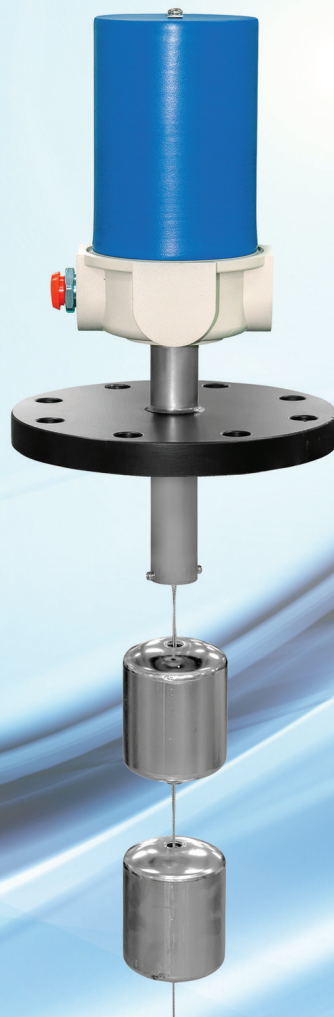


Displacement Type Level Switch

Model : SMC





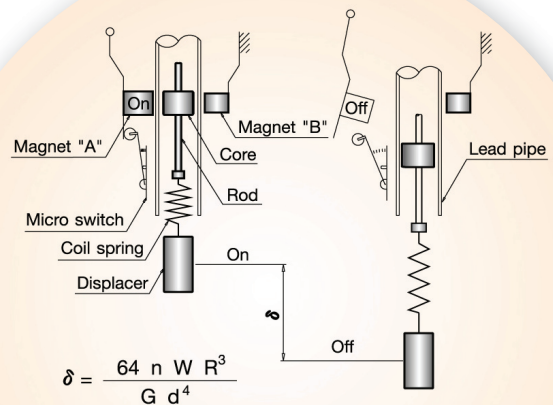
SMC Displacement Type Level Switch

Principle

A vertical displacement is induced on Rod and Core, which are connected to the Displacer and Spring, due to a change in the spring tension that results from a change in the buoyancy of the Displacer when the liquid level changes. The vertical displacement of the core causes magnet "A" to move away from the Lead Pipe actuating microswitch.

Features

- SMC type Level Switch can be used to prevent an overflow of liquids in a variety of tanks by starting a draining pump or stopping a filling pump.
- Safe actuation of the switch is accomplished since the switching parts are completely separated from the tank.
- Setting of High and Low contact points is flexible, and the cost of equipment does not depend heavily on measurement distance.
- Switching point can be adjustable by moving float to up and down only.



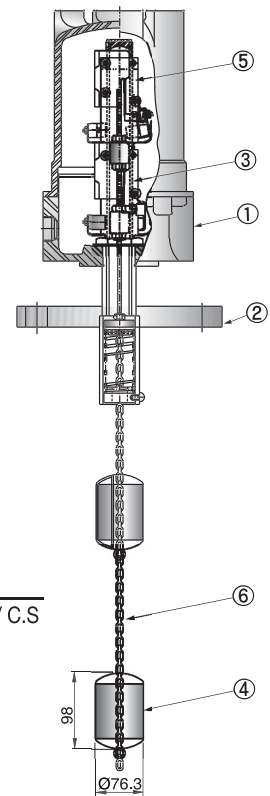
$$\delta = \frac{64 n W R^3}{G d^4}$$

- δ : Displacement (mm)
- G : Modulus of Elasticity (kg/mm³)
- d : Wire Diameter (mm)
- n : Number of Coils
- W : Road (kg)
- R : Radius of Coil (mm)

