

iSN-104

4-channel Liquid Leak Detection Module

Features

- 4-ch Liquid Leak Detection
- Water Leakage and cable break detection triggers and audible alarm
- A mute button to silence the audible alarm
- Five LED indicators to display the status of the power and the alarm
- Liquid Leak Detection Cable and Extended Cable can be up to 500 meters
- Sensitivity adjustable detection
- Supports the DCON and the Modbus RTU Protocols
- Embedded Dual Watchdog
- Wide Operating Temperature Range: -25 to +75°C
- Tiny Form Factor with Easy Screw Mounting

Introduction

The iSN-104 Liquid Leak Detection Module is a low-cost intelligent liquid leak detection device that can be used to directly control triggers and audible alarm. No additional conversion module is needed and the iSN-104 can be easily integrated with a variety of monitoring systems to achieve remote alarm and remote device control. The iSN-104 Liquid Leak Detection module can be used to monitor double-core leader cable lengths of up to 500 meters, and can be used with both the extended cable and its included liquid leak detection cable. The module can be easily integrated with other collection hosts connected to the network. The iSN-104 is suitable for real-time leak detection in critical locations, such as computer room base stations, warehouses, libraries, museums and industrial sites, and also for air handling equipment, refrigeration units, liquid containers, or pump tanks, etc., where there is a need to monitor any leakage of the equipment.

When required, communication with the iSN-104 can be programmed based on the Modbus RTU protocol, with the added benefit that different addresses can be configured via hardware to allow for Modbus RTU communication.

Specifications

EMS Protection	
EFT (IEC 61000-4-4)	±4 kV for Power
ESD (IEC 61000-4-2)	±8 kV Air for Random Point
LED Indicators	
Status	1 as Power Indicator 4 as Alarm Indicator
System	
Alarm	For both liquid leak detection and cable-break detection.
Buzzer	Yes. Can be muted by a push button.
Liquid Leak Detection	
Channels	4
Liquid Type	Water, 2uS/cm
Sensor Type	Probe for point detection or Cable for line detection
Max. Cable Length	500 meters Includes liquid leak detection cable and extended cable.
Sensitivity Range	26 KΩ ~ 580 KΩ (rotary switch adjustable)
Cable-break Detection	Yes. For Liquids Leak Detection Cable CA-LLD-DC100X-Lxxx only.

COM Ports	
Ports	1 x RS-485
Baud Rate	Software Configuration: 1200 ~ 115200 bps
Data Format	(N,8,1), (O,8,1), (E,8,1), (N,8,2)
Protocol	Modbus RTU or DCON
Power	
Reverse Polarity Protection	Yes
Input Range	10 ~ 30 VDC
Consumption	1.6 W Max.
Mechanical	
Dimensions (mm)	72 x 95 x 57 (W x L x H)
Installation	DIN-Rail Mounting
Environmental	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +80°C
Humidity	10 ~ 90% RH, Non-condensing

