seitron Americas

INDUSTRIAL CATALOG

Industrial Emissions Analysis Range

Our dedicated team is always on the forefront of designing and manufacturing the most suitable, custom and innovative instruments to match almost every industrial application.

Standards regulating exhaust gas emissions in industrial systems are also becoming more strict, being of great relevance for both climate and health protection.

In high intensity processes, great quantities of toxic gases are produced, such as carbon monoxide (CO), carbon dioxide (CO_2), nitrogen oxides (NOX), sulfur dioxide (SO_2) amongst others.

Often performed in extreme environments, featuring high levels of humidity, high temperatures and presence of particulate matter coming from combustion gases, accurate emissions measurements are needed in order to verify the quality, efficiency and safety of the process.

The analysis are typically performed by special laboratories, maintenance technicians of industrial plants or by the industries themselves.

In order to answer these needs, Seitron has developed a line of industrial emissions analyzers, either portable for periodical measurements or fixed for continuous emissions monitoring.

Applications

Chemical Industries

Boilers

Industrial Burners

Cement

Gas & Diesel Engine

Mining

Laboratories

Biogas Factories

Novo
ALL-IN-ONE EMISSIONS ANALYZER

INDUSTRIAL EMISSIONS ANALYZERS COMPANY OF THE YEAR 2025
Seitron Americas
MANUFACTURING

DL 2022
DEALER DESIGN AWARDS
the NEWS | GOLD

Fast / Easy / Robust / Accurate

- O2, CO, CO2, Temperature, Draft & Pressure Included
- Simultaneous Gas Pressure + Combustion Measurements
- **Cracked Heat Exchanger Test**   NEW
- Optional Built-in Printer
- Long Life O2 Sensor (4 Years)
- New Dual Range (Low/High) Sensor Technology
- Low NOx and SOx sensors
- 15 Preprogrammed Fuels Including Natural Gas, Oil, Propane & Biofuels
- BIO 5%, B20, B50, B80, B100 Fuels
- CO Protection Dilution Pump
- Rechargeable Li-Ion Batteries
- Integrated water trap with LED backlight for easy maintenance
- Differential Pressure Manometer
- Draft Measurement
- Mobile App for iOS and Android

Built-in printer

Field Replaceable Sensors

O_2 , CO Gas Sensors

7" Touch Color Display

Mobile App - iOS, Android

Simultaneous Combustion + Gas Preassure

Bluetooth®

Seitron Smart Analysis

GET IT ON Google Play

Download on the App Store

EXPLORE IT ON AppGallery

Windows Software
Seitron Smart Analysis

Windows 7 or later

HVAC KNOW IT ALL

MECHANICAL HUB

INDUSTRIAL COMBUSTION & EMISSIONS GAS ANALYZERS

MEASUREMENT	SENSOR	RANGE	RESOLUTION	ACCURACY	
O2 Long life	Electrochemical	0 .. 25.0% vol	0.1% vol	±0.2% vol	
CO sensor with Over Range protection (NOx filter) - Dual Range	Electrochemical	0 .. 500 ppm	0.1ppm	±2 ppm / ±5% measured value	0 .. 40.0 ppm / 40.1 .. 500.0 ppm
		501 .. 8000 ppm	1 ppm	±5% measured value / ±10% measured value	501 .. 2000 ppm / 2001 .. 8000 ppm
CO Mid	Electrochemical	0...20000 ppm	1 ppm	±10 ppm / ±5% v.m. / ±10% v.m.	0 .. 200 ppm / 201 .. 4000 ppm / 4001 .. 20000 ppm
CO High	Electrochemical	0...100000 ppm	1 ppm	±100 ppm / ±10% v.m.	0 .. 1000 ppm / 1001 .. 100000 ppm
NO	Electrochemical	0...500.0 ppm	0.1 ppm	±2 ppm / ±5% v.m.	0 .. 40 ppm / 40.1 .. 500.1 ppm
		501...5000 ppm	1 ppm	±10% v.m.	501 .. 5000 ppm
NO2	Electrochemical	0...100.0 ppm	0.1 ppm	±2 ppm / ±5% v.m.	0 .. 40 ppm / 40.1 .. 100.1 ppm
		101...1000 ppm	1 ppm	±10% v.m.	101 .. 1000 ppm
SO2	Electrochemical	0...500.0 ppm	0.1 ppm	±2 ppm / ±5% v.m.	0 .. 40 ppm / 40.1 .. 500.1 ppm
		501...5000 ppm	1 ppm	±10% v.m.	501 .. 5000 ppm
H2	Electrochemical Sensor	0...2000 ppm	1 ppm	± 10 ppm / ± 10% v.m.	0 ppm .. 100 ppm / 101 ppm .. 2000 ppm
H2 High	Electrochemical Sensor	0...40000 ppm	10 ppm	± 100 ppm / ± 10% v.m.	0 ppm .. 1000 ppm / 1001 ppm .. 40000 ppm
H2S	Electrochemical Sensor	0...5000 ppm	1 ppm	± 10 ppm / ± 10% v.m.	0 ppm .. 100 ppm / 101 ppm .. 5000 ppm
H2S Low	Electrochemical Sensor	0...500.0 ppm	0.1 ppm	±5 ppm / ±5% v.m.	0 .. 100.0 ppm / 101 .. 500.0 ppm
NH3 Low	Electrochemical Sensor	0...500.0 ppm	0.1 ppm	±10 ppm / ±10% v.m.	0 .. 100.0 ppm / 100.1 .. 500.0 ppm
CxHy	Pellistore Sensor	0..5% vol CH4	0.01% vol	±0.25% abs	
CH4 NIDR	NDIR Sensor	0..100% vol	0.01% vol	±0.3 vol / ±10% v.m.	0% .. 10% vol / 10.01% .. 100.00% vol
CO2 NDIR	NDIR Sensor	0..100% vol	0.01% vol	±1 vol / ±2% fs	0% .. 10.00% vol / 10.01% .. 50.00% vol
CO2	Calculated	0 .. 99.9% vol	0.1% vol		
NOx	Calculated				
Air Temperature	TcK sensor	-4.0 .. 2282.0 °F / -20.0 .. 1250.0 °C	32.18 °F / 0.1 °C	±0.5 °C / ±0.5%	32 .. 212 °F (0 .. 100 °C) / 213.8 .. 2282.0°F (101 .. 1250 °C)
Stack Temperature	TcK sensor	-4.0 .. 2282.0 °F / -20.0 .. 1250.0 °C	32.18 °F / 0.1 °C	±0.5 °C / ±0.5%	32 .. 212 °F (0 .. 100 °C) / 213.8 .. 2282.0°F (101 .. 1250 °C)
Pressure (draft & differential)	Piezo Resistive	-40.1 .. +80.4 inH2O	0.004 inH2O	±1% measured value / ±0.08 inH2O / ±1% measured value	-40.1 .. -0.81 inH2O / -0.80 .. +0.80 inH2O / +0.81 .. +80.4 inH2O
Differential Temperature	Calculated	32.0 .. 2282.0 °F / 0 .. 1250.0 °C	33.8 °F / 0.1 °C		
Air Index	Calculated	0.00 .. 9.50	0.01		
Excess Air	Calculated	0 .. 850 %	1%		
Stack losses	Calculated	0.0 .. 100.0 %	0.1 %		
Efficiency	Calculated	0.0 .. 100.0 %	0.1 %		
Warranty	4 years on O2 Sensors and 2 years on Analyzer, CO Sensor, Probe				

Features:
- Built-in Printer
- CO Air Free
- Altitude Adjustment
- Field Replaceable Sensors
- Combustion Efficiency, Losses, Excess Air
- CO sensor protection
- Draft & Differential Pressure
- Temperature Measurements
- 7" Color Touch Screen
- Bluetooth Connectivity
- Long Lasting Rechargeable Battery & AC Charger
- Gas Sampling Probe & Hose

Novo Kits Include:
- Combustion Analyzer
- Gas probe with 12" (300 mm) interchangeable tip
- 10 ft (3m) Single Connection Hose
- Integrated water trap
- Manometer Hoses
- Outdoor Combustion Air Temp Probe
- AC Power Adapter & Cable
- Hard plastic kit case
- Quick Guide
- Calibration Certificate

