ATO

User Manual for Noise Sensor

V1.0

ATO

Noise sensor

1 Functional characteristics

The noise sensor is designed by using the industrial standard noise monitor, which is compatible with the monitoring system and monitors the noise all day.It can be widely used in warehouse, machine room, production workshop, archives room, library, school, shopping mall, smart home, building control, airport, railway station and other fields.

2 Technical parameters

- ⊙ **measuring range :30 db~130 db**
- ⊙ **resolution :0.5 db**
- ⊙ **accuracy :±%5, A weighted**
- ⊙ **frequency range :10-20 KHz**
- ⊙ **timing: F**
- ⊙ **operating temperature -20℃~70℃**
- ⊙ **relative humidity 25~90 per cent**
- ⊙ **pressure 65 KPa ~108 KPa**
- ⊙ **lead length :2.5 m (customizable)**

★ voltage output

Electricity supply: v DC 7-24
Output: v 0-2
Noise =(output voltage-0.4)/1.6*100+30

★ current output

Electricity supply: v DC 9-24
Output: mA 4-20
Noise =(output current-4)/16*100+30

★RS485 type

Electricity supply: v DC 7-24
Communications Agreement: Modbus Agreement

★TTL@3.3V; communication parameter :9600, N,8,1

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3 Connections

Model	Annotations	Colour Description
Voltage output	1(V+): Power positive 2(G): Power ground 3(Vo): Output voltage signal 4 empty	Brown (V+): Power positive Yellow (G): Power ground Blue (Vo): Output voltage signal
Current output	1(V+): Power positive 2(G): Power ground 3(Vo): Output current signal 4 empty	Brown (V+): Power positive Yellow (G): Power ground Blue (Vo): Output current signal
RS485 Interface Type Modbus Agreement	1(V+): Power positive 2(G): Power ground 3(T+): RS485T+/ A/TT+ 4(T-): RS485-/B/ T-	Red (V+): Power is on Black (G): Power ground Wong (T+): RS485T+/ A/TT+ Green (T-): RS485-/B/ T-

5 Modbus Agreement

⊙ **default values for the communication parameters are:**

Baud rate 9600 bps, a start bit ,8 data bits, no check, a stop bit.

⊙ **Modbus register**

Parameter Name	Register address	Parameter type	Modbus Function Number	Parameter Range and Description	Default
Noise value	x0000 0	INT16, read only	0 x03/ Read	300-1300 divided by 10 to get the actual noise value.	No
Noise value	x0000 0	INT16, read only	0 x03/ Read	300-1300 divided by 10 to get the actual noise value.	No
Modbus slave address	x1000 0	INT16, Read and write	0 x03/ Read 0 x16/ Write	0-255	2

⊙ Modbus register parameter description

Noise value		
Range of parameters	300-1300	Default: None
Parameter Storage	No	

Meaning: Noise measurement

Example: If the returned value is 0125, the first byte High byte 00, second byte low byte 25, then noise measurement

Value :(01*256+25)/10=65.0 db

Modbus slave address (ADDRESS)		
Range of parameters	0-255	Default :2
Parameter Storage	Storage immediately	

Modbus address, can be set to 0-255. Use 0 address to set any address, after setting need to reboot restart module, make this address effective.

⊙ examples

1. example: read register 0 x0000, that is, noise measurement value

Request :02 03 00 00 00 01 84 39(8 bytes)

Device address	1 byte	x02 0
Function Number	1 byte	x03 0
Starting register address	2 bytes	x0000 0
Number of registers	2 bytes	x0001 0
Check	2 bytes	x8439 0

Response :02 03 02 00 25 3D 9F(7 bytes)

Device address	1 byte	x02 0
Function Number	1 byte	x03 0
Number of valid bytes	1 byte	x02 0
Data	2 bytes	0 x00(High bytes)
		0 x25(Low bytes)
Check	2 bytes	x3D9F 0

2. example: modify register 0 x1000, that is, Modbus slave address (ADDRESS)

Request :00 16 10 00 00 01 02 00 03 7A 2A (11 bytes)

Device address	1 byte	x00 0
Function Number	1 byte	x16 0
Starting register address	2 bytes	x1000 0
Number of registers	2 bytes	x0001 0
Number of valid bytes	1 byte	x02 0
Write device address	2 bytes	x0003 0
Check	2 bytes	x7A2A 0

Response :00 16 10 00 00 01 8C D8(7 bytes)

Device address	1 byte	x00 0
Function Number	1 byte	x16 0
Starting register address	2 bytes	x1000 0
Number of registers	2 bytes	x0001 0
Check	2 bytes	x8CD8 0

Warning

Failure to connect in line order may cause damage to the equipment and the instruments connected to the equipment

When the input power exceeds the maximum access power of the device, it will cause damage to the device

Attention

Please read this instruction before use

Correctly connect equipment lines

First confirm

1. Check that the device is the same as the one you purchased

2.Check the appearance of the equipment for damage

3. Check that equipment accessories are complete