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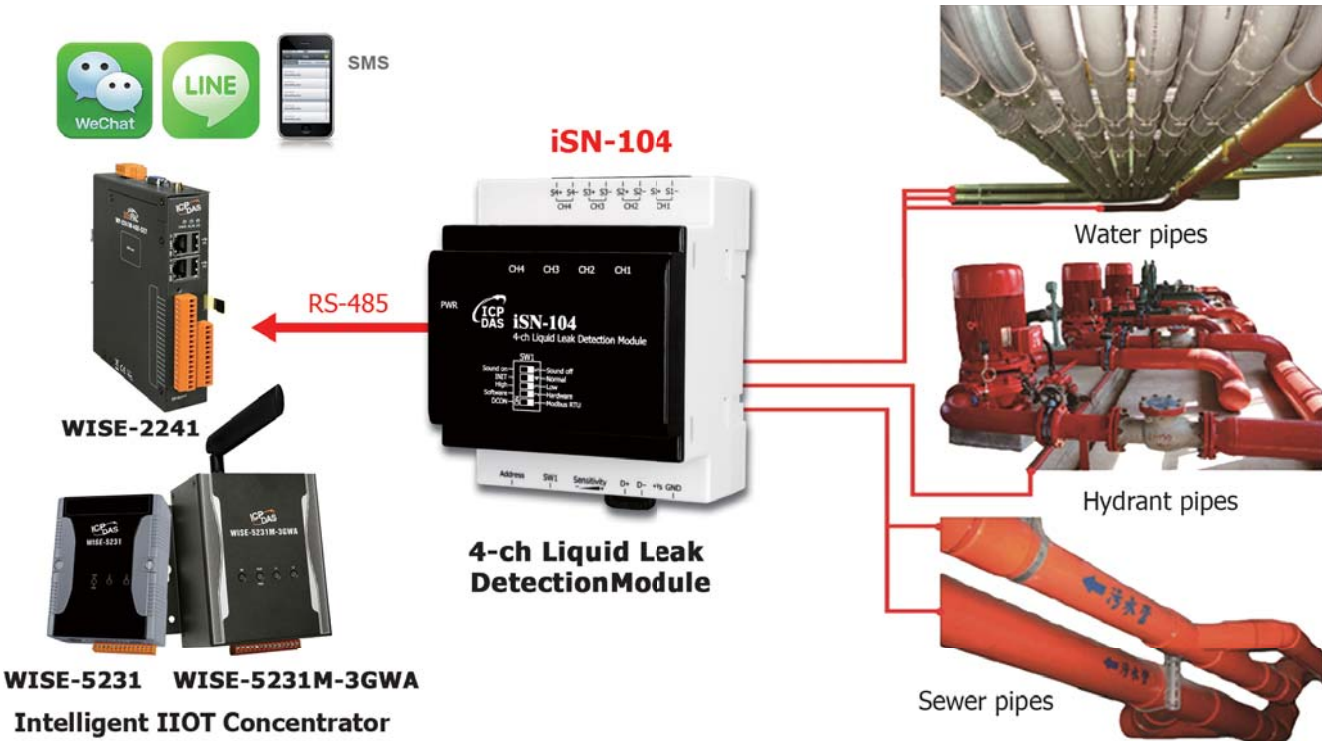
Applications

