RK300-03 CO$_2$ Concentration Sensor

Hunan Rika Electronic Tech Co.,Ltd

Add: 401, 1st Unit, 10th Bd, International Enterprise Center, No.268 Xinxing Rd, Yuhua Dist,

 Changsha, 410116 Hunan, China.

T:+86-731-85132979

E:info@rikasensor.com

W:www.rikasensor.com

RK300-03 CO$_2$ transmitter is using NDIR principle to detect the CO$_2$ concentration in the air, designed with advanced infrared absorption gas detection technology ,a precise optical path and an excellent circuit.   A temperature sensor built-in realizes temperature compensation to ensure the accuracy of measurement. It is without oxygen dependence , of long service life.

FEATURES

- High sensitivity
- Fast response
- High precision, wide measuring range
- Effective resistance to water vapor
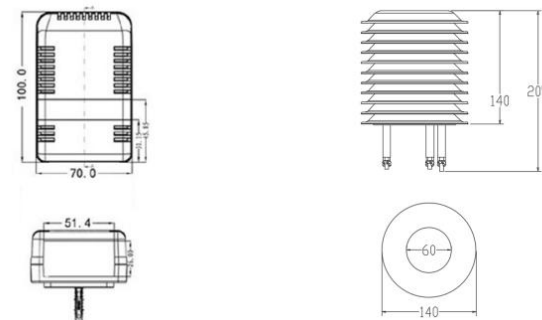- Excellent stability
- Easy installation

SPECIFICATIONS

Item	Technical Specification
Range(concentration)	0-2000ppm,0-5000ppm,0-10000ppm
Accuracy	±3%FS@25℃
Supply	Mark on the label
Output	4-20mA,0-5V,RS485
Power Consumption	<50mA@24V(4-20mA)
Warm Up Time	3min
Response Time	<90s
Temperature Drift	≤0.2%FS/℃
Stability	<±2%FS
Repeatability	<±1%FS
Operating Temperature	-20℃-+60℃@15-80%RH
Storage	-40-70℃@20%-90%RH
Shell Material	ABS

DIMENSION

Unit:mm

Indoor(Wall-mounted installation)   Outdoor

ELECTRICAL CONNECTIONS

Connector（cable）	Voltage	Current	RS485
Red (PIN1)	V+	V+	V+
Black (PIN2)	V-	V-	V-
Yellow (PIN4)	Signal out	Signal out	RS485A
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_2 Concentration**

Host Scan Order(slave address:0x01)

01 03 00 00 00 01 840A

Slave Response

01 03 02 0E 48 BC12

CO_2: (0E48)H=(3656)D=3656ppm

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

Host Scan Order (Changed the 02H to 01H):

02 06 00 30 00 01 4836

Slave Response:

02 06 00 30 00 01 4836

If you forget the original address, you should use the broadcast address(FEH) (ensure that no other devices on the bus at this time).

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.

CE Complies with applicable CE directives.

Manual subject to change without notice. Version 1.0

Copyright © 2015 Hunan Rika Electronic Tech   Co.,Ltd