Model	Description
Novo 3	Analyzer w/ O2, CO, NO/NOx, CO2, Efficiency, Excess Air, Draft, Pressure, Temp, Rechargeable Battery & AC Plug, 12" (300mm) Probe with 10 ft (3 m) Hose, Hard Case, Calibration Certificate, Operating Manual, Cheat Sheet, Integrated Water Trap, Data Storage, PC Software, Bluetooth, Differential Pressure Manometer Kit, Outdoor Air Temperature Probe + iOS and Android App included.
Novo 3-P	All In One Kit with BUILT-IN Printer. Analyzer w/ O2, CO, NO/NOx, CO2, Efficiency, Excess Air, Draft, Pressure, Temp, Rechargeable Battery & AC Plug, 12" (300mm) Probe with 10 ft (3 m) Hose, Hard Case, Calibration Certificate, Operating Manual, Cheat Sheet, Integrated Water Trap, Data Storage, PC Software, Bluetooth, Differential Pressure Manometer Kit, Outdoor Air Temperature Probe + iOS and Android App included.
Novo 4S	Analyzer w/ O2, CO, NO, SO2, Total NOx, CO2, Efficiency, Excess Air, Draft, Pressure, Temp, Rechargeable Battery & AC Plug, 12" (300mm) Probe with 10 ft (3 m) Hose, Hard Case, Calibration Certificate, Operating Manual, Cheat Sheet, Integrated Water Trap, Data Storage, PC Software, Bluetooth, Differential Pressure Manometer Kit, Outdoor Air Temperature Probe + iOS and Android App included.
Novo 4S-P	All In One Kit with BUILT-IN Printer. Analyzer w/ O2, CO, NO, SO2, Total NOx, CO2, Efficiency, Excess Air, Draft, Pressure, Temp, Rechargeable Battery & AC Plug, 12" (300mm) Probe with 10 ft (3 m) Hose, Hard Case, Calibration Certificate, Operating Manual, Cheat Sheet, Integrated Water Trap, Data Storage, PC Software, Bluetooth, Differential Pressure Manometer Kit, Outdoor Air Temperature Probe + iOS and Android App included.
Novo 4N	Analyzer w/ O2, CO, NO, NO2, Total NOx, CO2, Efficiency, Excess Air, Draft, Pressure, Temp, Rechargeable Battery & AC Plug, 12" (300mm) Probe with 10 ft (3 m) Hose, Hard Case, Calibration Certificate, Operating Manual, Cheat Sheet, Integrated Water Trap, Data Storage, PC Software, Bluetooth, Differential Pressure Manometer Kit, Outdoor Air Temperature Probe + iOS and Android App included.
Novo 4N-P	All In One Kit with BUILT-IN Printer. Analyzer w/ O2, CO, NO, NO2, Total NOx, CO2, Efficiency, Excess Air, Draft, Pressure, Temp, Rechargeable Battery & AC Plug, 12" (300mm) Probe with 10 ft (3 m) Hose, Hard Case, Calibration Certificate, Operating Manual, Cheat Sheet, Integrated Water Trap, Data Storage, PC Software, Bluetooth, Differential Pressure Manometer Kit, Outdoor Air Temperature Probe + iOS and Android App included.
Novo 4C	Analyzer w/ O2, CO, NO, CxHy, Total NOx, CO2, Efficiency, Excess Air, Draft, Pressure, Temp, Rechargeable Battery & AC Plug, 12" (300mm) Probe with 10 ft (3 m) Hose, Hard Case, Calibration Certificate, Operating Manual, Cheat Sheet, Integrated Water Trap, Data Storage, PC Software, Bluetooth, Differential Pressure Manometer Kit, Outdoor Air Temperature Probe + iOS and Android App included.
Novo 4C-P	All In One Kit with BUILT-IN Printer. Analyzer w/ O2, CO, NO, CxHy, Total NOx, CO2, Efficiency, Excess Air, Draft, Pressure, Temp, Rechargeable Battery & AC Plug, 12" (300mm) Probe with 10 ft (3 m) Hose, Hard Case, Calibration Certificate, Operating Manual, Cheat Sheet, Integrated Water Trap, Data Storage, PC Software, Bluetooth, Differential Pressure Manometer Kit, Outdoor Air Temperature Probe + iOS and Android App included.

SIMULTANEOUS GAS PRESSURE + COMBUSTION READING + DRAFT

Thanks to Novo's ability to measure combustion parameters and gas pressure simultaneously, service time is drastically reduced and the need for separate devices is minimized.

PRO/CHART ANALYSIS MODES

- Select Equipment Type
- Stabilize Combustion readings in GREEN Zone for optimal combustion
- View Stoichiometric Chart/Graph
- Customize Manufacturer's Specific Ranges

GAS PRESSURE + COMBUSTION + DRAFT

- View LIVE Draft, Gas Pressure & Combustion Results at the SAME TIME
- Print or Save Gas Pressure
- No need for separate external manometer

7" RESPONSIVE TOUCH SCREEN

The new device has been redesigned to give the user an improved and easy-to-use experience. The analyzer includes a large 7" touchscreen, granting maximum visibility of all information along with quick and smooth browsing experience.

NEW CRACKED HEAT EXCHANGER TEST

- Detects potential cracks in forced-air furnace heat exchangers by comparing oxygen levels with the blower off and on
- Quick and reliable process to identify potential hazards before they escalate

NEW DRAFT PROBE (#AJDR01)

- External probe for NoVO enables measurements at alternate flue points
- Offers enhanced flexibility and diagnostic accuracy
- Perfect for technicians needing precision across multiple stack zones

Novo Series
Emissions Analyzers Selection Guide

PARAMETERS	Novo 3	Novo 3-P	Novo 4	Novo 4-P
# of Gases	3	3	4	4
O2 Long-Life (4 years)	✓	✓	✓	✓
CO2, (Calculated from O2), 0 - 100%	✓	✓	✓	✓
CO Measurement w/NOx filter, 0 - 8000 ppm	✓	✓	✓	✓
CO Over Range Protection 0 - 100,000 ppm	✓	✓	✓	✓
NO/NOx included 0 - 5,000 ppm	✓	✓	✓	✓
Low-NOx Capable 0 - 500.0 ppm	✓	✓	✓	✓
TOTAL NOx (NO + NO2 Included)	-	-	✓	✓
Ambient Temperature Measurement	✓	✓	✓	✓
Stack Temperature Measurement	✓	✓	✓	✓
Differential Pressure Manometer	✓	✓	✓	✓
Draft Measurement	✓	✓	✓	✓
Excess Air Calculation	✓	✓	✓	✓
Ambient CO Monitor	✓	✓	✓	✓
Simultaneous Measurement of Combustion + Pressure	✓	✓	✓	✓
Capable of measuring NO2, SO2, CxHy, H2S, H2, NH3, Direct CO2	-	-	✓	✓
High Altitude Adjustment	✓	✓	✓	✓

FEATURES

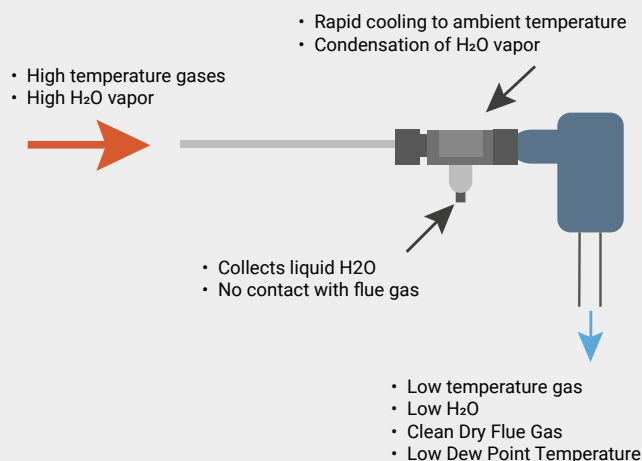|	Novo 3	Novo 3-P	Novo 4	Novo 4-P
Built-In Printer (Non-Fading Paper)	Optional	✓	Optional	✓
Wireless Bluetooth® Printer	Optional	-	Optional	-
FIELD-REPLACEABLE Pre-Calibrated Sensors	✓	✓	✓	✓
Mobile App + QR code	✓	✓	✓	✓
PC Software	✓	✓	✓	✓
Automatic data Logging	✓	✓	✓	✓
Combustion Efficiency Measurements for All Atmospheric & Condensing Systems	✓	✓	✓	✓
Rechargeable Battery w/ AC Charger	✓	✓	✓	✓
Display Screen	7" Touch	7" Touch	7" Touch	7" Touch
Carrying Case	Hard	Hard	Hard	Hard

Sample Conditioning Unit (SCU)
FOR LOW NOX & LOW SOX MEASUREMENTS

When using a portable gas analyzer for monitoring NO, NO2 and/or SO2 ranges **below 50 ppm** or if you are doing Long-term testing (over 40+ min), we need a sampling system designed **to minimize or eliminate** the residence time of the soluble gases in contact with condensing water droplets forming in side the walls of the sampling lines. Otherwise, the measured readings **could be in excess of 20% lower** than the actual values in the process.