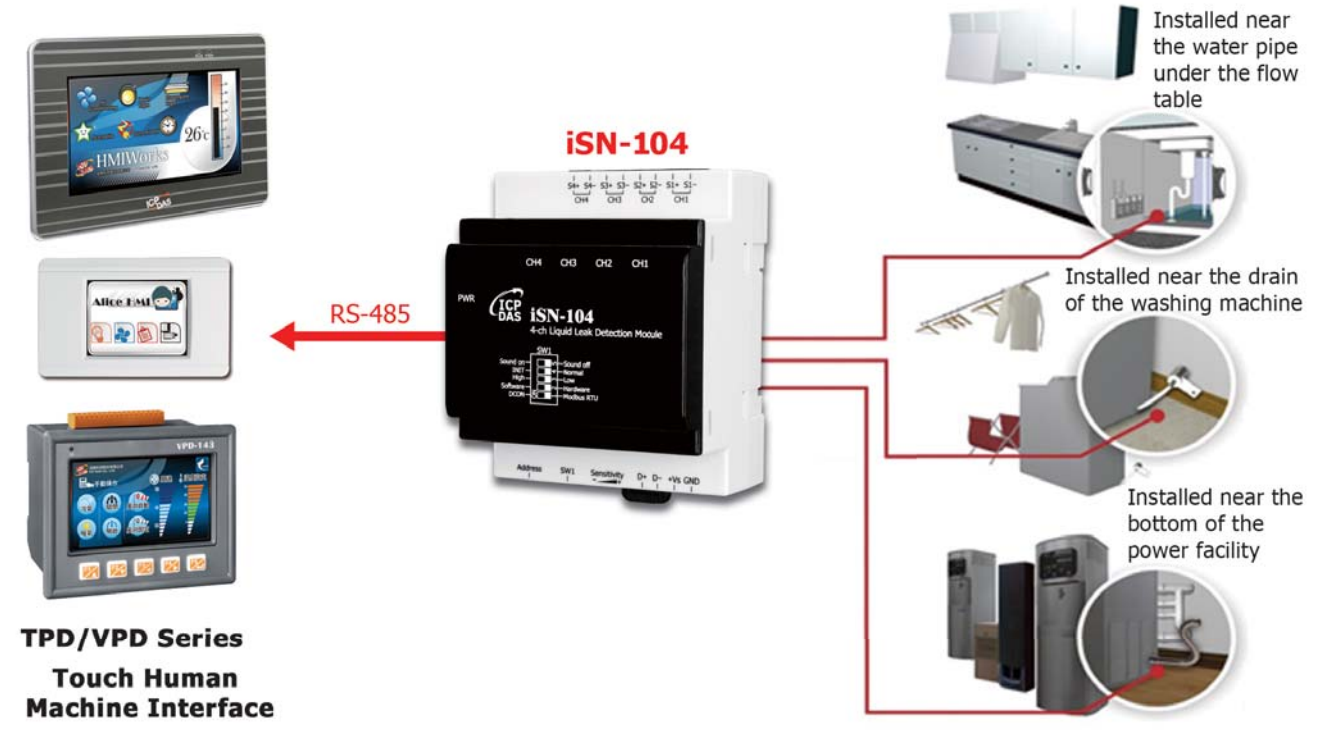
The iSN-104 is a leakage detection module used in water pipe leak monitoring in buildings with two working modes.

1. Work with the Liquids Leak Detection Cable that installed near the possible leaking pipe or area to detect leakage and cable break with alarm.

