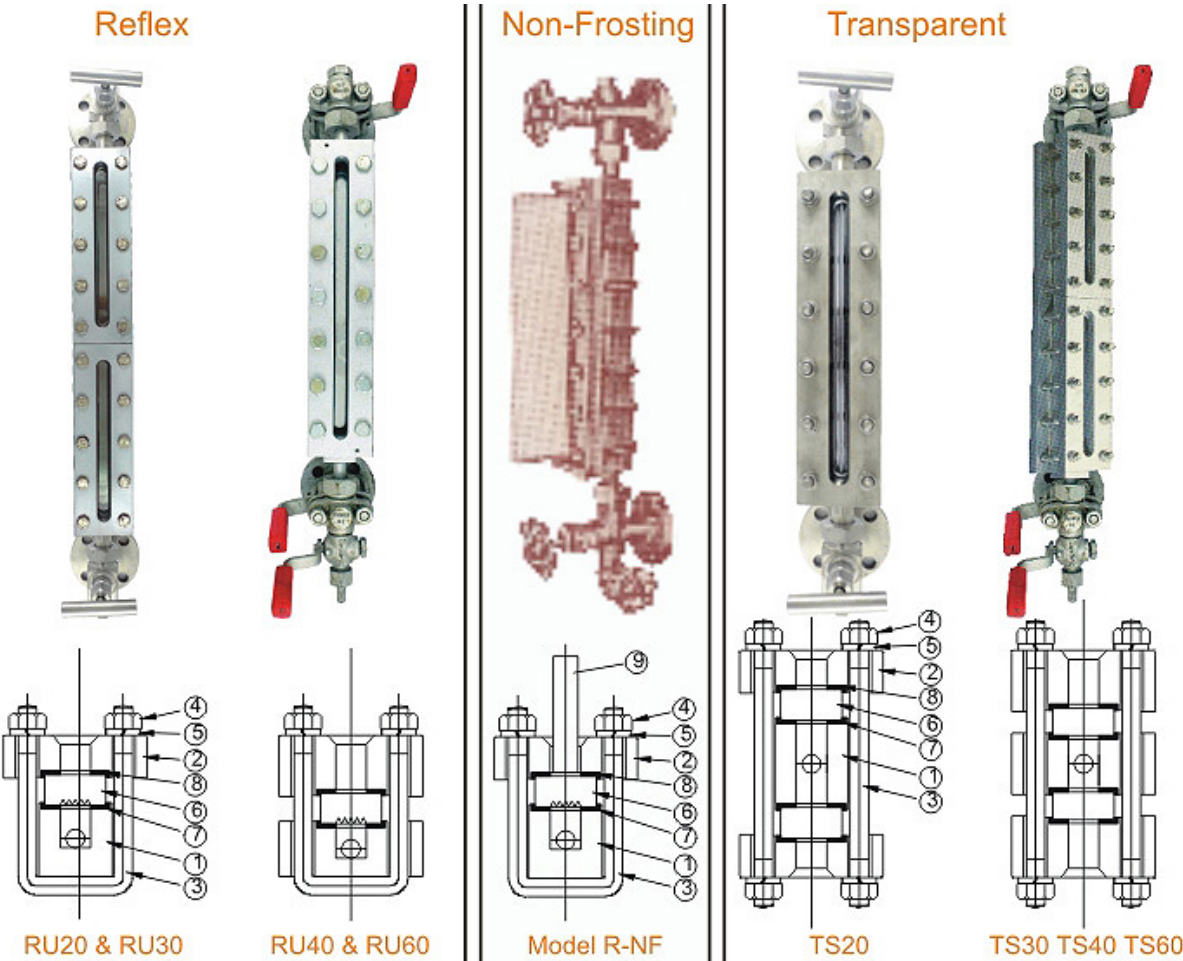
安裝前後直管距離

口徑 : 15A-300A
 操作壓力 : MAX 12 kg/cm²
 操作溫度 : MAX 100 °C
 精度 : ± 3 %

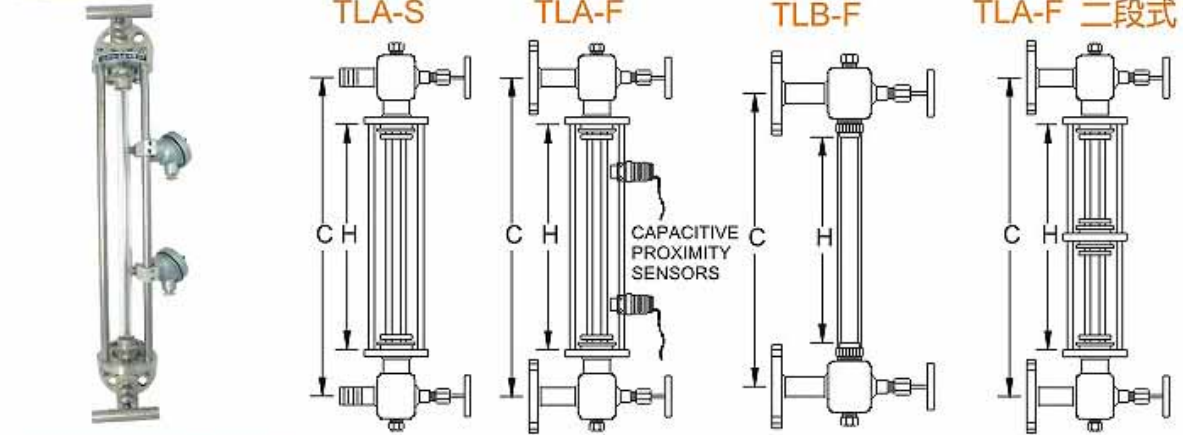
MODEL H-800FC



Level meter

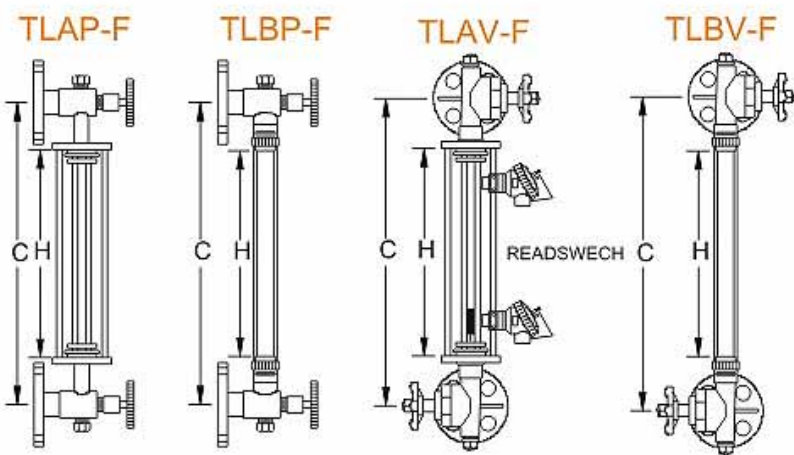


MODEL



DIMENSIONS m/m

MODEL	C	H	段数
TL-03	300	200	1
TL-05	500	400	1
TL-08	800	700	1
TL-10	1000	900	1
TL-12	1200	1100	1
TL-15	1500	1400	1
TL-18	1800	1700	1
TL-20	2000	1900	1
TL-22	2200	2100	2
TL-25	2500	2400	2
TL-28	2800	2700	2
TL-30	3000	2900	2

