XW-DC-03

Two-channel non-locating leak detector

Product Specification

◆ **Non-locating detection**

◆ **Adjustable sensitivity**

◆ **Local acousto-optic alarm**

◆ **RS-485 communication**

Product Overview

XW-DC-03 Two-channel non-locating leak detector is a simple and cost-effective liquid leak detection device, which can connect two sense cables at the same time for detection.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
- Data centre
- Intelligent Building
- Museum
- Warehouse

Features

- With two groups of independent detection channels, can connect two leakage detection cables as the same time. A single channels can connect 500 meter leak detection cable to monitor the leakage status of each area which suitable for multiple leak detection areas.

- Using industrial grade electronic components, can not only ensure high sensitivity, but also reduce the false alarm caused by various external factors.

- Adopt electromagnetic compatibility design,anti-surge, anti-static, anti-EFT and other protection functions.

- Support to adjust sensitivity by software according to the requirements of the detection environment (the adjustment range is within 1cm-20cm of the cable length).

- 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.

- When detects liquid leakage, the LED leakage indicator on the panel is steady on and the internal buzzer gives an alarm sound.

Technical Data

Sensing performance	Response time	≤2s
	Detection distance	500m
Environmental rating	Operating Temperature	-10°C~50°C
	Operating humidity	0~95%RH(No condensation)
Power supply	Supply voltage	DC 9~30V(recommend 12V DC)
	Power Consumption	≤0.2W
RS485 interface	Communication protocol	MODBUS-RTU
	Bus address	1~254(default 1)
	Baud rate	1200, 2400, 4800, 9600(default), 19200bps
	Data format	N,8,1
Relay	Contact type	Dry Contact, NC/NO
	Load capacity	120VAC/2A, 24VDC/2A
EMC protection grade	ESD(sense cable interface)	Contact discharge±8KV, Air discharge±15KV

Operation Principle

Detection system topology diagram
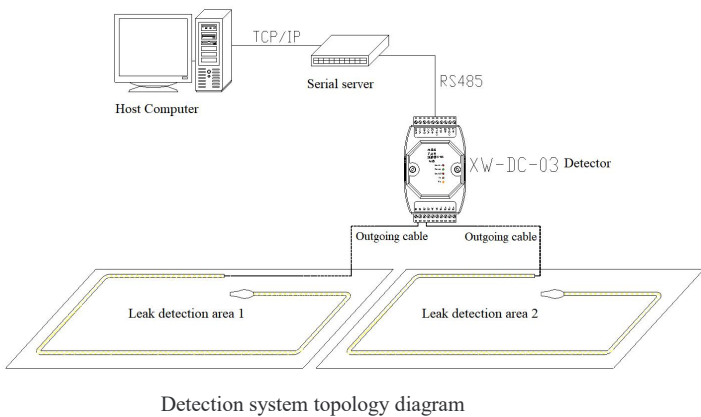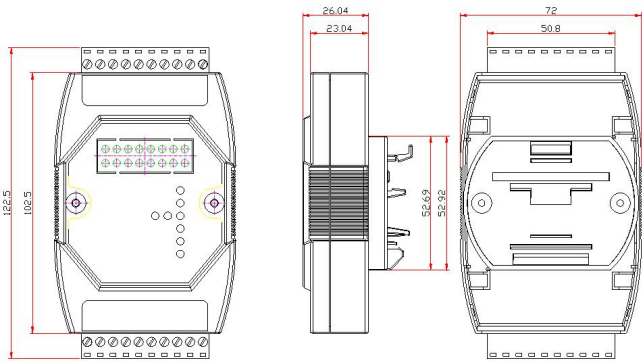
XW-DC-03 Two-channel non-locating leak detector connect with sense cables to detect 1 or 2 areas, and the leakage data can be uploaded leakage data to the host computer through RS485 signal. Sensor relay output signal can be used to control peripheral equipment such as acousto-optic alarm, telephone dialer, SMS module, switch value collection module, etc.

Installation

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

◆ Buttons and indicators

Channel 1 leak indicator
Power indicator
Channel 2 leak indicator
Communication indicator
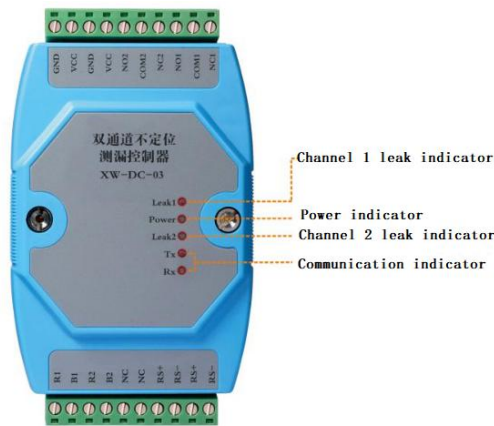
◆ Install the detector in a secure indoor collection box or cabinet where it is easy to maintain and check. Avoid high temperature, high humidity, vibration, corrosive gases, and other electronic interference sources. The detector buckle is mounted on a standard 35 mm DIN rail.
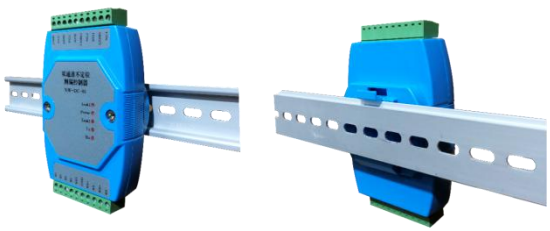
◆ Non-locating leak detection system is composed of detector, outgoing cable, sense cable and related accessories. Connect cables when the power supply of detector is disconnected.

Sense cable	Connect the red and black core wires of the outgoing cable to the wiring terminals R1 and B1(or R2 and B2) of the detector separately, and then lay the sense cables to the detection area.
Relay output	Two sets of 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. Two sets of RS485 output terminals for cascading multiple detectors.
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.

Debug Instructions

◆ Power on the controller and the power indicator is steady 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 one second, the relay will act and the LEAK indicator lights up red, the buzzer rings, and press the OFF button to mute. After drying the water on the sense cable, the relay is reset and LEAK light off.

◆ The detection sensitivity from grade 1 to 4 is successively enhanced, and the factory default is grade 4. The sensor sensitivity corresponding to each grade is as shown:

Under tap water conditions		
Grade 1	Length of sense cable to be soak>20cm	Resistance: 60KΩ
Grade 2	Length of sense cable to be soak>6cm	Resistance: 100KΩ
Grade 3	Length of sense cable to be soak>2cm	Resistance: 160KΩ
Grade 4	Length of sense cable to be soak>1cm	Resistance: 300KΩ

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.