Specifications

Description		SMC series
Application	Liquid	
Specific Gravity	0.7 ~ 1.3	
Ambient Temperature	-40 ~ +80°C	
Process Temperature	-40 ~ +230°C (Cooling Fin from 200°C)	
Pressure	30 kgf/cm ² (Max.)	
Enclosure	Weather Proof Explosion Proof	
Output	1 ~ 4 SPDT, 1 ~ 4 DPDT	
Range	5 m Max.	
Switch Type	Micro Switch	
Contact Rating	(High temp') 250V AC 5A, (General) 250V AC 10A	
Cable Gland	PF 1/2", PF 3/4"	
Material	Housing	ADC, AC, C.S
	Flange	C.S, 304SS, 316SS
	Spring	Inconel
	Chain	304SS & 316SS & Monel
	Displacer	304SS & 316SS & Monel
	Ex. Proof	Ex d IIC T6, IP66

Structure



NO.	NAME OF PART	MATERIAL
①	HOUSING ASS'Y	ADC / AC / C.S
②	FLANGE	304SS
③	SET PLATE ASS'Y	304SS
④	DISPLACER	304SS
⑤	MICRO SWITCH	
⑥	CHAIN	304SS

Control

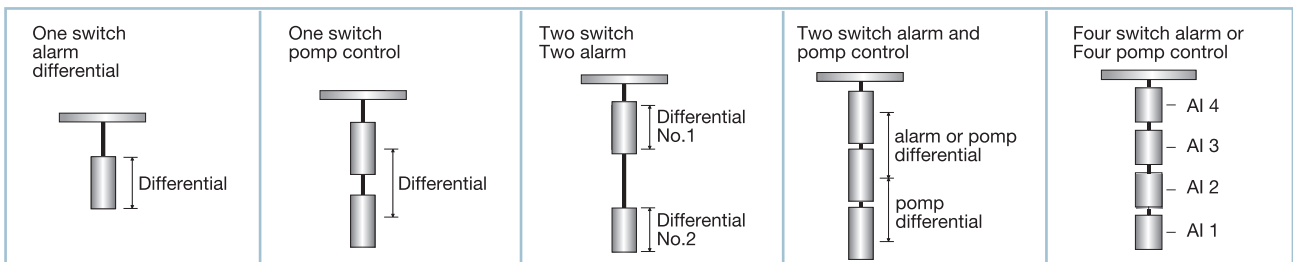
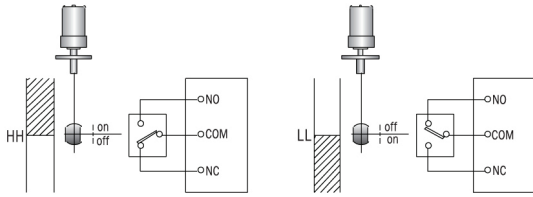