2. Work with the leakage probe that installed in fixed possible leak locations to detect.

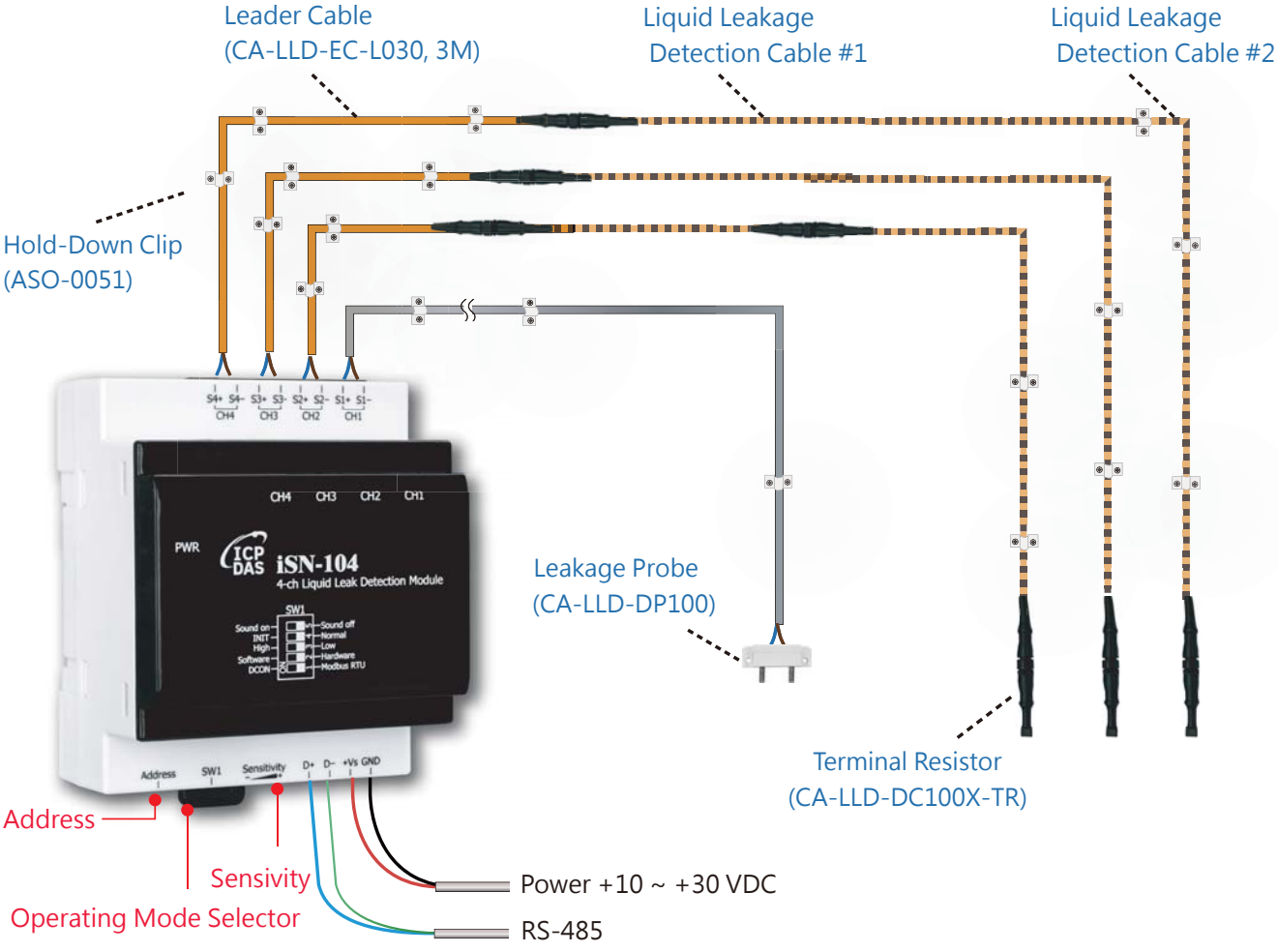
The leakage monitoring is applied to the water pipes, fire pipes and sewage pipes of buildings, as well as the detecting of domestic water, drainage and electric equipment, which can effectively achieve water saving and ensure the safety of living. The iSN-104 can detect leakages, send out signal and alarms, combine with the WISE IoT Edge Controller or TPD/VPD Touch HMI, and to further integrate with the mobile APP or community system.



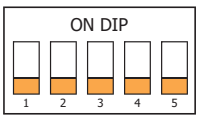


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Wire Connections

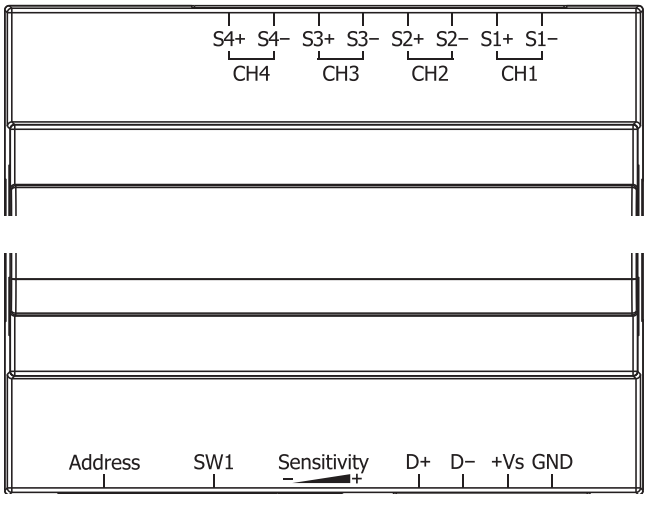


Configuration

DIP Switch Description			
	SW1	ON	DCON Protocol
		OFF	Modbus RTU Protocol
	SW2	ON	Software Configuration
		OFF	Hardware Configuration
	SW3	ON	High Node Address
		OFF	Low Node Address
	SW4	ON	INIT Mode
		OFF	Normal Mode
	SW5	ON	Sound On
		OFF	Sound Off

