

SB17XX SERIES EXPLOSION PROOF TYPE RF-ADMITTANCE LEVEL SWITCH OPERATION MANUAL

APPLICABLE MODEL:SB1710,SB1711,SB1712,SB1720,SB1728,SB1750,SB1760

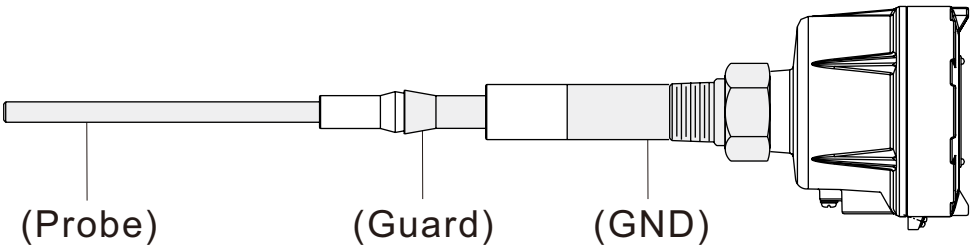
PRINCIPLE :

SB17 series RF-Capacitance / Admittance level switch consists of guard section, active section, grounding and insulation. Active section probe, guard and grounding are isolated with insulation. Level of medium can be detected by increase of admittance when medium reaches the active section probe. Ground and active section probe are insulated, thus detection would be not wrongfully occurred to cause false alarm when medium attaches to the probe.

The special structure is suitable for detecting in different medium without being affected by attachments.

FEATURES :

- (1). SB17 series RF Admittance level switch has guard section, which is designed to overcome possible medium attachment and to secure signal accuracy.
- (2). Applied to measure powder, viscosity liquid.
- (3). Easy installation and maintenance.



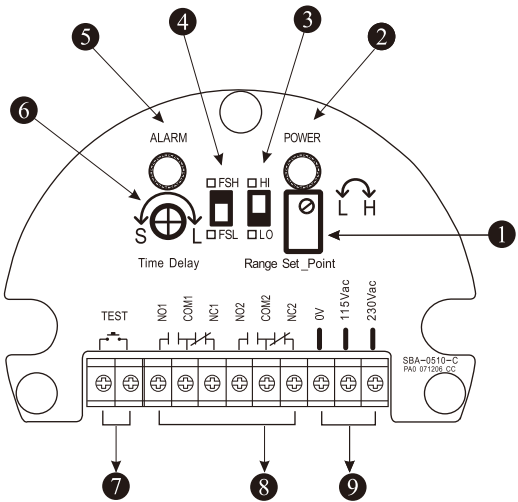
SPECIFICATION :

No.	ITEM	SPECIFICATION
1	Resolution	<0.3pF
2	Power supply	115/230VacA10%, 50/60Hz or 24VdcA20%
3	Light indicator	LED red
4	Power consumption	2W around
5	Output	DPDT Relay
6	Contact rate	3A/250Vac(Resistor load)
7	Alarm mode	High / Low Fail-Safe mode
8	Alarm indicator	LED green
9	Delay time	0~30sec.
10	Simulate alarm test	Optional
11	Housing	IP65

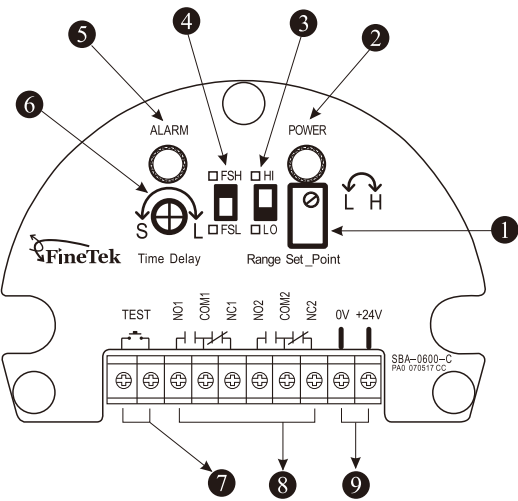


PTB PROOF NO.05 ATEX 1057 II 2G Ex d IIB T6~T1 Gb
II 2D Ex tb IIIC T80°C~T445°C Db IP65

WIRING DIAGRAM :



SB17XXA/C series



SB17XXB/D series

DWSCRIPTION OF PANEL FUNCTION :

- ① Set_Point: Clockwise, capacitance increases.
- ② Red LED: Power indicator.
- ③ Range: Alarm setting- HI/ LOW
- ④ FSH/FSL switch (High/ Low level failsafe)
- ⑤ Green LED: Alarm indicator for FSH and FSL. Green LED turns off when alarm goes off.
- ⑥ Time delay: Alarm time delay setting up to 30 seconds.
- ⑦ Remote alarm Test (for SBXXA series)
- ⑧ Relay output.
- ⑨ Power supply 115/ 230 Vac

FAIL-SAFE ALARM :

◎ FSH High level fail-safe alarm :

SB17XX series is installed in high level and FSH mode is ON,Green LED lights up and relay output COM/NC is opened when Medium is in normal level (medium does not reach the probe). When medium level reaches high level (medium touches the probe) or blackout, Green LED shuts off and relay output COM/NC is closed. When relay output COM/NC is closed, it implies FSH alarm is activated.

