

### Product Specification



- ◆ Locating detection
- ◆ High stability
- ◆ Multiple functions
- ◆ Relay output
- ◆ RS-485 communication

### Product Overview

XW-PC-3 Locating leak detection sensor can detect the area up to 150 meters, monitoring of environmental leakage, once the liquid is detected, the sensor immediately alarm and accurately locate the leakage position and trigger the relay. The relay contact signal and 485 signal output by the detector can be integrated with various monitoring systems to realize remote monitoring.

### Application & Features

#### Application

- IDC
- Intelligent Building
- Data centre
- Library
- Museum
- Warehouse

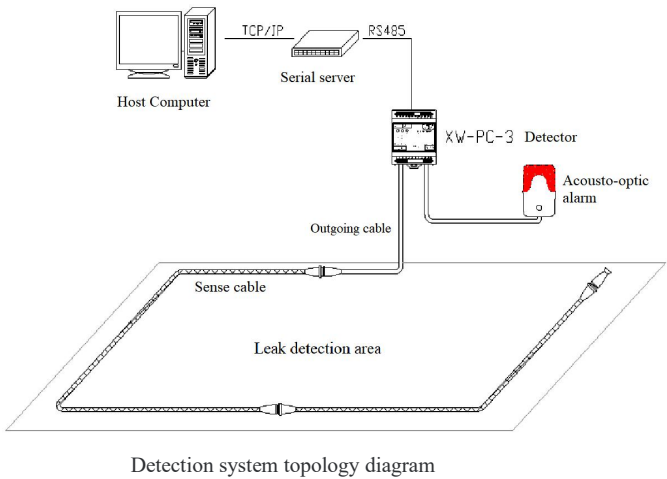
#### Features

- Using industrial-grade electronic components can not only ensure high sensitivity, but also reduce false alarms caused by various external factors.
- With fault alarm, leakage alarm, interference alarm and other functions, and can display the status of the sensor through the interface indicator.
- Adopt standard industrial modules and DIN rail mounting, all connections can be easily done through terminals. When leakage occurs, the relay act and leakage indicator light up, and the controller automatically restores to normal state after danger elimination, no need manual operation.
- Sensor can output RS485 signals and the communication distance is up to 1200 meters.

## Technical Data

Sensing performance	detection distance	150m
	Response time	≤8s
	Detection accuracy	±0.5m+1%
	Reading accuracy	0.1m
RS485 interface	Communication protocol	MODBUS-RTU, MODBUS-ASCⅡ self-adaption
	Bus address	1~254(default 1)
	Baud rate	1200, 2400, 4800, 9600(default), 19200bps
	Data format	N,8,1
Relay Output	Contact type	Dry Contact, 1 set, NC/NO
	Load capacity	250VAC/3A、30VDC/3A
Environmental rating	Operating Temperature	-40℃~70℃
	Operating humidity	0~95%RH(No condensation)
Power supply	Supply voltage	DC 9~30V(recommend 12V DC)
	Power Consumption	≤0.5W
EMC protection grade	ESD	Contact discharge±8KV, Air discharge±15KV
	Surge	±4KV
	EFT	±4KV

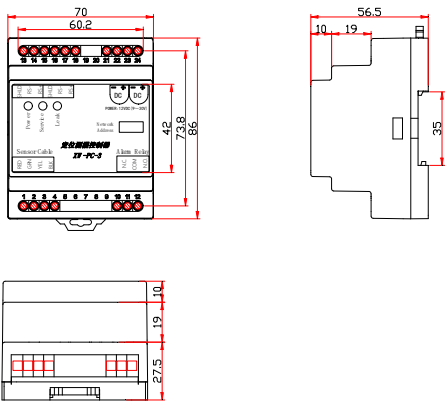
## Operation Principle



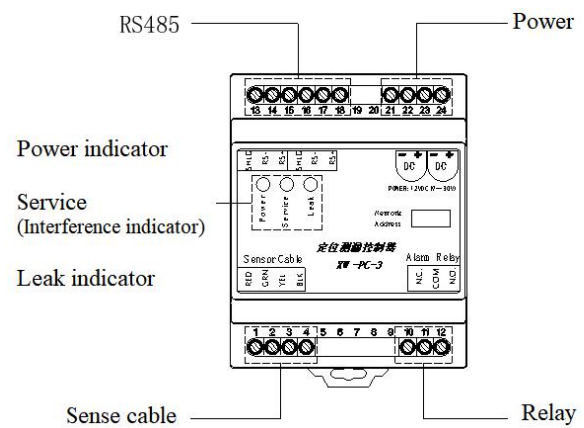
XW-PC-3 Locating leak detection sensor connect with sense cables, and once the liquid is detected, the leakage data can be uploaded leakage data to the host computer through RS485 signal, accurately locate the leakage position and trigger the relay action. Sensor relay output signal can be used to control peripheral equipment such as acousto-optic alarm, automatic valve and intelligent alarm, etc.