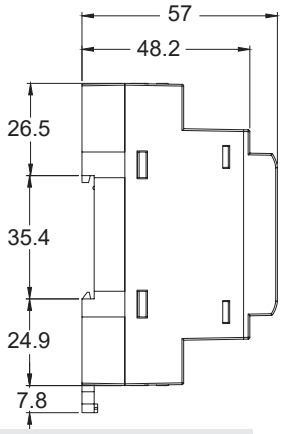


PIN Assignments

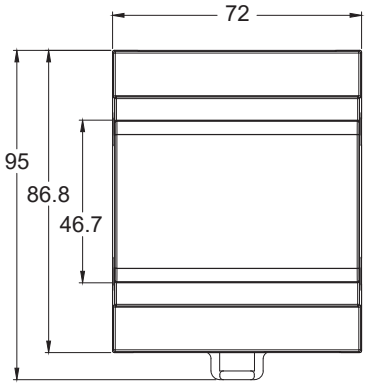


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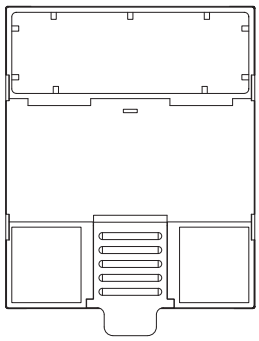
Dimensions (Units: mm)/PIN Assignments

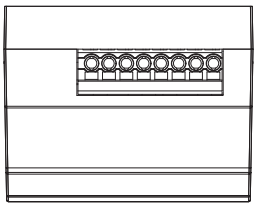


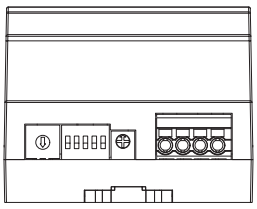
Left View



Front View


Rear View

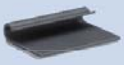

Top View


Bottom View

Ordering Information

iSN-104 CR	4-channel Liquid Leak Detection Module, Supports Modbus/RTU and DCON protocols (RoHS)

Accessories

 tM-7520U CR	RS-232 to RS-485 converter (RoHS)
 tM-7561 CR	USB to RS-485 converter (RoHS)
 I-7514U CR	4-channel RS-485 Hub (RoHS)
 ASO-0052	90 Hold-Down Clip (include 50 pcs) (RoHS)
 ASO-0051	180 Hold-Down Clip (include 50 pcs) (RoHS)

 CA-LLD-DC100-L100 CA-LLD-DC100-L300 CA-LLD-DC100-L500	Liquids Leak Detection, Water Detection Cable w/o Position, 10 m/ 30 m/ 50 m length (RoHS)
 CA-LLD-DC100X-L010 CA-LLD-DC100X-L030 CA-LLD-DC100X-L100 CA-LLD-DC100X-L300 CA-LLD-DC100X-L500	Liquids Leak Detection, Water Proof Plug Male to Female Cable, 1 m/ 3 m/ 10 m/30 m/ 50 m (RoHS)
 CA-LLD-EC-L030	Leader Cable, 3 M (RoHS)
 CA-LLD-DC100X-TR	Terminal Resistor, 2 MΩ (RoHS)
 CA-LLD-DP100	Leakage Probe (RoHS)

Liquids Leak Detection = **LLD**

CA-LLD- AA BBB -L CCC

DC : Liquids Leak Detection Cable



EC : Extension Cable



DP : Detection Probe



100 : Liquids Leak Detection Cable



100X : Liquids Leak Detection Cable, can be connected in series



Length

010 : 1 M
030 : 3 M
050 : 5 M
100 : 10 M
300 : 30 M
500 : 50 M

TR : Terminal Resistor



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