Part # AACP01 - (1500/4500/6000) - **PASSIVE SCU**
Part # AJCP01 - (Novo) - **PASSIVE SCU**

Part # AACE01 - **ACTIVE SCU** (All Models)

- High temperature gases
- High H_2O vapor

- Rapid cooling to ambient temperature
- Condensation of H_2O vapor

- Collects liquid H2O
- No contact with flue gas

- Low temperature gas
- Low H_2O
- Clean Dry Flue Gas
- Low Dew Point Temperature

ACTIVE SCU

High temperature gases
High H_2O vapor

cooler

pump

Low temperature gas
Low H_2O

Collects liquid H_2O
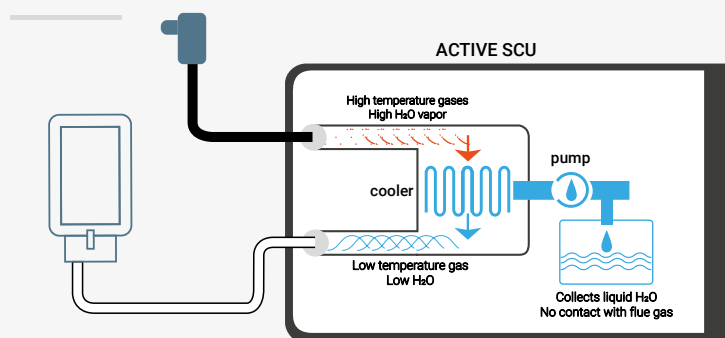No contact with flue gas

Features:

- Easy Plug & Play Installation
- Rapid Cooling to Ambient Temperature
- Easy Maintenance
- Compatible with 1500/4500/6000 (AACP01) and Novo (AJCP01) probe handles

Features:

- Integrated Thermoelectric Peltier Cooler
- Rapid Cooling and Drying of Flue Gas Samples
- Compatible with All Portable Seitron Gas Analyzers
- Automatic Condensate Drain Pump
- Protective Hard Plastic Carrying Case
- Connect to AC Power or Optional Portable DC Charger

Compatible with:

AAPT07	12" gas probe. Working temperature: 266°F (130°C)
AAPT08	7" gas probe. Working temperature: 752°F (400°C)
AAPT09	12" gas probe. Working temperature: 1112°F (600°C)
AAPT10	30" gas probe. Working temperature: 1472°F (800°C)
AAPT11	40" gas probe. Working temperature: 2192°F (1200°C)

S6000

INDUSTRIAL / COMMERCIAL EMISSIONS ANALYZER

Fast / Easy / Robust / Accurate

- Built In Printer
- Up to 6 gas (O_2 , CO, NO, NH_3 , NO_2 , CO_2, SO_2, CxHy (HC), H_2, H_2S, CH_4)
- NOx & SOx in one Instrument
- Low NOx & Low SOx Capable
- True NOx (Low NO+NO2) Available
- Automatic data logging
- Diluition pump for CO Auto range up to 100,000 ppm
- Smartphone Real Time + QRcode App (iOS, Android)
- Built in Manometer
- Draft/Pressure included
- PC Software Included
- New Ammonia (NH3) and Hydrogen (H2) Measurement

Up to 6 Gas Sensors

Field Replaceable Sensors

Built-in Printer

Full Color Graphic Display

Mobile App - iOS, Android

Bluetooth®

Seitron Smart Analysis

GET IT ON Google Play
Download on the App Store
EXPLORE IT ON AppGallery

Windows Software Seitron Smart Analysis

Windows 7 or later

Features

- Draft & Differential Pressure
- Temperature Measurements
- Large Color Display
- 2000 Test Internal Memory
- Bluetooth Connectivity
- Long Lasting Rechargeable Battery & AC Charger
- Gas Sampling Probe & Hose
- Gas velocity w/optional Pitot tube
- Longer probes: extension hoses available

INDUSTRIAL EMISSIONS ANALYZERS COMPANY OF THE YEAR 2025

Seitron Americas

MANUFACTURING

INDUSTRIAL COMBUSTION & EMISSIONS GAS ANALYZERS

MEASUREMENT	SENSOR	RANGE	RESOLUTION	ACCURACY	
O2 Long life	Electrochemical	0 .. 25.0% vol	0.1% vol	±0.2% vol	
CO sensor with Over Range protection NOx filter	Electrochemical	0 .. 500 ppm	0.1ppm	±2 ppm ±5% measured value	0 .. 40.0 ppm 40.1 .. 500.0 ppm
		501 .. 8000 ppm	1 ppm	±5% measured value ±10% measured value	501 .. 2000 ppm 2001 .. 8000 ppm
CO2	Calculated	0 .. 99.9% vol	0.1% vol	-	
H2	Electrochemical	0 .. 2000 ppm	1 ppm	± 10 ppm 0 ppm - 100 ppm	± 10 % 100 ppm - 2000 ppm
Low NO Standard NO	Electrochemical	0 .. 500 ppm	0.1ppm	±2 ppm ±5% measured value	0 .. 40.0 ppm 40.1 .. 500.0 ppm
		501 .. 5000 ppm	1 ppm	±5% measured value	501 .. 5000 ppm
Low NO2 Standard NO2	Electrochemical	0 .. 500 ppm	0.1ppm	±2 ppm ±5% measured value	0 .. 40.0 ppm 40.1 .. 500.0 ppm
		501 .. 1000 ppm	1 ppm	±5% measured value	501 .. 1000 ppm
Low SO2 Standard SO2	Electrochemical	0 .. 500 ppm	0.1ppm	±2 ppm ±5% measured value	0 .. 40.0 ppm 40.1 .. 500.0 ppm
		501 .. 5000 ppm	1 ppm	±5% measured value	501 .. 5000 ppm
NOx	Calculated	-	-	-	
NH3	Electrochemical	0 .. 500.0 ppm	0.1 ppm	±10 ppm ±10%	0 .. 100.0 ppm 100.1 .. 500.0 ppm
CxHy (HC)	Pellistor	0 .. 5%	0.01 %	±5% full scale	
Air Temperature	Pt100	- 4 to 248 °F - 20 to 120 °C	33.8 °F 32.2°F (0.1 °C)	33.8 °F 32.2°F (0.1 °C)	
Gas Temperature	TcK	- 4 to 2280 °F - 20 to 1250 °C	33.8 °F 32.2°F (0.1 °C)	33.8 °F 32.2°F (0.1 °C)	
Differential temperature	Calculated	- 4 to 2280 °F - 20 to 1250 °C	32.2°F (0.1 °C)	-	
Pressure/Draft	Piezo Resistive	-40.1 .. +80.4 in H2O	0.004 in H2O	±1% measured value ±0.08 inH_2O ±1% measured value	-40.1 .. -0.81 inH_2O -0.80 .. +0.80 inH_2O +0.81 .. +80.4 inH_2O
Excess air	Calculated	0 .. 850%	1%	-	
Efficiency	Calculated	0 .. 100%	0.1%	-	
Warranty	2 years on Sensors and 2 years on Analyzer				

Standard Probe Detail:
- 12" (300mm) probe
- 1112 °F (600 °C) max
- 10' (3m) Dual Hose

Long Probe Detail:
- 30" (750mm) probe
- 1472 °F (800 °C) max
- 10' (3m) Dual Hose

Extra Long & High Temp Probe Detail:
- 40" (1m) Probe or 60" (1.5m) probe
- 2192 °F (1200 °C) max
- 10' (3m) Hose

Hose Extention:
- 10' (3m) Length Available

Windows Software Seitron Smart Analysis

- Remote display of real-time analysis from the portable analyzer and data saving
- Display and/or export and stored data
- Analyzer configuration

Model	Description
S6000-5DS	O2, CO, NO/NOx, NO2 & SO2 Gas Sensors
S6000-5DC	O2, CO, NO/NOx, NO2 & CxHy/HC Gas Sensors
S6000-5SC	O2, CO, NO/NOx, SO2 & CxHy/HC Gas Sensors
S6000-5SH	O2, CO, NO/NOx, SO2 & H2S Gas Sensors
S6000-6DSC	O2, CO, NO/NOx, NO2, SO2 & CxHy/HC Gas Sensors
S6000-6DSH	O2, CO, NO/NOx, NO2, SO2 & H2S Gas Sensors

