User Guide

Product Introduction

Flood sensor adopts unique AC detection technology, effectively avoiding the problem of water leakage sensitivity decline caused by oxidation of water-immersed electrodes over a long period of time.RS485 output is a standard ModBUS-RTU, with a maximum communication distance of 2000 metres, which can be directly accessed to the PLC, industrial control instrument, configuration screen or configuration software. The equipment adopts waterproof shell with high protection level, which can be used for a long time in humid, high dust and other harsh occasions.

Use Case Scenarios

The sensor is widely used in communication base stations, hotels, restaurants, computer rooms, libraries, archives, warehouses, equipment, cabinets and other places where water alarms are required.

Features

1. The alternating current is used to collect the inductive parameters of accumulated water and accurately distinguish whether flooding occurs or not.
2. Detection using alternating current. Electrophoretic polarisation does not occur even when the electrode is immersed for a long period of time, does not rely on special electrodes, has a long life and is reliable in detection.

Product Specifications

Specifications	
Model	UB-WD-N1
Power Supply	DC 10~30V
Max Current	961mA（@12V）
Detection Object	water
Working Environment	-20~60℃, 0~80%RH
Connector	Audio
Dimensions	Base diameter: φ80mm, Height: 190mm
Cable Length	3m
Communication Protocol	RS485 Modbus RTU Protocol
RS485 Address	0xD9
Baud Rate	1200 bit/s,2400 bit/s, 4800 bit/s (default), 9600 bit/s, 19200 bit/s

Wiring Instruction

Communication protocols

1. Communication basic parameters

Communication Basic Parameter	
Coding System	8–bit binary
Data Bit	8 bits
Parity Checking Bit	none
Stop Bit	1 bit
Error Checking	CRC Check
Baud Rate	1200 bit/s, 2400 bit/s, 4800 bit/s (default), 9600 bit/s, 19200 bit/s

2. Data Frame Format

The Modbus-RTU communication protocol is used in the following format:

- Initial structure ≥ 4 bytes in time.
- Address code: 1 byte, default 0xD9.
- Function code: 1 byte, support function code 0x03 (read only) and 0x06 (read/write).
- Data area: N bytes, 16-bit data, high byte comes first.
- Error check: 16-bit CRC code.
- End structure ≥ 4 bytes of time.

Request					
Slave Address	Function Code	Register Address	No. of Registers	CRC LSB	CRC MSB
1 byte	1 byte	2 bytes	2 bytes	1 byte	1 byte

Response							
Slave Address	Function Code	No. of Bytes	Content 1	Content 1	...	Content n	CRC
1 byte	1 byte	1 byte	2 bytes	2 bytes	...	2 bytes	2 bytes

3. Register Address

Register Address				
Address	Content	Register Length	Function Code	Description of definitions
0x0002	Leak state	1	03	Integer (1 for normal, 2 for leaking)
0x07D0	Address	1	03/06	1 ~ 255
0x07D1	Baud Rate	1	03/06	0:2400, 1:4800, 2:9600, 3:19200, 4:38400, 5:57600, 6:115200, 7:1200

NOTE

1. Do not use the device in systems that involve personal safety.
2. Do not pull the sensor lead wire, do not drop or hit the sensor violently.
3. Do not place the transmitter directly under high temperature environment.
4. Prohibit the transmitter to be placed in steam, water mist, water curtain or condensation environment for a long time.