User Guide

Product Introduction

The sensor adopts professional hydrogen sulphide concentration sensor sensor as the core detecting device; it has the characteristics of wide measuring range, high precision, good linearity, good versatility, easy to use, easy to install, long transmission distance and moderate price.

Use Case Scenarios

Widely used in chemical plants and other gas leakage detection.

Features

1. High precision photoreceptor, high absorption in the full spectrum range.
2. Comes with level and adjusting handwheel, easy to adjust on site.
3. Highly transparent dust cover with good sensitivity and special surface treatment to prevent dust adsorption.

Product Specifications

Specifications	
Model	UB-H2S-I1
Power Supply	DC 10 ~ 30V
Max Current	917mA (@12V)
Measuring Range	0 ~ 100ppm
Accuracy	±2ppm 或 ±10%
Resolution	1ppm
Warm-up Time	≥ 5 min
Response Time	≤ 35 s
Working Environment	-20 ~ 50℃, 15 ~ 90%RH
Connector	Audio
Cable Length	3m
Communication Protocol	RS485 Modbus RTU Protocol
RS485 Address	0xC9
Baud Rate	1200 bit/s, 2400 bit/s, 4800 bit/s, 9600 bit/s (default), 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, 9600 bit/s (default), 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 0xC9.
- 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
0x0000	H_2S value	1	03	Integer
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 install the equipment in a strong convective air environment.
2. Avoid contact with organic solvents (including silicone and other adhesives), paints, chemicals, oils and highly concentrated gases.
3. The device should not be used for a long time in the environment containing corrosive gases, corrosive gases will damage the sensor.
4. Do not place the device for a long time in a high concentration of organic gases, long-term placement will lead to sensor zero point drift, and slow recovery.
5. Prohibit long time storage and use in high concentration alkaline gas.