(*) All models above are available also with: Low NO, Low NO2, Low SO2   -   (**) Ammonia (NH3) Available upon request on any Model

S9000
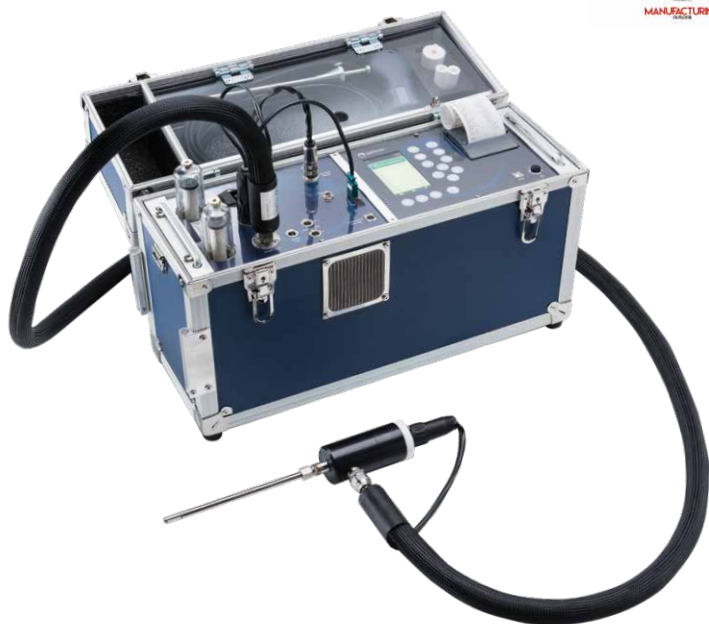
SEMI-CONTINOUS EMISSIONS ANALYZER UP TO 12 TOTAL GAS SENSORS

- Ability to simultaneously measure up to 12 different gases, with up to 9 single gas measuring sensors and one infrared bench (NDIR) for High CO, Direct CO2 & Hydrocarbons (HC)
- Measurable gases: O2, CO, CO2, CxHy, NO, NO2, SO2, H2S, H2, NH3 with different ranges and accuracies
- Selectable Fuels: methane, LPG, propane, butane, light oil, heavy oil, biogas, wood, pellets, natural gas, coal. Up to 16 additional fuels can be added by the user
- Pump for gas sample and 2nd dilution pump for CO cell protection
- Withstand very high stack temperatures
- Double particulate filter system
- Standard expansion water trap or Peltier quick Cooler
- Automatic condensate drainage with peristaltic pump
- Power supply from Lithium Ions Batteries or mains 90...260 Vac
- Datalogger function
- Industrial Grade Metal Case

Up to 9 Gas Sensors + 3 Gas Sensors (NDIR Bench)

Field Replaceable Sensors

Built-in Printer

Full Color Graphic Display

Real-Time PC Software included

Optional: Heated Line and Probe

Bluetooth®

Windows Software Seitron Smart Analysis

Windows 7 or later

Features
- Real-time data logging PC Software included
- Built in Thermometric Chiller with auto Condensate Drain
- Large Color Display
- 16000 Test Internal Memory
- Bluetooth Connectivity
- Gas Sampling Probe & Hose
- Heated probe and head available
- Positive, negative and Pressure Differential measurement
- AC Charger / power supply
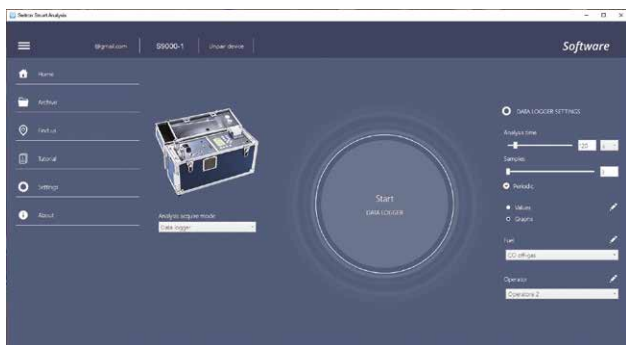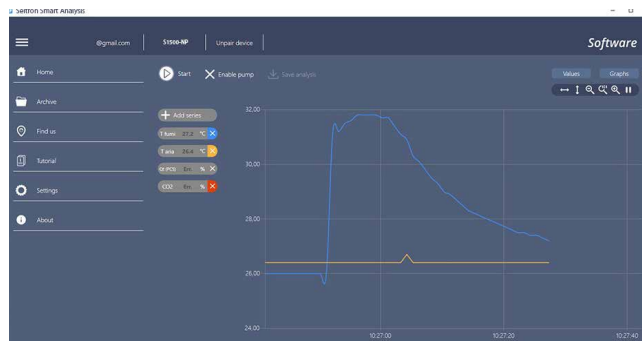- Gas sampling probes of different type and length

S9000 - FEATURES

**Windows Software
Seitron Smart Analysis**

Windows 7
or later

- Data Storage
- Remote display of real-time analysis from the analyzer
- Display and/or export and stored data
- Analyzer configuration

Heated Lines/Probe

Application

- Built In Thermoelectric Chiller with Auto Condensate Drain

- Customizable of Gas Sensors/probes for any Industrial application:
  O2, CO Low, CO High, NOx, Low NOx, SO2, Low SO2, H2S, CO2, High CO, H2 and now with NH3!

S9000 - TECHNICAL FEATURES

Power supply: **Battery charge:** **Charging time:** **Instrument battery life:**	100 .. 260V~, or Li-ion battery pack with internal protection circuit, rechargeable. 8 hours from 0% to 90%. 10 hours of continuous operation (except printer and Peltier Chiller). 2 hours with Cooler running.
Display:	Backlit TFT graphical color display. 4.3" 480×272 pixel.
Connectivity **Communication port:** **Bluetooth:**	 TYPE B USB connector. Communication distance: <100 metres (open field).
Autozero: **Dilution:**	Automatic autozero cycle with gas sampling probe in stack. CO sensor measurement range expansion system up to 100,000ppm (10.00%).
Gas measurement sensors: **Infrared bench:** **Fuel type:**	Up to 9, configurable among electrochemical, NDIR (single cell) and Pellistor. 3 gases NDIR bench: CO, CO_2, CxHy. 12 preprogrammed and 16 additional programmable by the user.
Self diagnostics: **Temperature measurement:** **Ambient temperature measurement:**	Check all functions and internal sensors with status indication. TcK double input with mini connector (ASTM E 1684-96) for Temperature Differential measurement (supply and return). Via internal sensor or via T2 TcK input with remote sensor.
Printer: **Printer power supply:** **Printer battery life:**	Integrated, thermal, with easy paper loading and paper level indicator. Analyzer batteries. With fully charged batteries up to 40 analysis reports.
Internal Data Memory:	16,000 complete data analysis, time and customer's name can be stored.
In-line filter:	With replaceable cartridge, 99% efficiency with 20µm particles.
Vacuum pump: **Capacity pump:**	2.0 l/min flow rate in the stack up to 120inH2O (300hPa) head. Internal sensor measuring pump flow rate.
Cooler sample treatment **Drying system:** **Type:** **Set point temperature cooler:** **Max. temp. deviation from set point:** **Condensate emptying pump:** **Peristaltic duty cycle pump:** **Warm-up time:** **Operating temperature:** **Anti-condensation trap** **Type:** **Condensate emptying pump:** **Operating temperature:**	 Rapid water condensation using cyclone system Peltier cell +41°F (+5°C) +50°F (+10°C) from set point Peristaltic hose 38 ml/min 30s On .. 30s Off ~ 15 .. 20 minutes 23°F (-5°C) .. 113°F (113°F / 45°C) Integrated Peristaltic hose 38 ml/min 23°F (-5°C) .. 113°F (45°C)
Working temperature: **Storage temperature:** **Humidity limit:** **Protection level:** **External dimensions:** **Weight:**	23°F (-5°C) .. 113°F (45°C) -4°F (-20°C) .. 122°F (50°C) 20% .. 80% RH IP21 20" x 14" x 8" (50 x 36 x 20 cm) (W x H x D). 20" x 18" x 5" (50 x 46 x 13 cm) (W x H x D) with intermediate drawer for heated head and sensor transportation. ~ 26.5 lb (12kg) (Typical configuration: nine sensors - Cooler - IR bench - smoke sampling sensor - power cable - USB cable - carrying strap - two paper rolls - USB stick - condensate drain tube - remote air intake tube - combustive air sensor). ~ 28.6 lb (13kg) (Typical configuration with additional accessories such as: 3m extension for smoke sensor - auxiliary air sensor - 12" (300mm) Pitot Tube - draught gauge). ~ 36.8 lb (16.7kg) (Typical configuration with additional accessories and intermediate drawer containing: heated head sensor with 12" (300mm) tip and heated tube).

