

# Zwinsoft

## ZWIN-ESG1008 Composite gas detector

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### Product Specifications



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## 一、 Product Overview

ZWIN-ESG1008 five-in-one composite gas detector is an early fire warning product mainly used in electrochemical energy storage battery PACK. This product is usually installed on the outside or inside of the battery PACK box, or on the high wall or ceiling of a small energy storage battery cabinet. This product has RS485 communication function.

This product uses built-in detectors to detect the smoke concentration, CO concentration, temperature, hydrogen concentration in the air, and VOC concentration in real time, and transmits data through RS485 and corresponding protocols. Timely detection and transmission of various data of the air environment. This product has the following features:

- Real-time: The product monitors various air environment indicators in the area in real time.
- Accuracy: The sensor used has the advantages of low power consumption, high precision, high sensitivity, wide linear range, strong anti-interference ability, etc., coupled with the self-developed motherboard and program, it has achieved high integration, excellent anti-interference algorithm, light and compact size, stable and reliable performance, and good repeatability and stability.
- Easy to install: There are four screw holes on the product housing, suitable for various equipment installation environments.

## 二、 Product Parameters

Serial	Name	unit	Technical Parameters
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number			
1	Working voltage	V	12V
2	Working temperature	°C	-10°C~+50°C
3	Detection type	-	Carbon monoxide, smoke, temperature, hydrogen、VOC
4	Temperature measurement range	°C	-55°C~+125°C
5	Temperature measurement accuracy	°C	±1°C
6	Carbon monoxide measurement range	PPM	0~5000PPM
7	Carbon monoxide measurement accuracy	PPM	±10PPM
8	Smoke concentration measurement range	PPM	200~10000PPM
9	Smoke concentration measurement accuracy	-	$\leq 0.6 (R_{3000ppm}/R_{500ppm} C_3H_8)$
10	Hydrogen measurement range	PPM	100~3000PPM
11	VOC measurement range	PPM	1~30PPM
12	Communication method	-	RS485
13	Installation method	-	Screw fixing
14	Preheating time before test	-	More than 2 days

## 二、Communication Protocol

1. The factory default device ID is 01.

(1) Read instructions

(2) Read the real-time value of the slave

Host sends: 01 03 00 00 00 0A CRC

Slave Reply: 01 03 14 64 3B 1F 41 68 11 79 43 9A 99 DD 41 EC 51 98 3F 8F C2 CB 42

A3 4F

The returned data is of float type,

64 3B 1F 41 represents carbon monoxide concentration 9.95PPM

68 11 79 43 represents smoke concentration 249.07PPM

9A 99 DD 41 represents temperature 27.7°C

EC 51 98 3F represents VOC concentration 1.19PPM

8F C2 CB 42 represents hydrogen concentration 101.88PPM The returned data is of float type,

(3) Read the slave SN::

The host sends: 01 03 10 00 00 06 CRC

The slave responds: 01 03 0C 82 33 14 30 00 00 94 69 09 A7 1D 09 B7 38

82 33 14 30 00 00 94 69 09 A7 1D 09 represents the SN number

(4) Read the slave version number:

The host sends: 01 03 10 06 00 07 CRC

The slave responds: 01 03 0E 58 46 2D 48 56 33 31 2D 53 56 31 30 20 20 9C B7

58 46 2D 48 56 33 31 2D 53 56 31 30 20 20 represents the version number

(5) Read SN+ version number

The host sends: 01 03 10 00 00 0D CRC

The slave responds: 01 03 1A 82 33 14 30 00 00 94 69 09 A7 1D 09 58 46 2D 48 56 33

31 2D 53 56 31 30 20 20 65 CC

82 33 14 30 00 00 94 69 09 A7 1D 09 represents the SN number

58 46 2D 48 56 33 31 2D 53 56 31 30 20 20 represents the version number 写入指令

Modify device ID:

Host sends: 01/FE 06 00 01 00 YY CRC (YY is the new ID)

Slave responds: ID 06 02 00 ID CRC