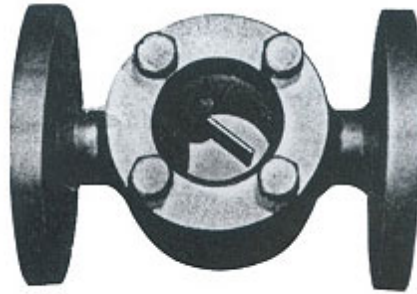


Flow sightwts

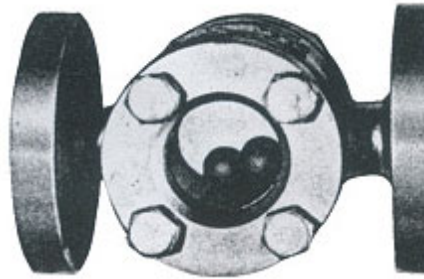
GF-100



GF-200



GF-300



GS-100



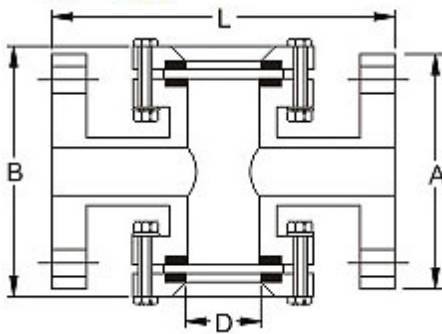
GS-200



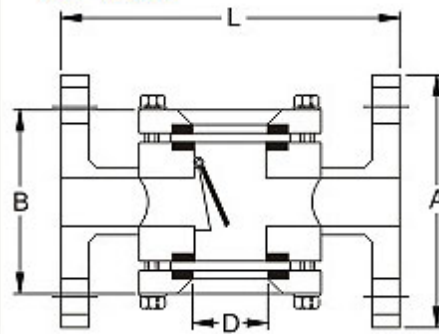
GS-300



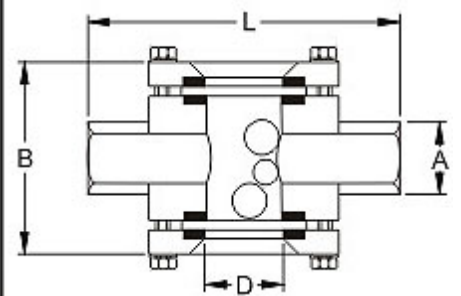
GF-100



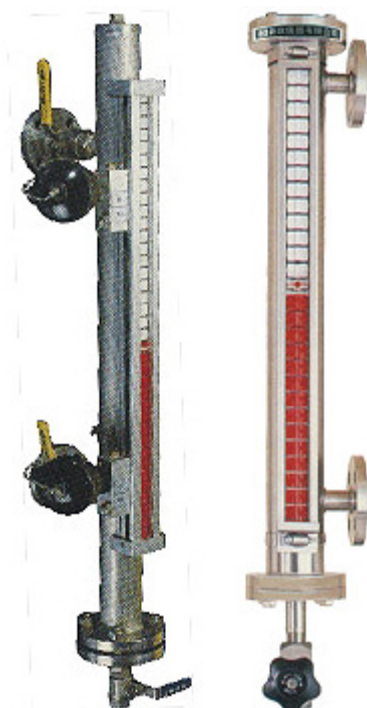
GF-200



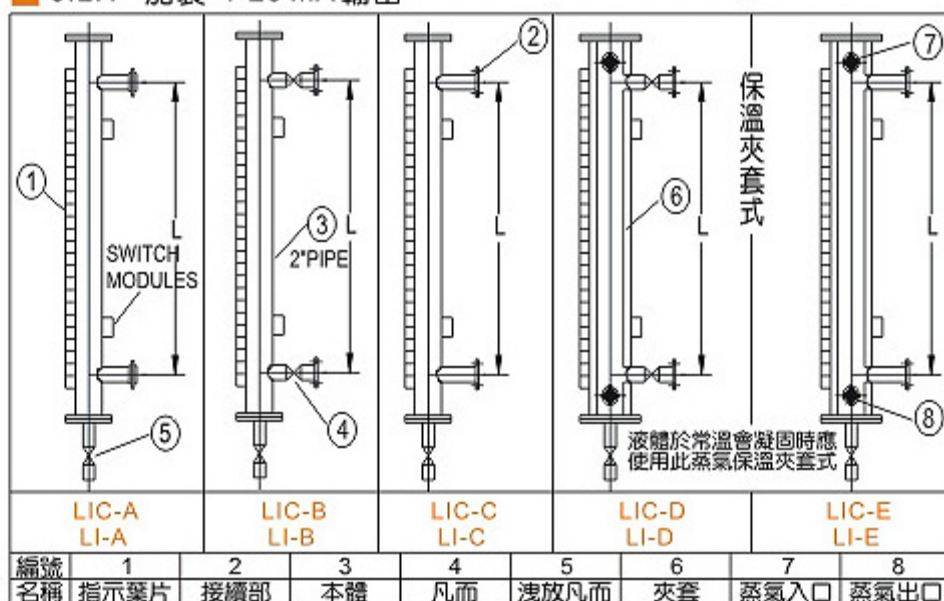
GS-300



Displacement type



- 1.LIC 液位指示器及另附裝設液位控制開關 (REED SWITCH)
- 2.LI 只有液位指示器
- 3.LIT 加裝 4-20 mA 輸出



Other productes



HIGH VOLTAGE REED SWITCH



HIGH VOLTAGE REED RELAY



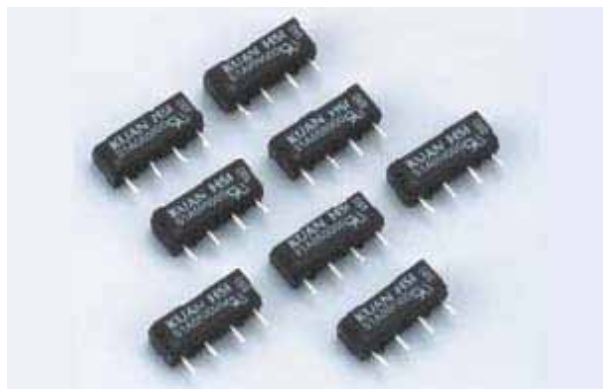
THERMOELECTRIC MODULES



HALL-EFFECT SENSOR IC



ROLL BALL SWITCH



REED RELAY