- Emissions Measurements
- Thermoelectric Chiller with Automatic Condensate Drain
- Built-In Printer
- New iOS & Android App (Remote Display & QR Scanning)
- CO_2: Direct CO_2 measurement and/or % Calculation
- Low Ranges available for most sensors
- True NOx Measurement
- Combustion Efficiency, Losses, & Excess Air Calculations
- Draft & Differential Pressure
- Temperature Measurements
- Large Color Display
- 16,000 Test Internal Memory
- Bluetooth Connectivity
- Rechargeable Battery Pack & AC Charger
- Gas Sampling Probe & Hose
- PC Software & USB Cable
- Operating Manual
- Calibration Certificate
- Aluminum Carrying Case

ORDERING CODE:

Model # S9000-A-B-C	Description Standard S9000 Kit Configuration with O_2 sensor and 12" probe as standard

Example:
S9000-OCNL-IR-12H = O_2, Standard CO, Low Range NO, IR Bench (CO_2, CxHy & High CO), with 12" Heated Line & Probe

TABLE A (Gas Sensor Options – Choose up to 8)

O	O2 Sensor (0 .. 25.0% vol) **Included with standard kit**
C	Standard CO Sensor w/ H2 Compensation (0-8000 ppm)
CL	LOW-Range CO Sensor (0-1000 ppm)
CM	MID-Range CO Sensor (0-20,000 ppm)
CH	HIGH-Range CO Sensor (0-100,000 ppm)
N	Standard NO/NOx Sensor (0-5000 ppm)
NL	LOW NO/NOx Sensor (0-500 ppm)
D	Standard NO2 Sensor (0-1000 ppm)
DL	LOW NO2 Sensor (0-500 ppm)
S	Standard SO2 Sensor (0-5000 ppm)
SL	LOW SO2 Sensor (0-500 ppm)
H	Standard H2S Sensor (0-5000 ppm)
HL	LOW H2S Sensor (0-500 ppm)
G	H2 Sensor (0-2000 ppm)
C	Standard CxHy Sensor (0-5 %)
A	Standard Ammonia (NH3) Sensor (0-500 ppm)

TABLE B (NDIR Bench Options)

IR*	CO2 NDIR Sensor (0-50%), CxHy NDIR Sensor (0-100,000ppm), and High CO NDIR Sensor (0-50%)
O	No IR Bench Included

 *** IR Bench counts as 3 gas sensors**

TABLE C - Probe Options

12	12" (300mm) Probe, 1112F (600C) max, with 10' (3m) **Included With Standard Kit**
30	30" (750mm) Probe, 1470F (800C) max, with 10' (3m) Dual Hose (AASF35)
40	40" (1000mm) Probe, 1470F (800C) max, with 10' (3m) Dual Hose (AASF36)
12H	12" (300mm) Probe, 1112F (600C) max, with 10' (3m) HEATED Hose and HEATED Probe Head (AASR03)
40H	40" (1m) Probe, 2190F (1200C) max, with 10' (3m) HEATED Hose and HEATED Probe Head (AASR04)

OPTIONAL - Accessories and Consumable Parts

AARC10	Non-Fading Paper Roll (pack of 10)
AAFS02	Sintered Filter with Support for probe
AAFS01	Replacement Inox filter for AASF02
AATTA03	36" (900mm) Pitot Tube for Gas Velocity Measurements
AACEX02S	10' (3m) Dual Hose Extension
WFILA0001	Particulate Filter (Internal)
WFILX0016	Particulate Filter (External)
AAFA04	Anti-Dust filter (2pcs), only with NH3 installed
AASP01	Heat Protection Shield for probes
AAEB01	Trunk Extension
AATY01	Trunk Trolley
AACSA04	4" (100mm) Auxiliary Temperature Probe w/ 10ft (3m) hose
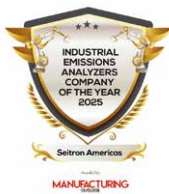
S9000-RACK

CONTINUOUS EMISSIONS GAS ANALYZER (CEM)

UP TO 8 TOTAL GAS SENSORS

- Serial communication port type RS485 according to protocol MODBUS® RTU USB Communication
- 4 .. 20 mA isolated output
- Output signal: from 4 to 20mA scalable up to 10% of the measurement range of the chosen sensor. Other calibrations beyond this limit on request
- 4 alarm relays outputs
- Heated probes available up to 20 ft (6m) connection
- Efficiency calculations
- Condensing efficiency calculation
- PCI efficiency calculation
- PCS efficiency calculation
- 15 default fuels
- 32 programmable fuels
- CO sensor protected by an automatic dilution system

Bluetooth®

**Windows Software
Seitron Smart Analysis**

Windows 7 or later

Features

- up to 8 gas sensors in total
- NDIR bench (measuring up to 3 gases)
- Electrochemical gas measurement sensors (up to 5)
- Rotary Flow Meter for immediate visualization of pump flow rate
- Stack temperature measurement (2 temperatures)
- Ambient or Primary Air Source Temperature
- Thermal Compensation
- Draft in the stack with automatic autozero
- Measurement of the differential pressure
- Stack Air Velocity measurement with the use of Pitot tube
- Suction pump flow rate measurement

**Up to 5 Gas Sensors
+ 3 Gas Sensors (NDIR Bench)**

Continuous Emissions Analysis (CEM)

Field Replaceable Sensors

Full Color Graphic Display

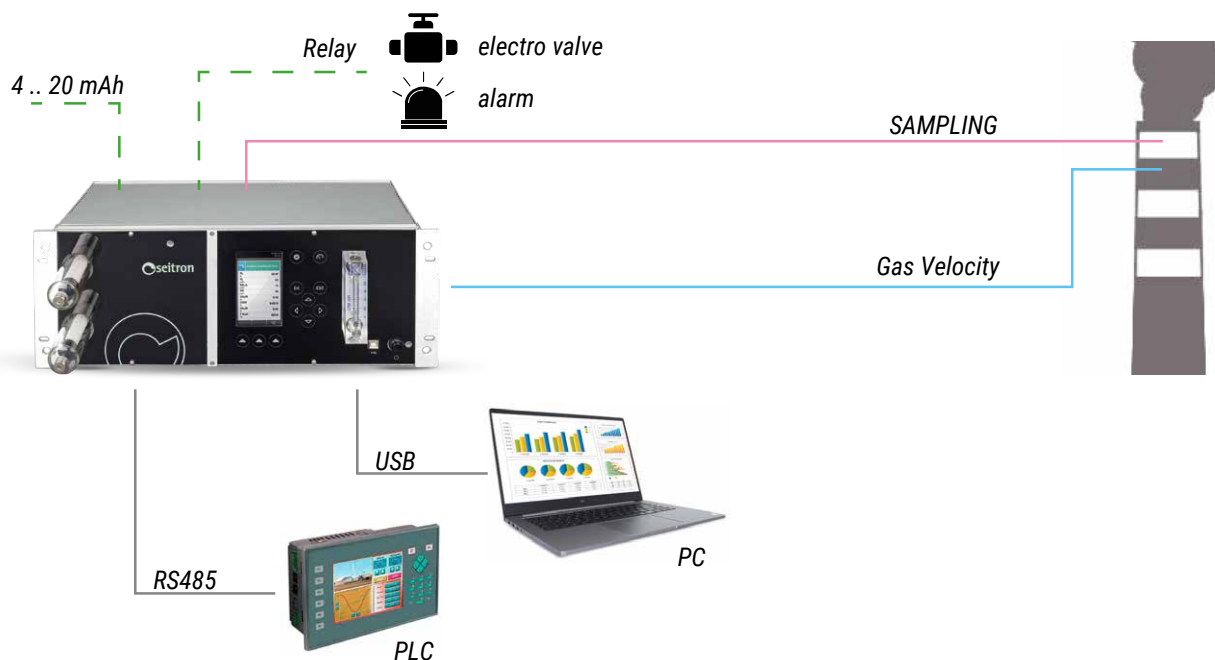**PC Software included**

Optional: Heated Line and Probe
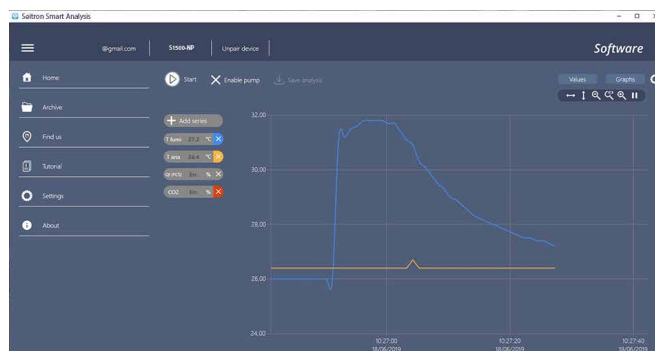
SAMPLING LINE SELECTION SYSTEM

