

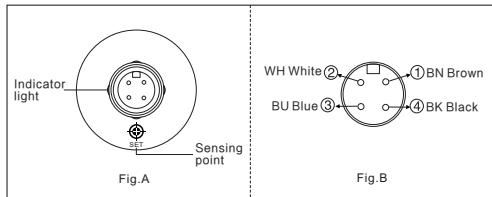
Small High Frequency Level Switch Manual

LB Type

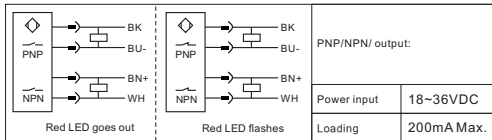
■ English



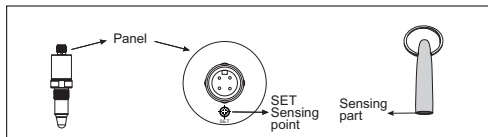
Panel control and display



Connection



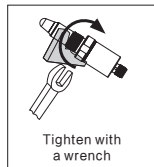
Operation



- 1. NO/NC setting:** Put sensing part to the SET(sensing point), wait for 3 seconds, keep the sensing part in contact when the indicator light turns green and flashes, and remove the sensing part until the flashing stops, then it enter to the setting of NO/NC. The system is NO status by default.
- 2. Learning mode:** Fully insert the PEEK probe into the medium for 5 seconds. Put sensing part to the sensing point for 3 seconds. Remove the sensing part when the indicator light turns green and flashes, then the yellow light flashes to indicate that it is learning. When the yellow light flashes 3 times quickly, it means the learning is successful. If there is no flash quickly, do the learning again.
- 3.Reset factory default:** put the sensing part close to SET(sensing point) before power on, and the yellow light will flash after power is connected, remove the sensing point. When the yellow light flashes 3 times quickly, it means that the factory setting is restored successfully.

Notice:

1. PEEK probe should be completely immersed into the medium when set up the learning mode. The stainless steel wetted part is not required.
2. Do not use the unit which is factory default to detect the medium. Run the learning function before measuring the medium.
3. Learning function can sense the measuring of thousands of different medium, even mixed medium. If there is any change for detecting medium, it must be learn the medium again.



Status Indication

Max.																					
Min.																					
		<table border="1"> <tr> <td colspan="2">Power On</td> <td>Green Light On</td> <td></td> </tr> <tr> <td rowspan="2">NO</td> <td>Probe senses material</td> <td>Red Light On</td> <td></td> </tr> <tr> <td>Probe do not sense material</td> <td>Green Light On</td> <td></td> </tr> <tr> <td rowspan="2">NC</td> <td>Probe do not sense material</td> <td>Red Light On</td> <td></td> </tr> <tr> <td>Probe senses material</td> <td>Green Light On</td> <td></td> </tr> </table>		Power On		Green Light On		NO	Probe senses material	Red Light On		Probe do not sense material	Green Light On		NC	Probe do not sense material	Red Light On		Probe senses material	Green Light On	
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Electrical Connection



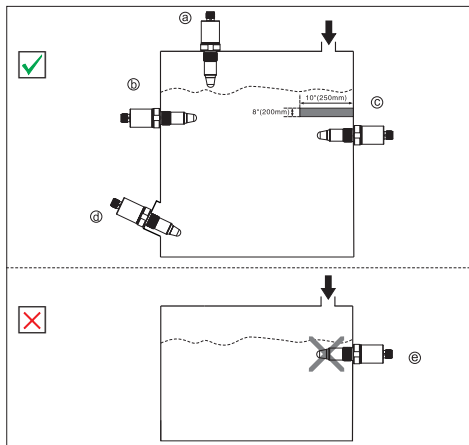
1. The unit must be connected by a technical electrician.
2. The national and international regulations for the installation of electrical equipment must be adhered to Voltage supply to EN50178, SELV, PELV.
3. Disconnect the power before connecting the unit.

Technical Parameters

Type	Small
Supply Voltage[V]	18...36 DC
Switch response time[s]	< 1
Ambient temperature[°C/°F]	-40...+85°C/-40...+185°F
Storage temperature[°C/°F]	-40...+85°C/-40...+185°F
Medium temperature[°C/°F]	-40...+115°C/-40...+239°F
Operating pressure [bar]	Max. 40
Measured medium	Powder, liquid, suitable for sticky liquid
Process connection	G1/2" A
Connection	M12*1.0 Socket
Housing material	Stainless steel 316L
Probe material	PEEK
Output	Load 200mA
Max. power consumption[W]	< 1W
Protection/Enclosure Rating	IP68/IP69K

Installation Notice

1. The ideal installation for reducing the shock to materials and the hanging of materials is to make the switch horizontal at an angle of 15–20 degree.
2. Keep the switches away from the feed opening of the barrel to reduce the shock to materials, if unavoidable, a protection plate is necessary.
3. The operators cannot use the product to climb or hook any object when working in the tank.



Correct mounting:

- (a) Top mounted: Probe is vertical downward and mounted on the top of any position (away from the inlet port).
- (b) Laterally mounted: Laterally mounted to reduce material impact and hanging of flowing materials.
- (c) Laterally mounted with shield: Length approx. 10"(250mm), width approx. 8"(200mm), to prevent (d) material from accumulating improperly around the unit and reduce the impact of material on the unit.
- (d) Inclined mounted—Mount in the hopper: Max. distance between the end of screw on the unit and the tank wall < 2.4"(60mm). It can avoid false alarm due to improper accumulation of materials.

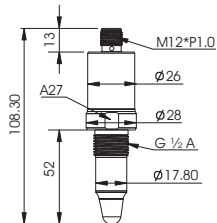
Incorrect mounting:

- (e) Laterally mounted in filling wall or under the inlet opening.

Dimensions

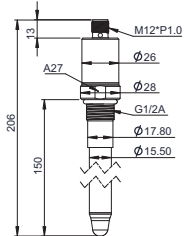
Small High Frequency length of probe is about 52mm, there is also extended length of probe 150mm and 250mm for your choice.

Small:



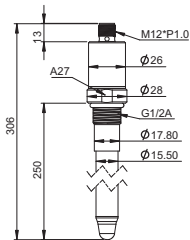
Unit: mm

Small
Extra length probe 150mm:



Unit: mm

Small
Extra length probe 250mm:



Unit: mm

Adapter

By using sanitary adapter, the protection rating can reach to IP69K. The options are as below:

- ① Use welding adapter US0069.
Installation manual is supplied with the adapter.
- ② Use Clamp adapter US0070
Installation manual is supplied with the adapter.

- ③ The sealing O- ring on the sensors can be used as pipe's sealing part.
The upper sealing area of the pipe connection must be parallel with the thread hole. The surface roughness must not be lower than Rz 6.3
 - ▶ Grease the sensor thread with proper lubricating paste.
 - ▶ Insert the sensor into the pipe.
 - ▶ Tighten it with a spanner.
(Maximum tightening torque: 35 Nm.)