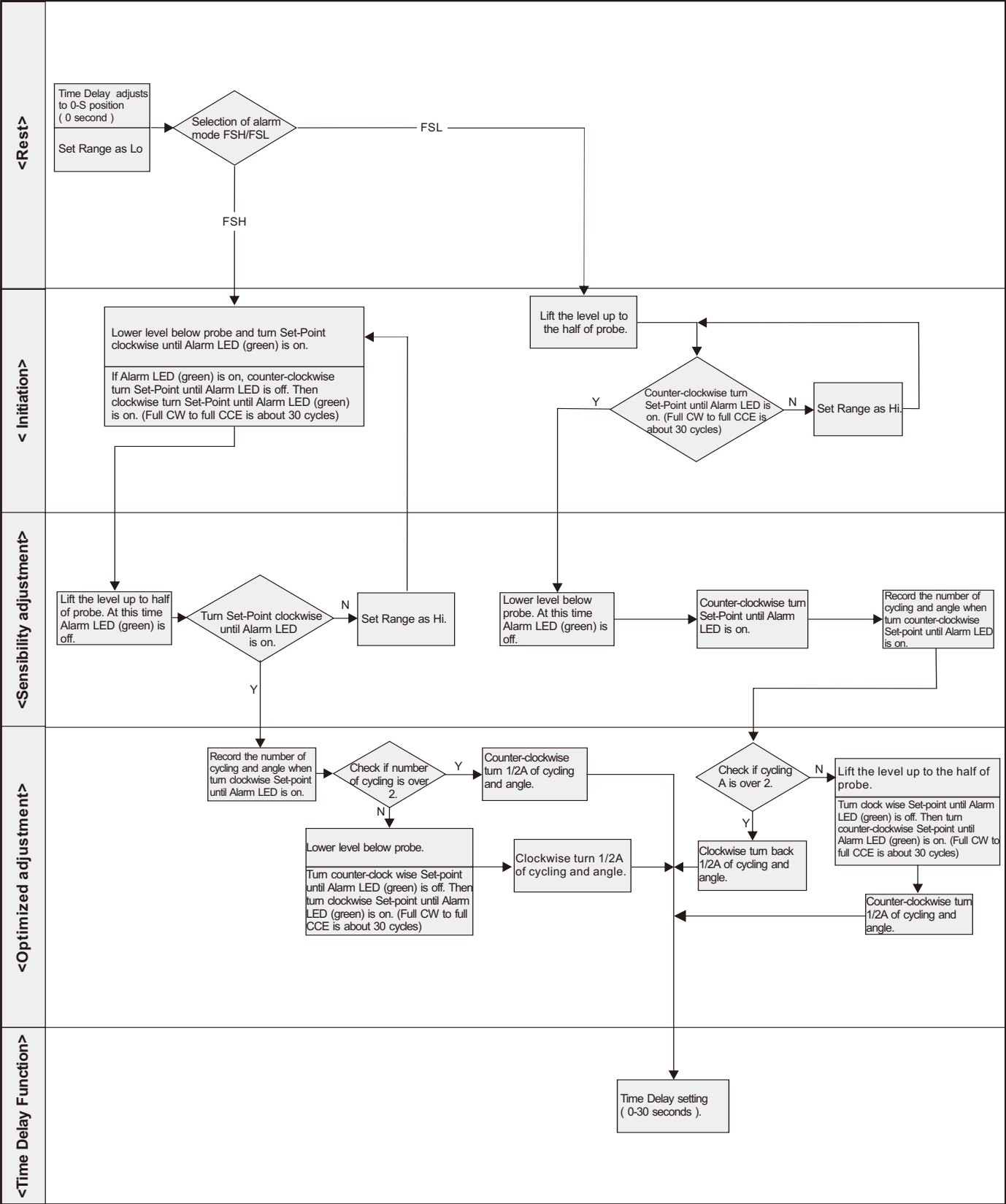
◎ FSL Low level fail-safe alarm :

SB17XX series is installed in low level and FSL mode is ON,Green LED lights up and relay output COM/NC is opened when Medium is in normal level (medium touches the probe).When medium level drops below low (medium does not reach the probe)or blackout, Green LED shuts off and relay output COM/NC is closed. When relay output COM/NC is closed, it implies FSL alarm is activated.