S9000-RACK FEATURES

**Windows Software
Seitron Smart Analysis**

- Data Storage
- Remote display of real-time analysis from the analyzer
- Display and/or export and stored data
- Analyzer configuration

- Serial communication port type RS485 according to protocol MODBUS RTU USB communication
- Customizable Gas Sensor/probe configurations for any Industrial application:
  O2, CO Low, CO High, NOx, Low NOx, SO2, Low SO2, H2S, CO2, High CO, H2 and now with NH3!)
- Built In Thermoelectric Chiller with Auto Condensate Drain
- Heated Lines/Probes

S9000-RACK TECHNICAL FEATURES

Power supply	90 .. 264 Vac
Power absorption at 230 V	100 VA
Display	TFT 4.3", 272 x 480 pixels graphic color with backlight
PC Communication port	USB Connector type A
Connectivity	USB-RS485 MODBUS RTU
Autozero	Automatic autozero cycle with the probe inserted in the chimney
Internal Sampling pump	2.2 l/min head at the stack up to 300 hPa.
Line Filters	Replaceable cartridge, 95% efficiency with 20um particles
Sample treatment	Peltier cooling system with automatic emptying of the condensation water
Size	19" /4 HE / 400 mm
Operation temperature	32°F .. 113°F (+0°C .. + 45°C)
Storage temperature	-4°F .. 122°F (-20°C .. + 50°C)
Alarm relay	4 x SPDT AC/DC 24 V 1A
Protection fuses	2 x 4A 5 x 20 T
Analog Outputs	4 x 4-20 mA max resistance load 1 KOhm
Gas 1, Gas 2 Output Connector	1/8 BSPP
Gas Input Connector	1/8 BSPP
Pressure P1, P2 Input Connector	1/8 BSPP
Condensate drainage Output Connector	1 /8 BSPP - fast connection tube 0.25" (6mm) diameter
Air Connector	1/8 BSPP
Compliant with European Standards	EN 50270, EN 50379-1 ed EN 50379-2
Compliant with USA Standard	CTM030 and CTM034

Standard Equipment

Code	Description
WFUS5X20004R	4A 5x20 delayed fuse
WFILA0001	Filtering cartridge for gas line and autozero line
WFILX0016	Particulate filter grade 7 for IR bench protection
WCAV0048	USB-A / USB-B adapter cable
AACCV01	Power cable
AACCV06	US power cable and plug
AASW17	S9000 Smart Analysis PC Software

• Emissions Measurements - Up to 8 total Gas Sensors
• Optional NDIR Sensor Bench – Includes CO2, High CO, & CxHy Hydrocarbons (3 sensors)
• Thermoelectric Chiller with Automatic Condensate Drain
• Serial communication port type RS485 according to protocol MODBUS® RTU USB Communication
• 4 .. 20 mA isolated output (4 configurable channels – active loop)
• Four alarm relays outputs SPDT, AC/DC 24V 1A.
• Data saved via Modbus® on PC
• Real-Time Data Logging Software
• Stack and Ambient Air Temperature Measurements
• Differential Pressure Measurement
• Stack Gas Velocity Measurement (with optional pitot tube)

Included: filters, power cable, calibration certificate, Seitron Smart Analysis PC software and mobile App

ORDERING CODE:

Model # S9000-RACK-A-B-C	Description Standard S9000-RACK Kit Configuration

Example:
S9000-RACK-IR-OCNL-12H = O2, Standard CO, Low Range NO, IR Bench (CO2, CxHy & High CO), with 12" Heated Line & Probe

TABLE A (NDIR Bench Options)

IR*	CO2 NDIR Sensor (0-50%), CxHy NDIR Sensor (0-100,000ppm), and High CO NDIR Sensor (0-50%)
O	No IR Bench Included

* IR Bench includes as 3 gas sensors.

TABLE B (Gas Sensor Options **)

O	O2 Sensor (0 .. 25.0% vol)
C	Standard CO Sensor w/ H2 Compensation (0-8000 ppm)
CL	LOW-Range CO Sensor (0-1000 ppm)
CM	MID-Range CO Sensor (0-20,000 ppm)
CH	HIGH-Range CO Sensor (0-100,000 ppm)
N	Standard NO/NOx Sensor (0-5000 ppm)
NL	LOW NO/NOx Sensor (0-500 ppm)
D	Standard NO2 Sensor (0-1000 ppm)
DL	LOW NO2 Sensor (0-500 ppm)
S	Standard SO2 Sensor (0-5000 ppm)
SL	LOW SO2 Sensor (0-500 ppm)
H	Standard H2S Sensor (0-5000 ppm)
HL	LOW H2S Sensor (0-500 ppm)
G	H2 Sensor (0-2000 ppm)
C	Standard CxHy Sensor (0-5 %)
A	Standard Ammonia (NH3) Sensor (0-500 ppm)

** If you selected IR Bench, you can choose up to 3 gas.
If you DON'T select IR Bench, you can choose up to 5 gases.

TABLE C - Probe Options

12	12" (300mm) Probe, 1112F (600C) max, with 10' (3m)
30	30" (750mm) Probe, 1470F (800C) max, with 10' (3m) Dual Hose (AASF35)
40	40" (1000mm) Probe, 1470F (800C) max, with 10' (3m) Dual Hose (AASF36)
12H	12" (300mm) Probe, 1112F (600C) max, with 10' (3m) HEATED Hose and HEATED Probe Head (AASR03)
40H	40" (1m) Probe, 2190F (1200C) max, with 10' (3m) HEATED Hose and HEATED Probe Head (AASR04)

OPTIONAL - Accessories and Consumable Parts

AARC10	Non-Fading Paper Roll (pack of 10)
AAFS02	Sintered Filter with Support for probe
AAFS01	Replacement Inox filter for AASF02
AATTA03	36" (900mm) Pitot Tube for Gas Velocity Measurements
AACEX02S	10' (3m) Dual Hose Extension
WFILA0001	Particulate Filter (Internal)
WFILX0016	Particulate Filter (External)
AAFA04	Anti-Dust filter (2pcs), only with NH3 installed
AASP01	Heat Protection Shield for probes
AACSA04	4" (100mm) Auxiliary Temperature Probe w/ 10ft (3m) hose

Sensors for S9000 & S9000-RACK

Measurement Ranges And Accuracies

MEASUREMENT	GAS SENSOR	MEASUREMENT RANGE	RESOLUTION	ACCURANCY
O2	Electrochemical sensor	0 .. 25.0% vol	0.1% vol	±0.2% vol
CO with H2 compensation	Electrochemical sensor	0 .. 8000 ppm	1 ppm	±10 ppm 0 .. 200 ppm ±5% measured value 201 .. 2000 ppm ±10% measured value 2001 .. 8000 ppm
CO with active dilution	Electrochemical sensor	0 .. 100000 ppm	100 ppm	±20% measured value
CO Low range with H2 compensation	Electrochemical sensor	0 .. 1000.0 ppm	0.1 ppm	±2 ppm 0 .. 40.0 ppm ±5% measured value 40.1 .. 1000.0 ppm
CO Low range with active dilution	Electrochemical sensor	6.250 ppm	10 ppm	±20% measured value
CO	Electrochemical sensor	0 .. 20000 ppm	1 ppm	±100 ppm 0 .. 2000 ppm ±5% measured value 2001 .. 4000 ppm ±10% measured value 4001 .. 20000 ppm
CO with dilution	Electrochemical sensor	0 .. 250000 ppm	100 ppm	±20% measured value
CO	Electrochemical sensor	0 .. 100000 ppm	100 ppm	±0.02% vol o ±5% m.v. 0 .. 2.00 % ±5% measured value 2.01 .. 10.00 %
NH3	Electrochemical sensor	0 .. 5000 ppm	0.1 ppm	±10 ppm 0 .. 100 ppm ±10% measured value 101 .. 500.0 ppm
NO	Electrochemical sensor	0 .. 5000 ppm	1 ppm	±5 ppm 0 .. 100 ppm ±5% measured value 101 .. 5000 ppm
NO Low range	Electrochemical sensor	0 .. 500.0 ppm	0.1 ppm	±2 ppm 0 .. 40.0 ppm ±5% measured value 40.1 .. 500.0 ppm
NOx	Electrochemical sensor			
SO2	Electrochemical sensor	0 .. 5000 ppm	1 ppm	±5 ppm 0 .. 100 ppm ±5% measured value 101 .. 5000 ppm
SO2 Low range	Electrochemical sensor	0 .. 500.0 ppm	0.1 ppm	±2 ppm 0 .. 40.0 ppm ±5% measured value 40.1 .. 500.0 ppm
NO2	Electrochemical sensor	0 .. 1000 ppm	1 ppm	±5 ppm 0 .. 100 ppm ±5% measured value 101 .. 1000 ppm
NO2 Low range	Electrochemical sensor	0 .. 500.0 ppm	0.1 ppm	±2 ppm 0 .. 40.0 ppm ±5% measured value 40.1 .. 500.0 ppm
CxHy	Electrochemical sensor	0 .. 5.00% vol	0.01% vol	±0.25% vol
H2	Electrochemical sensor	0 .. 2000 ppm	1 ppm	±10 ppm 0 .. 100 ppm ±10% 100 .. 2000 ppm