## Installation

◆ Product dimensions (Unit: mm, error: ±0.5mm)



◆ Buttons and indicators



- ◆ Install the detector in a secure indoor collection box or cabinet where it is easy to maintain and check. Avoid high temperature, high humidity, vibration, corrosive gases, and other electronic interference sources. XW-PC-3 sensor buckle is mounted on a standard 35 mm DIN rail.

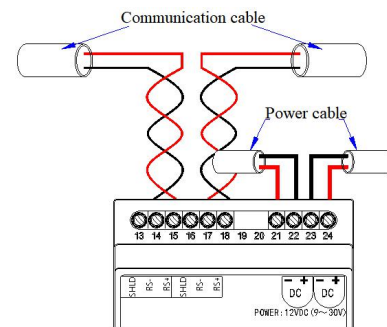


◆ Wiring instructions

Sense cable	Connect the red, green, yellow, and black core wires of the outgoing cables to connect R, G, Y, and B on the sensor panel, and then connect the XW1000 sense cable with spiral structure.
Relay output	Output NO/NC contact can be connected to monitoring system, also can be connected to alarm devices to output alarm signal. When controlling high current equipment, it is necessary to add secondary relays to expand the contact load capacity, otherwise the detector may burn out.
Power Supply	DC 9~30V power input (DC12V is recommended to ensure long-term working stability). If voltage too low, it will not work properly, and if voltage too high, the controller will burn out.

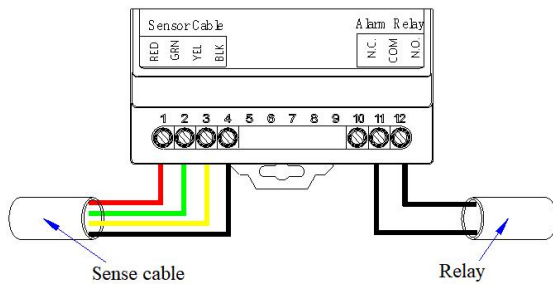
**Connect power cables and communications cables**

XW-PC-3 sensor uses the rated supply voltage. RS-485 communication cable transmit alarm and status information. Note the positive and negative directions of the ports. All XW-PC-3 devices have two sets of RS485 communication terminals, one set of inbound terminals (from the monitoring host system) and one set of outbound terminals (to the next controller).



**Connect power cables and communications cables**

The relay contacts can be used to connect local or remote alarm, control valve or other device, can also connect automation control system. The relay operates only for leak alarm. With NO and NC two kinds of state, can choose the connection mode freely. In the leak detection system, the outgoing cable used to connect the sensor and leak sense cable.

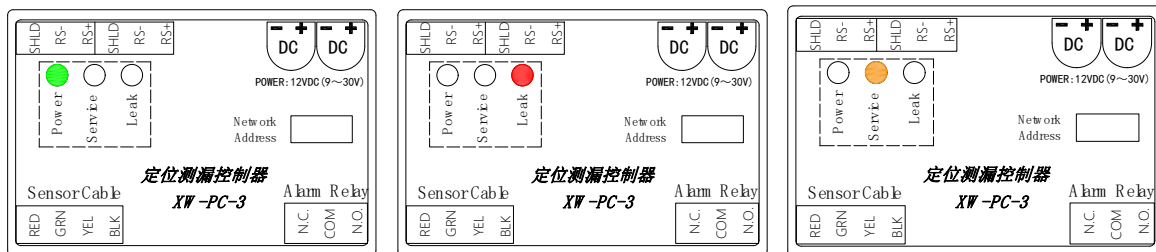


Output signals of relay are shown in the following table:

Connection combination	Alarm status	Output status
N.O.—COM	No alarm	Open
	Alarm	Close
	poweroff	Open
N.C.—COM	No alarm	Close
	Alarm	Open
	poweroff	Close

## Debug Instructions

- ◆ Power on the sensor, normal working condition (no leakage), the power indicator is green and keep on. Otherwise, the power supply or controller is faulty. The running indicator blinks periodically for one second, otherwise the detector is abnormal.
- ◆ Take a some water (non-purified water) and soak the sensor probe protection cover in water. After 5~8s, the relay work and LEAK indicator will be red and keep on.
- ◆ If the Service indicator blinks orange, it indicates fault alarm. Possible causes include incorrect sense cable connection, cable failure, less water, insufficient water conductivity, or alarm interference.
- ◆ After drying the water on the sense cable, the relay is reset and LEAK light off.



## Notices

- ◆ Please don't touch the detector with wet hands.
- ◆ Please don't modify or disassemble the detector.
- ◆ Please connect cables when the detector when power-off.
- ◆ Check the load capacity of the power supply when connecting multiple devices.
- ◆ Avoid contact with metal files, grease, pipe paint and other contaminants.
- ◆ Before installation, confirm the rated voltage of detector and the power supply voltage.
- ◆ During regular inspection and maintenance, avoid using organic solvents and wipe with dry cotton yarn.



We recommend that you use this manual under the guidance of professional personnel. If the product is damaged by violation operation or a third party force majeure such as fire, flood, lightning and natural disaster, Xiangwei will not assume any responsibility.

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