RK300-11 CO Sensor

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The product uses electro-chemical technology to measure CO concentration, which is fast and sensitive. It is widely used in air quality detection, smart home and other occasions where CO detection is needed. The shell has high protection level and can adapt to various harsh conditions on site.

FEATURES

- High sensitivity gas detection probe
- Fast response
- High accuracy
- Excellent stability
- Long service life
- Digital output with temperature humidity and CO concentration 3 parameter

SPECIFICATIONS

Item	Technical Specification
Range(concentration)	0-500ppm,0-1000ppm
Range(temperature)	-40-+80℃ only for digital output
Range(humidity)	0-100% only for digital output
Accuracy(CO concentration)	±3%FS @25℃
Resolution(CO concentration)	1ppm
Supply	Mark on the label
Output	RS485，4-20mA，0-5V，0-10V
Power Consumption	<50mA@24V(4-20mA)
Warm Up Time	3min
Response Time	<30s
Operating Temperature	-20℃-+60℃@15-80%RH
Storage	-40-70℃@20%-90%RH
Shell Material	ABS
Repeatability	<±10%FS
Zero drift	<10ppm
Installation	Wall-mounted
Dimension	110*85*44mm

OUTPUT CHARACTERISTICS

- **Current**

Characteristic transfer function:

CO=(I-4)/(20-4)*2000(Range:0-2000ppm).

(where I = output current(mA))
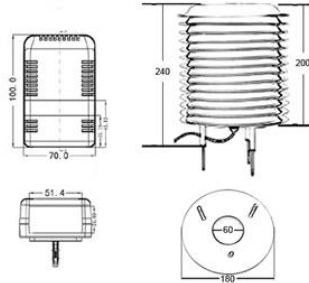
- **Voltage**

Characteristic transfer function:

CO=U/(full scale voltage-zero point voltage)*2000(Range:0-2000ppm),

(where U = output voltage(V))

- **RS485**

If the transmission distance is over 100m, please add one 120Ω terminal matching resistance on the front end and back end of bus interface respectively.See appendix for communication protocol.

DIMENSION

ELECTRICAL CONNECTIONS

Connector（cable）	RS485	Voltage/ Current
Red	V+	V+
Black	V-	V-
Yellow	RS485A	Signal+
Green	RS485B	

Note: This product has been tested and complies with European CE requirements for EMC directive.

Communication Protocol（MODBUS）

Transmission mode: MODBUS-RTU,**Baud rate:** 9600bps,**Data bits:**8,**Stop bit:**1,**Check bit:**no

Slave address:the factory default is 01H (set according to the need,00H to FFH)

● **The 03H Function Code Example: Read The CO Concentration**

Host Scan Order(slave address:0x01)

01 03 00 00 00 01 840A

Slave Response

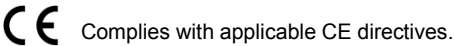**01 03 02 00 32 BF06**

CO: (0032)H=(50)D,50=50ppm

● **The 06H Function Code Example: Modify the slave address**

Host Scan Order (Changed to 02H,read and write address must be 01H):

01 06 00 30 00 02 0804

Slave Response:

01 06 00 30 00 02 0804

Note:

1. All underlined is fixed bit;

2. The last two bytes is CRC check command.

WARRANTY

This product is warranted to be free of defects in materials and construction for a period of 12 months from date of lead time.

Liability is limited to repair or replacement of defective item.