

RK300-13 VOC Concentration Sensor

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RK300-13 volatile organic compound gas sensor is a gas detection product developed and produced by our company; RK300-13 adopts MEMS principle and can be used for VOC gas detection in various environments. The sensor has the advantages of stable signal, high precision and fast response speed.

APPLICATION

- Medical equipment
- HVAC and air conditioning
- Industrial control
- Environmental monitoring

SPECIFICATIONS

Item	Specification
Measuring range	0-10ppm
Supply	Mark on the label
Resolution	0.001ppm
Accuracy	±3%rdg@25℃
Response time	≤2s
Output	RS485
Power consumption	≤0.2W
Operating temperature	-20-+50℃
Relative humidity	0-95%RH（No condensation）
Shell Material	ABS

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DIMENSION



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ELECTRICAL CONNECTIONS

Connector（cable）	Voltage	RS485
Red	V+	V+
Black	V-	V-
Yellow	Signal+	485A
Green		485B

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

PARAMETER SELECTION TABLE

Remark	Series	Type	Indoor /Outdoor	Range	Output	Supply	Cable Length	
RK								
	300							
		13						
			A					Indoor
			B					Outdoor
				A				0-10ppm
				X				Other
					A			4-20mA
					B			RS485（modbus-RTU）
					X			Other
						A		12-24VDC
						X		Other
							2000	Units:mm（typ）
							3000	Units:mm
							...	Units:mm

Example:RK300-13BAAA2000 Outdoor,Range:0-10ppm, output:4-20mA,Supply:12-24VDC,Cable Length:2m.

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 EFH)

- The 03H Function Code Example: Read The VOC concentration

Host Scan Order(Slave addr:0x01):

01 03 00 00 00 01 840A

Slave Response:

01 03 02 00 9B F9EF

VOC :(009B)H=(155)D =155ppm

- The 06H Function Code Example: Modify the slave address(fixed command,ensure that no other devices on the bus)

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


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

 Complies with applicable CE directives.
Manual subject to change without notice. Version 1.0
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