

# GAS DETECTION & ANALYSIS SOLUTIONS

Fixed • Portable • Process • Emission Monitoring

Precision Gas Intelligence for Safety, Process Control  
and Environmental Compliance



**LABTECH ELECTRONICS PRIVATE LIMITED**

**PRECISION IN EVERY PROCESS**

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# COMPLETE GAS MEASUREMENT PORTFOLIO

Integrated solutions for personnel safety, process optimisation, product purity and environmental compliance.



## GAS DETECTION

- Fixed Gas Detectors • Portable Gas Detectors
- Open-Path Detectors • Gas Alarm Controllers

## PROCESS GAS ANALYSIS

- Oxygen Purity • Trace Oxygen • Hydrogen
- Nitrogen • Dew Point



## EMISSION MONITORING

- CEMS • Stack & Flue Gas
- Portable Emission Analysis
- Particulate Monitoring



## SENSING TECHNOLOGIES

- Electrochemical • NDIR • TDLAS • PID • Thermal Conductivity • Laser Backscatter



## INDUSTRIES

- Oil & Gas • Petrochemical • Power • Steel • Cement • Chemical • Pharmaceutical • Water & Wastewater



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# FIXED GAS DETECTION

Continuous monitoring for personnel safety, plant protection and process control.



## AC500GDS-TG UNIVERSAL FIXED GAS DETECTOR

- Toxic Gases • Oxygen • Combustible Gases • VOC
- Electrochemical • NDIR • Catalytic • PID
- Accuracy:  $\pm 2-5\%$  FS, sensor dependent
- Outputs: 4–20 mA • RS485 Modbus • HART optional
- Protection: IP66/IP68      Supply: 12–24 VDC

## AC500GDS-M3 FIXED MULTIGAS DETECTOR

- Simultaneous monitoring of 1–6 gases
- 2.4-inch colour display • Configurable high and low alarms
- 4–20 mA • RS485 • Relays • Optional wireless communication



## APPLICATION-SPECIFIC DETECTORS



### AC500GDS-H2O2

Hydrogen Peroxide  
0–200 ppm • Electrochemical



### AC500GDS-O2

Oxygen Deficiency  
%Vol • Diffusion Type

## TYPICAL GASES

O<sub>2</sub> • CO • H<sub>2</sub>S • SO<sub>2</sub> • NO<sub>2</sub> • NH<sub>3</sub> • Cl<sub>2</sub> • H<sub>2</sub> • CH<sub>4</sub> • LPG • CO<sub>2</sub> • VOC



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# PORTABLE GAS DETECTION

Fast, reliable measurement for personal safety, confined-space entry and process surveys.



## AC500DGDS-M4S PORTABLE FOUR-GAS DETECTOR

Standard Gases: O<sub>2</sub> • CO • H<sub>2</sub>S • LEL

Sound • Light • Vibration Alarms

100 Event Records • Optional 100,000-Reading Data Logger

Operating Time: Approx. 14 h    Protection: IP65    Weight: 240 g

## AC5000PGS PORTABLE PUMPING GAS DETECTOR

Integrated Sampling Pump • Fast Remote Sampling

Span & Zero Calibration • USB Data Download

Sound • Light • Vibration    Protection: IP66

### BIOGAS CONFIGURATION

CH<sub>4</sub>: 0–100% Vol • CO<sub>2</sub>: 0–100% Vol

O<sub>2</sub>: 0–25% Vol • H<sub>2</sub>S: 0–500 ppm



## AC500SGDS SINGLE-GAS DETECTOR

Replaceable Sensor • Compact  
Personal Protection

Audible • Visual • Vibration Alarm



## AC5000PGS-N2 PORTABLE NITROGEN ANALYSER

Range: 0–100% Vol N<sub>2</sub>    Resolution: 0.01% Vol

Response: ≤20 s    Built-in Pump    IP66

## APPLICATIONS

Confined Spaces • Tanks • Pits • Pipelines • Biogas Plants • Safety Surveys • Process Sampling

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# INFRARED & OPEN-PATH GAS DETECTION

Advanced hydrocarbon monitoring for localised leaks and wide-area gas clouds.