H2S	Electrochemical sensor	0 .. 500.0 ppm	0.1 ppm	±5 ppm 0 .. 100.0 ppm ±5% measured value 100.1 .. 500.0 ppm
H2S	Electrochemical sensor	0 .. 5,000 ppm	0.1 ppm 1 ppm	±5 ppm 0 .. 100.0 ppm ±5% measured value 100.1 .. 500.0 ppm ±10% measured value 501 .. 5000 ppm
CO2	Calculated	0 .. 99.9% vol	0.1% vol	
CO2	NDIR sensor	0 .. 1000.0% vol	0.01% vol	±1% Vol 0.00 .. 10.00 % ±2% Full-scale 10.01 .. 50.00 %
CO2 0-50% *	NDIR bench	0 .. 50.0% vol	0.1% vol	+/- 0,3% Vol 0,00 .. 8,00% Vol +/- 5% vm 8,01% .. 40,00% Vol +/-10% vm 40,01% .. 50,00% Vol
CO 0..50% *	NDIR bench	vol 500.000 ppm	100 ppm	0-2500 ppm : +/- 50 ppm 1 ppm 2501 -100000 ppm : +/- 3% vm 10ppm 100001 -250000 ppm : +/- 5% vm 10ppm
HC * referred to methane	NDIR bench	0-1.000.000 ppm (100%Vol)	1 ppm	+/- 50ppm 0 .. 200 ppm +/- 2% vm 201 .. 50000 ppm +/- 3 % vm 50001 .. 1000000ppm
HC * referred to propane	NDIR bench	0 .. 100000 ppm	1 ppm	+/- 10ppm 0 .. 300 ppm +/- 3% vm 301 .. 4000 ppm +/-5% vm 4001 .. 30000 ppm
Air temperature	TcK sensor	-4 .. 248 °F (-20.0 .. 120.0°C)	32.2°F (0.1 °C)	-30 .. +34 °F (±1°C)
Flue gas temperature	TcK sensor	-4 .. 2282 °F (-20.0 .. 120.0°C)	32.2°F (0.1 °C)	-30 .. +34 °F (±1°C) 32 .. 212 °F (0 .. 100 °C) ±1% measured value 214 .. 2282 °F (101 .. 1250°C)
Auxiliary sensor temperature	PT100	-4 .. 392 °F (-20.0 .. 200.0°C)	32.2°F (0.1 °C)	-31 .. +33 °F (±0.5°C)
Pressure (draft and differential)	Piezoelectric sensor	-4 .. 80 inH2O	0.004 inH2O	±1% measured value -4 .. -0.81 inH2O ±0.008 inH2O -0.8 .. +0.8 inH2O ±1% measured value +0.81 .. +80 inH2O
Temperature Differential	Calculated	32 .. 2282°F (0 .. 1250.0 °C)	32.2°F (0.1 °C)	
Excess Air	Calculated	0 .. 850%	1%	
Stack heat losses	Calculated	0.0 .. 100.0%	0.1%	
Efficiency	Calculated	0.0 .. 100.0%	0.1%	
Efficiency (condensation)	Calculated	0.0 .. 120.0%	0.1%	

(*): The NDIR bench always measures the 3 gases CO, CO2, HC (ref. to methane CH4) or HC (ref. to propane C3H8)

Industrial
Emissions Analyzers Selection Guide

PARAMETERS	Novo	Novo-P	S6000
# of gases	3-4	3-4	5 or 6
O_2 Long Life, 0 - 25.0%	✓	✓	✓
CO, 0 - 8,000 ppm	✓	✓	✓
Calculated CO_2	✓	✓	✓
CO_2 Sensor for Direct Measurement (0 - 50%)	-	-	✓
Automatic CO Dilution Auto-Range	✓	✓	✓
NO Sensor, 0 - 5,000 ppm	Optional	Optional	✓
NO_2 Sensor, 0 - 1,000 ppm	Optional	Optional	Optional
SO_2 Sensor, 0 - 5,000 ppm	Optional	Optional	Optional
Low NO, NO_2, SO_2 Sensor, 0 - 100.0 ppm	Optional	Optional	Optional
CxHy (HC) Pellistor, 0 - 5% vol CH_4	Optional	Optional	Optional
H_2S Sensor (standard or low range)	Optional	Optional	Optional
H_2 Sensor, 0 - 2,000 ppm	Optional	Optional	Optional
NH_3 Sensor, 0 - 500.0 ppm	-	-	Optional
CH_4 NDIR Sensor, 0 - 100% v/v	-	-	Optional

FEATURES

	Novo	Novo-P	S6000
BUILT-IN Printer (NON-FADING PAPER)	-	✓	✓
Wireless Bluetooth Printer	Optional	-	-
FIELD-REPLACEABLE Pre-Calibrated Sensors	✓	✓	✓
Reporting & Storage Software with Bluetooth	✓	✓	✓
Real-Time Software & Data Logging	-	-	-
Internal Memory	100,000 Tests	100,000 Tests	2,000 Tests
Automatic Data Logging	✓	✓	✓
External Cooler	Optional	Optional	Optional
Draft / Differential Pressure	✓	✓	✓
Gas Velocity	✓	✓	✓

PARAMETERS	S9000	S9000-RACK
# of gases	up to 12	up to 8
Heated Hose & Probe Head	Optional	Optional
Continuous 24/7 Measurement	-	✓
O_2 Long Life, 0 - 25.0%	✓	✓
CO, 0 - 8,000 ppm	✓	✓
Calculated CO_2	-	-
CO_2 Sensor for Direct Measurement (0 - 100%)	Optional	Optional
Automatic CO Dilution Auto-Range	✓	✓
NO Sensor, 0 - 5,000 ppm	✓	✓
NO_2 Sensor, 0 - 1,000 ppm	Optional	Optional
SO_2 Sensor, 0 - 5,000 ppm	Optional	Optional
Low NOx / SO_2 Sensor, 0 - 500.0 ppm	Optional	Optional
CxHy (HC) Pellistor, 0 - 5% vol CH_4	Optional	Optional
H_2S Sensor (standard or low range)	Optional	Optional
H_2 Sensor, 0 - 2,000 ppm	Optional	Optional
NH_3 Sensor, 0 - 500.0 ppm	Optional	Optional
NDIR Bench configured for one or more gases of the following: CO_2 (0 - 50%), CO (0 -15%) & HC (calibrated for CH_4 or C_3H_3)	Optional	Optional

FEATURES		
Calculated CO2, Efficiency, & Excess Air	✓	✓
BUILT-IN Printer (NON-FADING PAPER)	✓	-
Wireless Bluetooth Printer	-	Optional
FIELD-REPLACEABLE Pre-Calibrated Sensors	✓	✓
Reporting & Storage Software with Bluetooth	✓	✓
Real-Time Software & Data Logging	✓	✓
Internal Memory	16,000 Tests	Data saved via Modbus® on PC
Automatic Data Logging	✓	✓
Built-In Thermo-Electric Peltier Chiller	Optional	✓
Draft / Differential Pressure	✓	✓
Gas Velocity	✓	✓

cool
guardian

Refrigerant Gas Leak Detection

Cool Guardian refrigerant gas leak detector, characterized by fast response time, low-temperature performance (-40°), and integrated audio and visual alarms, simplifies and facilitates compliance to safety regulations.