Table for Chamber Selection

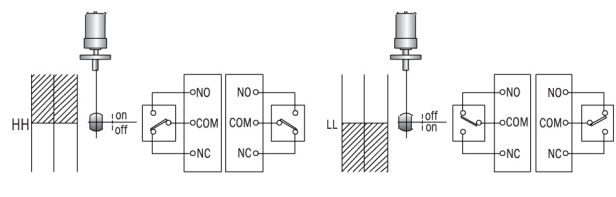
Type 1	Type 2	Type 3	Type 4

Number of Contact for Control

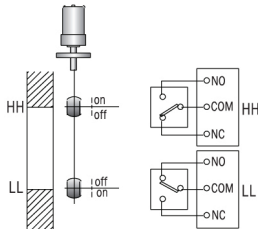
1. 1Point(Alarm~SPDT) : HH or LL Alarm



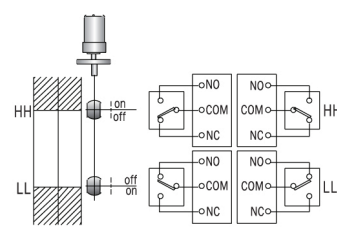
2. 1Point(Alarm~DPDT) : HH or LL Alarm



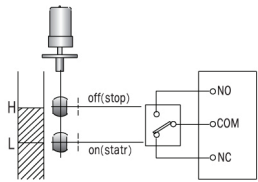
3. 2Point(Alarm~SPDT) : HH or LL Alarm



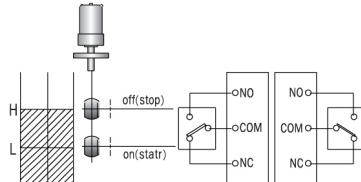
4. 2Point(Alarm~DPDT) : HH or LL Alarm



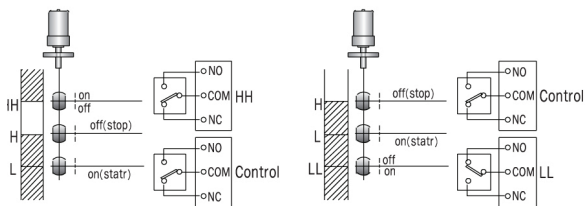
5. 2PointControl~SPDT) : H and L Control



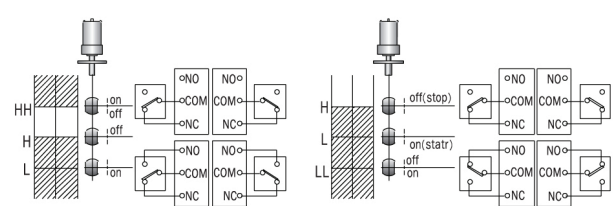
6. 2PointControl~DPDT) : H and L Control



7. 3Point (Control and Alarm ~ SPDT) : Control and HH(LL)

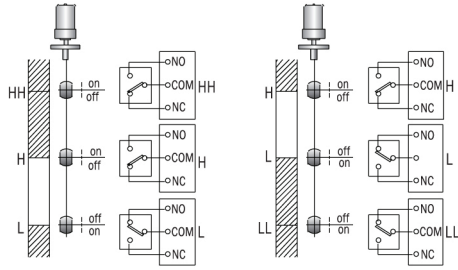


8. 3Point (Control and Alarm ~ DPDT) : Control and HH(LL)

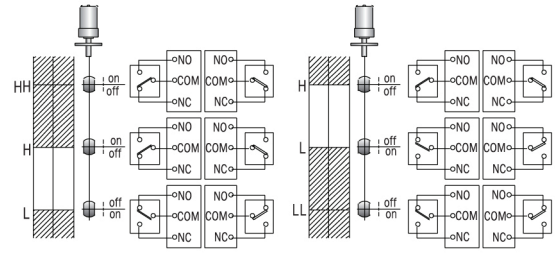


Number of Contact for Control

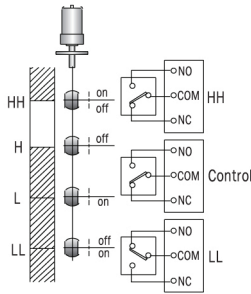
9. 3Point(Alarm~SPDT) : HH(LL), H, L Alarm



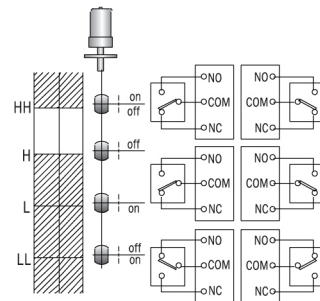
10. 3Point(Alarm~DPDT) : HH(LL), H, L Alarm



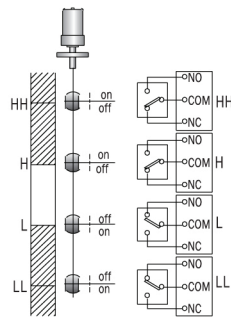
11. 4Point(Alarm and Control~SPDT) : HH, LL and Control



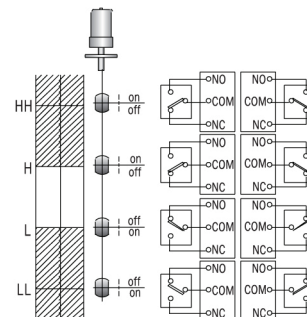
12. 4Point(Alarm and Control~DPDT) : HH, LL and Control



