



AT-EG02

Product Overview

The AT-EG02 is a high-performance, fixed multi-gas detector designed for continuous safety monitoring in demanding industrial environments. Capable of detecting up to four different gases simultaneously (combustible, toxic, and oxygen), it features an explosion-proof enclosure, a intuitive TFT color LCD interface, and remote control operation. With its fast response, high accuracy, and exceptional stability, it provides reliable protection and a smart user experience.

Key Features

Multi-Gas Monitoring: Supports up to 4 sensors (catalytic combustion, electrochemical, infrared, PID, semiconductor).

Robust Construction: Explosion-proof design per GB3836 standards and IP66 rating for harsh conditions.

Intelligent Interface: Remote-controlled operation with a clear TFT color display for safe and user-friendly interaction.



Flexible Connectivity: Features RS485 and 2-wire PowerBUS communication, plus relay and external alarm outputs.

Wide Operating Range: Functions reliably from -40°C to +70°C.

Easy Maintenance: Simplified remote calibration, addressing, and reset functions.

Technical Specifications

Category	Specification
Detection Target	Combustible Gas / Toxic Gas / Oxygen
Operating Voltage	24-36 VDC, Non-Polarity
Protection Rating	IP66
Housing Protection	Flameproof Enclosure "d" (GB3836.1/GB3836.2)
Output Interfaces	1 x Isolated RS485 (2KV) 1 x PowerBUS (2-wire system) 1 x Relay Output (COM, NO) 1 x External 24V Sound & Light Alarm Interface
Communication	RS485: 9600 bps PowerBUS: 9600 bps
Operating Environment	Temperature: -40°C to +70°C Humidity: 10% to 93% RH (Non-condensing)
Compatible Sensors	Catalytic Burn, Semiconductor, Electrochemical, Infrared, PID
Alarm Output	Relay Output
Product Weight	≤ 3.5 kg
Product Dimensions	253 × 202 × 151 mm (with alarm light)
Compliance Standards	GB3836.1-2010, GB3836.2-2010, GB15322.1-2003, JJG693-2011, GB4208-2008

Installation Guidelines

Mounting: Wall, pipe, bracket, or ceiling mounting. Ensure a secure and firm installation using Φ8mm mounting holes.

Sensor Orientation: The sensor must be installed facing downward.

Coverage & Placement:

Combustible Gas: Effective coverage radius of 7.5m indoors, 15m outdoors.

Toxic Gas: Within 1m of a leak source indoors, 2m outdoors.

Positioning by Gas Density:

Lighter than Air (e.g., H₂, CH₄): Install 0.5m - 2m **above** the source.



Heavier than Air (e.g., H₂S, CO₂): Install 0.3m - 0.6m **above** ground level.

Similar to Air (e.g., CO): Install within 1m **above and below** the source.

Note: Install in a location free from strong vibration, impact, electromagnetic interference, and ensure easy access for maintenance.

Wiring Terminal Definitions

Terminal	Description
24V	Power Supply Positive
GND	Power Supply Negative
COM	Relay Common
NO	Relay Normally Open
A+	RS485 A+
B-	RS485 B-
AL+	Sound & Light Alarm Positive
AL-	Sound & Light Alarm Negative

Recommended Cable: RVVP 2×2.5mm²

Maintenance & Service

Routine Maintenance:

Do not relocate or disassemble the unit after installation.

Avoid exposing the sensor to high gas concentrations.

Prevent frequent power cycles.

Sensor Life: Typical service life of 2-3 years (varies with environment).

Calibration: Regular calibration is required to ensure accuracy. The interval must not exceed one year.

Warranty & Service:

Warranty Period: 12 months from the date of purchase.

Lifelong Maintenance: Lifelong maintenance service is provided; repairs outside the warranty period are charged for parts and labor.