SIMULATE ALARM TEST STEP : (SB17XXA/B series)

- (1) Turn FSH/FSL dip switch to FSH
- (2) Range switch to Lo position
- (3) Time Delay turn to S (minimum)
- (4) Adjust Set_Point to ALARM LED (green) light, and clockwise one cycle.
- (5) Short TEST terminal or approach the position of "Reed SW. Inside" by 500 gos magnetic, the ALARM LED Green light goes off and relay output COM/NC is opened.
- (6) Turn on TEST terminal or far away the position of "Reed SW. inside", the ALARM LED Green light goes on and relay output COM/NC is opened.

Function Flow Diagram(FFD)



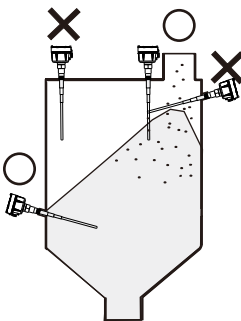
Installation Instructions For Ex-proof Products

1. There is an internal/external ground terminal in the housing. Please be sure to ground terminals when you use.
2. When install or maintain in the field, to comply with the caution "Open after power off"
3. Cable conduit should equip with explosion approval device (AD105DS). It can't be revised arbitrarily and have to lock well.
4. Be sure to obey the safe regulation of electric appliance for dangerous field when install and maintain.
5. Corrosive gas or liquid application isn't available for Aluminum & Stainless (SUS) material.
6. The level of temperature class for explosion sign and its maximum allowed temperature relating to the medium.

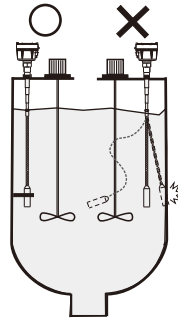
Temp. categories	T1	T2	T3	T4	T5	T6
Max. surface temp.	≤ 450°C	≤ 300°C	≤ 200°C	≤ 135°C	≤ 100°C	≤ 85°C
Medium temp.	≤ 440°C	≤ 295°C	≤ 195°C	≤ 130°C	≤ 95°C	≤ 80°C

7. Customers can't change the internal components and have to check the outer.

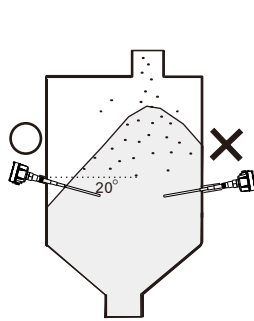
Mounted at highest point of stockpile under inlet to measure correct level.



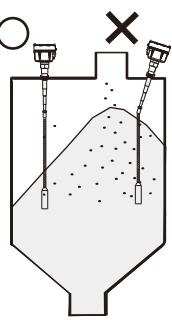
Don't install directly below the refilling inlet to prevent impact during refilling.



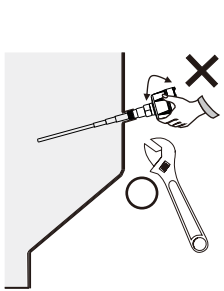
Please secure the extension type probe tightly so that the probe would not be entangled with actuators or hit the tank wall.



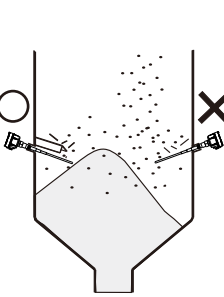
Installation at an incline of 20 degree is recommended to prevent bridge and affect material flow.



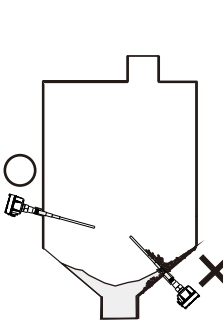
Ensure the housing stands vertically.



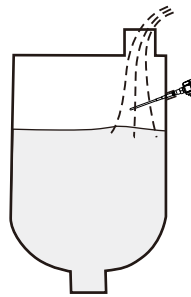
Use a spanner on the hexagonal screw head during installation. Usage of hand to tighten the probe is strictly prohibited.



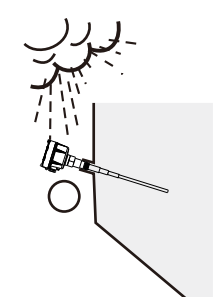
When the probe is near the inlet, please install pipe shield to prevent impact from probe to ensure accuracy.



Don't install like this to prevent block inside tank.



Don't install under inlet to prevent accuracy from being affected.



Cable entry should face downwards to prevent leakage or block.



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