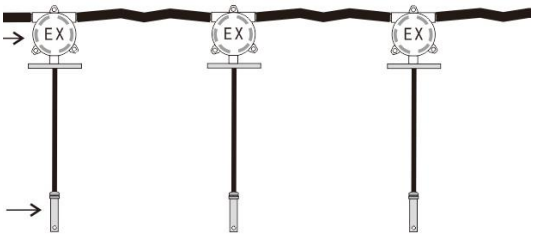
WT-LLD-D

Double-wall tank Leak sensor

WT-LLD-D liquid leak sensor, can be used for leak detection of double-wall tanks, manhole and submersible pump. The sensor can identify leakage of oil and water, if any oil or water penetrate, it will be detected by sensor in short time and automatic alarm. This sensor is optoelectronic type leak sensor, high accuracy and reliable performance, strong ability to anti-external disturbance. Both of oil and water can be detected by this sensor, so to ensure safety of the oil storage system in an all-round way, and protect environment.

The connection between leak sensor and console is RS485 bus, it is very easy for wiring; and adopts standard MODBUS communication protocol. The wiring and circuit of sensor is intrinsic design, can be safely used at Explosive and flammable area.

When oil or water permeate into the measured space, it will generate signal to console and active the alarm, so the staff at site can know well of system status.



Features and benefits

- Sensor adopts principle of Optoelectronic, more sensitive and have high accuracy.
- Intrinsic design overall, safe used at class 0 division 0
- Sensor can detect the leakage both of oil and water, to provide a basis for judging whether the inner wall or the outer wall has a leakage;
- Input voltage range is wide, all digital design, strong anti-interference ability;
- Convenient installation and adjustment
- Standard cable length is 3.2m.
- Adopting RS485 bus communication and MODBUS RTU communication protocol, the terminal can be connected both in series, flexible wiring, and communication distance can up to 600 meters if the wiring is in series
- Self-check disconnection fault. If the sensor has a disconnection failure, it can give a fault signal to console.
- Bus interface adopts lightning protection design, to protect equipment safety;

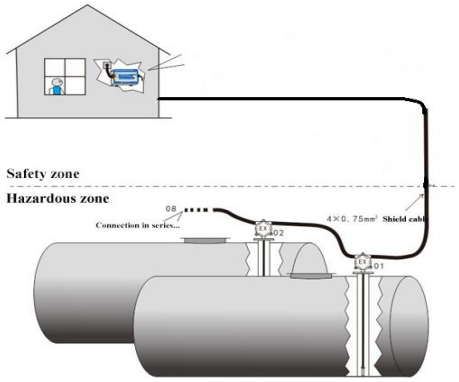
Technical parameter

- Power supply: 220VAC±10%
- Operating current: ＜20mA
- Working temperature: -40℃~ +60℃
- Response time: ＜2s
- Accuracy: ＜3mm
- Explosive-proof grade: Ex ia IIC T4 Ga

3. System installation

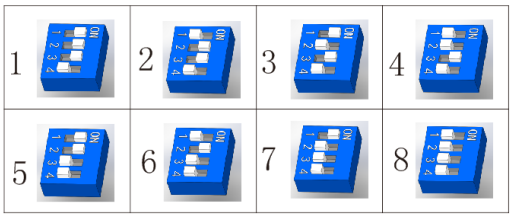
Field wiring diagram of WT-LLD-D double wall tank leak sensor

Install one leak sensor in each double-wall tank or manhole, or dispenser sump, and each leak sensor has one junction box. The distribution parameter of the sensor cable should comply with requirements that capacitance less than 0.6uF, and the inductance should be less than 0.1mH.



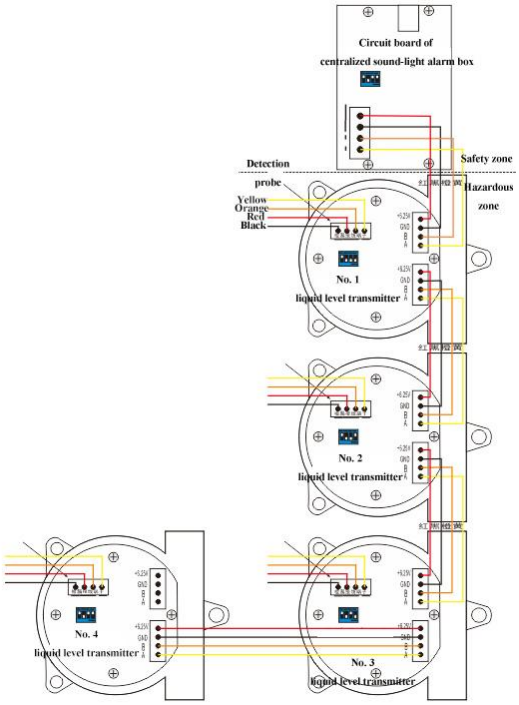
Sensors can be connected in series according to the assigned address, see the following diagram.

Operation instructions of dial switch address setting are as follows:



The Number is the leak sensor address in console, and has accordingly dial switch style. For example, if the leak sensor is 7 in console, its dial switch should like this.

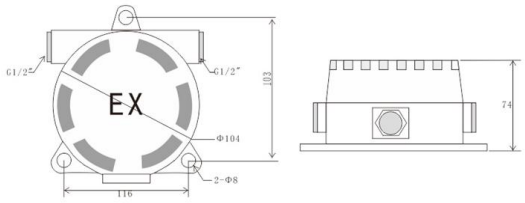
Electrical connection diagram of the WT-LLD-D double wall tank leak sensor



Notes

- Clean wiring and good connection
- After wiring, screw cable lock tightly, to prevent cable loosening;
- Each wire shall be provided with a unique identifier for identification and detection.

Installation of the WT-LLD-D double wall tank leak sensor



Junction box of leak sensor and its dial switch

Junction box

Dial switch inside Junction box

The numerical value of the dial switch is the address of the leak sensor. User need to assign the address of the leak sensor in sequence.

Please note that the address on the bus cannot be repeated, repetition will lead to communication failure, affect normal use.

Notes

Make sure the connection is correct and then power the system.

The maximum working environment temperature range from -40℃ to +60℃.

Users are not permitted to change the parts of the product, should work together with the product manufacturer to solve the operation failure to prevent the occurrence of the phenomenon of damage.

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