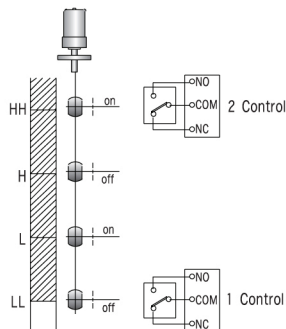
13. 4Point(Alarm ~SPDT) : HH, H, L, LL Alarm



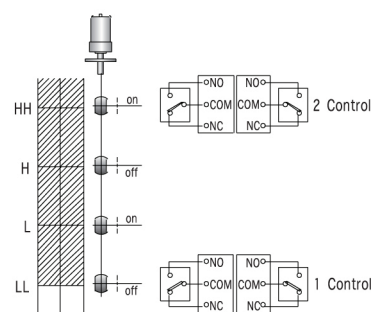
14. 4Point(Alarm ~DPDT) : HH, H, L, LL Alarm



15. 4Point(2Control~SPDT) : 1 Control and 1Control



16. 4Point(2Control~DPDT) : 1 Control and 1Control



Ordering Informations

■ Displacement Type Level Switch

SMC- 1 A 1 A 1 A

CONDUIT CONNECTION

A = PF 3/4" (Std.)
 B = PT 3/4"
 C = PF 1/2"
 D = PT 1/2"
 E = etc.

ENCLOSURE

1 = Weather proof (Std.) - C.S Cover
 2 = Weather proof - AC Cover
 3 = Explosion proof (Ex d IIC T6 IP66) - AC Cover

MOUNTING SIZE

A = JIS 10K 80A 304SS 6t Flange (Std.)
 B = JIS 10K 100A 304SS 6t Flange (Std.)
 C = JIS 10K 80A FF C.S Flange
 D = JIS 10K 100A FF C.S Flange
 E = JIS 10K 80A FF 304SS Flange
 F = JIS 10K 100A FF 304SS Flange
 G = etc.

WET PART MATERIAL

1 = 304SS (Std.)
 2 = 316SS
 3 = Monel (Special Option)

OPERATING TEMP' & PRESSURE

A = -40 ~ +120°C & 10Kgf/Cm² (Std.)
 B = -40 ~ +230°C & 30Kgf/Cm² (1S, 2S)
 C = -40 ~ +230°C & 30Kgf/Cm² (3S)
 D = -40 ~ +230°C & 30Kgf/Cm² (4S)
 (High temp') 250V AC 5A
 (General) 250V AC 10A

NUMBER OF CONTACT FOR CONTROL

1 = 1 point (Alarm)	9 = 3 point (HH/H/L/LL AlarmSPDT)
2 = 1 point (AlarmDPDT)	10 = 3 point (HH/H/L/LL AlarmDPDT)
3 = 2 point (Alarm)	11 = 4 point (H/L Alarm & ControlSPDT)
4 = 2 point (Alarm DPDT)	12 = 4 point (H/L Alarm & ControlDPDT)
5 = 2 point (Control)	13 = 4 point (HH/H/L/LL AlarmSPDT)
6 = 2 point (ControlDPDT)	14 = 4 point (HH/H/L/LL AlarmDPDT)
7 = 3 point (Alarm, Control)	15 = 4 point (2×ControlSPDT)
8 = 3 point (Alarm, ControlDPDT)	16 = 4 point (2×ControlDPDT)

※9 ~ 14 : Only weather proof

■ CHAMBER

SMC -CH 1 A 1 #####

CHAMBER SCH # (Pressure Rate)

TYPE OF CHAMBER

1 = Side Side (Flange type)
 2 = Side Side (Socket type)
 3 = Side Bottom (Flange type)
 4 = Side Bottom (Socket type)
 5 = etc.

C TO C (Carbon Steel)

A = 300mm
 B = 500mm
 C = 600mm
 D = 800mm
 E = 1,000mm
 F = etc.

CHAMBER PARTS MATERIAL

1 = Carbon steel (A105)
 2 = 304SS
 3 = 316SS
 4 = etc.

■ When placing an order, selected ordering number should be indicated on the purchase order sheet.



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■ Specifications subject to change without notice