## AC500GDS-IR POINT-TYPE INFRARED GAS DETECTOR

Methane & Hydrocarbon Gases • NDIR Infrared

Range: 0–100% LEL      Accuracy:  $\pm 2\%$  FS

Response:  $\leq 30$  s      Sensor Life:  $\geq 10$  Years

Outputs: 4–20 mA • HART      Supply: 24 VDC

Automatic optical self-calibration • Anti-condensation design

## AC500PGD OPEN-PATH NATURAL GAS DETECTOR

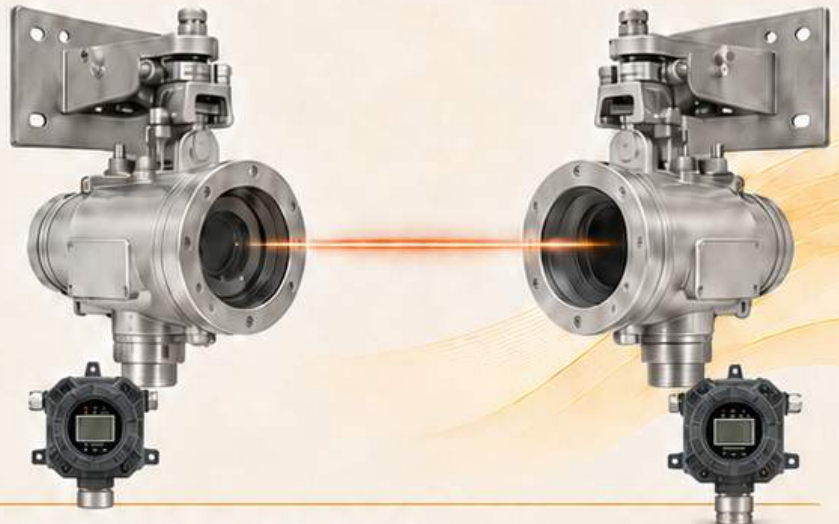
TDLAS Line-of-Sight Gas-Cloud Detection

Optical Path: Up to 100 m      Response:  $T_{90} \leq 3$  s

Measurement: Configurable LEL-m Range

Outputs: 4–20 mA • RS485 Modbus optional

SS316L Enclosure • IP66/IP67 •  $-40$  to  $+70^{\circ}\text{C}$



## SELECT THE RIGHT COVERAGE



### POINT-TYPE

Local leak monitoring

- Installed near expected release points



### OPEN-PATH

Wide-area gas-cloud monitoring

- Covers open and distributed process areas

## APPLICATIONS

Gas Stations • Compressor Areas • LNG/LPG Facilities • Tank Farms • Refineries • Loading Bays

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# GAS ALARM CONTROL & SAFETY ACCESSORIES

Centralised monitoring, annunciation and emergency control for industrial gas-safety systems.



## AC500GAC INTELLIGENT GAS ALARM CONTROLLER

2-Wire • 3-Wire • 4-Wire Detector Interfaces

Inputs: 4–20 mA • Digital Bus

Configurable Systems up to 100 Monitoring Points

LCD Display • Audible & Visual Alarm • Remote Zero Verification

Event Storage: Up to 65,000 Records      Communication: Up to 1000 m

Main Supply: 220 VAC

Detector Supply: 24 VDC

Operating Temperature: -10 to +50°C

No-Load Power: ≤10 W

SIL-Certified Configurations Available



### INDUSTRIAL HOOTER

High-Output Audible Warning • 24 VDC / 230 VAC



### LED ALARM BEACON

Red • Amber • Green • Flashing or Continuous



### MANUAL CALL POINT

Break-Glass or Resettable • NO/NC Potential-Free Contact

## ALARM ACTIONS

**FAULT:** Maintenance Alert • **LOW GAS:** Start Ventilation • **HIGH GAS:** Valve Closure / ESD • **MANUAL:** Emergency Alarm

# PROCESS GAS ANALYSIS

Reliable online measurement for gas purity, trace contamination and process optimisation.



## AC5000-O2

### PROCESS PURITY OXYGEN ANALYSER

Range: 10–99.99% O<sub>2</sub> • Principle: 3D Ion Current

Accuracy:  $\leq \pm 1\%$  F.S. • Resolution: 0.01%

Response: T90 <15 s • Sample Flow: 400–600 ml/min

Isolated 4–20 mA • RS232 Standard / RS485 Optional



## AC5000PT-O2

### PROCESS TRACE OXYGEN ANALYSER



Ranges: 0–10 / 100 / 1000 ppm, 1% O<sub>2</sub>

Electrochemical Principle • T90 <60 s

4–20 mA • RS232 / RS485 Optional

Overpressure & Over-range Protection

## AC5000-H2

### HYDROGEN ANALYSER



Thermal Conductivity Principle

Configurable up to 99.999% H<sub>2</sub>

Accuracy:  $\pm 2\%$  • Repeatability:  $\pm 1\%$

4–20 mA • RS485 Standard



## AC5000-DPX

### DEW POINT TRANSMITTER

Compact Online Moisture Monitoring

Outputs: 4–20 mA • RS485

Suitable for Compressed Air, Industrial Gases and Drying Systems



## APPLICATIONS

Air Separation • PSA Oxygen • Hydrogen-Cooled Generators • Inert Gas Systems • Semiconductor • Petrochemical • Food & Packaging



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# CONTINUOUS EMISSION MONITORING

Integrated stack, flue-gas and particulate monitoring for environmental compliance.



## AC9001 CEMS

### CONTINUOUS EMISSION MONITORING SYSTEM

Measured Parameters: SO<sub>2</sub> • NO<sub>x</sub> • CO • CO<sub>2</sub> • O<sub>2</sub> • SPM

Temperature • Pressure • Flue-Gas Velocity / Flow

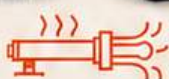
Heated Extraction & Sample Conditioning

Automatic Calibration • Fault Diagnostics • Data Logging

RS485 / Ethernet / GPRS Data Transmission



STACK



HEATED SAMPLING



PRE-TREATMENT



ANALYSIS



REPORTING



## AC9002

### STACK / FLUE MULTIGAS MONITOR

Continuous Monitoring  
of 1-6 Gases

Pump Sampling •  
Dual Flow Control

Dust, Oil &  
Moisture Filtration

4-20 mA • RS485 •  
Optional 4G / LoRa



## AC9010

### STACK SPM MONITOR

Laser Backscatter  
Measurement

Ranges up to  
20,000 mg/m<sup>3</sup>

Response: <10 s •  
Output: 4-20 mA

In-situ Installation •  
Low Maintenance

## APPLICATIONS

Power Plants • Boilers • Cement • Steel • Refineries • Chemical Plants • Incinerators

## AC8000-EM

### PORTABLE EMISSION GAS ANALYSER



Up to 18 Gases • Built-in Pump

O<sub>2</sub> • CO<sub>2</sub> • CO • NO • NO<sub>2</sub> • SO<sub>2</sub> • VOC

Data Logging • IP66

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Protect People • Optimise Processes • Preserve the Environment

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