Modern refrigeration systems are engineered for optimal efficiency and airtight integrity.

However, improper installation, unintentional damage, or mechanical wear and tear can potentially lead to hazardous leaks.

The Cool Guardian gas transmitter serves as a vigilant guardian against unforeseen leaks, which could compromise both the environment and human healt.

| R744 (CO2) | R401A | R134A | R32 |
| R454B | R407C | R290 | R717 (NH3) |

OUTPUTS
Configurable analog output
(4-20mA, 0-5V, 0-10V, 1-5V, 2-10V)

MODBUS COMMUNICATION
Up to 32 devices connectable
via RS485 interface

RELAY OUTPUTS
Three relays to serve as fault detector,
low and high-level alarm triggers

INCREASED SAFETY
Built-in audible and visual alarms
for an immediate danger warning, in
compliance with safety standards

EASY TO USE
Commissioning and maintenance
without special tools

Code	Gas	Range
Cool Guardian R744 (CO2)	R744 (CO2)	0 .. 10.000 ppm
Cool Guardian R410A	R410A	0 .. 1.000 ppm
Cool Guardian R134A	R134A	0 .. 1.000 ppm
Cool Guardian R32	R32	0 .. 1.000 ppm
Cool Guardian R454B	R454B	0 .. 1.000 ppm
Cool Guardian 407C	R407C	0 .. 1.000 ppm
Cool Guardian R290	R290	0 .. 2.500 ppm
Cool Guardian R717 (NH3)	R717 (NH3)	0 .. 100 ppm

Complete range of refrigerant gas sensors for different applications

Selection of the appropriate gas sensor to monitor the presence of refrigerants in **industrial processes, commercial cooling systems**, or **refrigeration facilities** is crucial when it comes to fixed gas transmitters. These transmitters are designed to accurately detect and measure various refrigerant gases, providing essential data for maintaining the integrity of refrigeration systems and preventing potential leaks.

Calibration Kit for easy in-field calibration

Seitron Cool Guardian periodic calibration is very easy, thanks to our calibration kit and Seitron Guard mobile App. The optional calibration kit includes a magnetic stick and a gas adapter. These items allow to operate on the field, without removing the detector's cover. By following step-by-step instructions on the App, the user can fine-tune the device ensuring high performing operations. Periodic Bump test and Calibration of Cool Guardian Stand Alone Transmitter help to maintain the safety and efficiency of refrigeration systems.

Technical Features

Power supply voltage:	12 .. 24 Vac ± 10% or 12 .. 24 Vdc ± 10%
Power absorption:	5 W
Relay outputs	
Contact rating:	3 x 1A 30 Vac (voltage free)
Analog Output:	4-20mA, 0-5V, 0-10V, 1-5V, 2-10V - configurable via App
Modbus® output:	Via RS485 with Modbus® RTU protocol
	Up to 32 connectable devices
Protection degree:	IP65 (With cables/plugs inserted in the cable glands)
Operating temperature:	-40 .. +50 °C (-40 .. +122 °F)
Operating humidity:	20% .. 90% RH (non-condensing)
SIZE (W x H x D):	190 x 176x 112 mm (7.5 x 7 x 4.4 inch)

App Seitron Guard
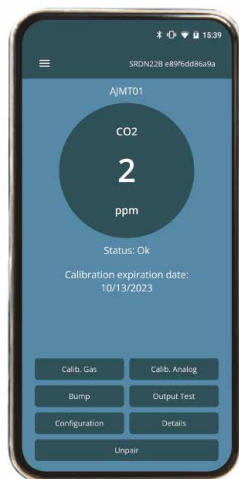
The Seitron Guard mobile app simplifies configuration, maintenance, and interaction with Cool Guardian gas transmitters.

Setup, calibration and use of the detectors is made simple and immediate, thanks to Bluetooth® connectivity:

- **Bump test / Calibration**
- **Product Configuration**: device renaming for easy locating, alarm thresholds setting and output settings management
- **Maintenance**: LED tests, buzzer function and relay control
- **User friendly monitoring**

Seitron Guard

be safe

Portable Gas Detector
Single Gas

- 24 months of continuous operation
- Reliable detection of low concentration of toxic and flammable gases
- Solid and robust
- Integrated crocodile clip
- Intrinsically Safe
- Self test function
- Event logging download
- Approved for **ATEX Zone 0**

AVAILABLE GASES

| CO | O2 | H2S | SO2 |

Main Applications of *be safe* line

- Site Maintenace
- Power Generation
- Water Management
- Aerospace
- Manufacturing
- Government & Defense
- Chemical and processing

be safe

Portable Gas Detector
Multi Gas

- Customisable configuration up to 4 gases
- Intrinsically Safe
- Product warranty for 3 years
- IP67 Protection Rating
- LCD display for actual concentration values readout
- Audible, visual and vibrating alarm
- Integrated crocodile clip
- Fast Bump Test and Calibration Kit included
- Approved for **ATEX Zone 0**
- Manual External Pump Kit Optional

AVAILABLE GASES

O2 Longlife	CO	H2S	LEL	H2	Dual CO+H2S
SO2	NH3	NO	NO2	CL2	

- **Steel and Heavy Industry**
- **First response and fire service**
- **Food & Beverage**
- **City and infrastructure**
- **Wastewaters treatment**
- **Waterwater Facilities**
- **Sewer & Underground Safety**

safe
guardian

| CO | O2 | CH4 |

Combustible & Toxic Gas Leak Detection

The Safe Guardian enables the constant monitoring of the ambient room air to detect & alarm the presence of **toxic and/or combustible gases**. With its configurable analog output and Modbus® RTU interface, the Safe Guardian is suitable for use in multiple applications, adapting to different needs.

The Safe Guardian gas transmitter provides safety, accuracy, fast response times and built-in audio and visual alarms. In addition, the Seitron Guard mobile app facilitates the commissioning, configuration and maintenance of the device.

TECHNICAL FEATURES

Power supply:	12 ... 24 Vac ± 10% or 12 . 24 Vdc ± 10%
Power consumption:	5 W
Relay outputs:	3x1 A 30 Vac (voltage-free contacts)
Analog output:	4 ... 20 mA, 0-5 V, 0-10 V, 1-5 V, 2-10 V configurable via app
Modbus®	output via RS485 with Modbus® RTU protocol
	up to 32 connectable devices
IP Rating:	IP65 (with cables/caps inserted in cable glands)
Working temperature:	-40 .. +50 °C(*-40 ... +122 °F*)
Humidity:	20% .. 90% RH (without condensation)
Dimensions (HxWxD):	6.93x3.62x3.27 in.

Code	Gas	Sensor Type	Range
Safe Guardian CO	CO	Electrochemical	0 .. 500 ppm
Safe Guardian O2	O2	Electrochemical	0 .. 25 % v/v
Safe Guardian CH4	CH4	Pellistor	0 .. 50 % LEL

Seitron Guard

GET IT ON Google Play — Download on the App Store — EXPLORE IT ON AppGallery

The Seitron Guard mobile app simplifies configuration, maintenance and interaction with Safe Guardian gas transmitters.

- Bump test/calibration
- Product configuration: renaming of device for easy localisation, alarm
- Setting thresholds and managing output settings
- Maintenance: LED test, buzzer function and relay check
- Intuitive monitoring

Gas Master
Control
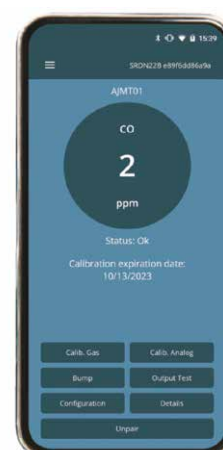


Control Unit for Mechanical Room   RYF01M

To be used in Mechanical and Refrigerant Rooms, designed for wall mounting:
- 180x128 graphic LCD display
- 8 LED indicators and signaling buzzer.
- 9 buttons keyboard

|	
Power supply:	85 .. 254 Vac 50/60 Hz
	12 Vdc
Inputs:	8 x 4..20 mA
	1 external input for Fire Alarm
	1 external input for Manual Reset
Modbus	up to 32 gas concentration transmitters
Outputs:	5 x 5 A 250 Vac SPDT
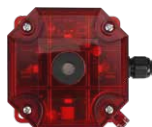
ACSR02
Siren with light and sound indicator
Power Supply: 7 .. 30 Vdc
Power Consumption: 2 W
Sound Intensity: 100 dB/m

ACSR03
Siren with light and sound indicator
Power Supply: 85 .. 264 Vac, 50 .. 60 Hz
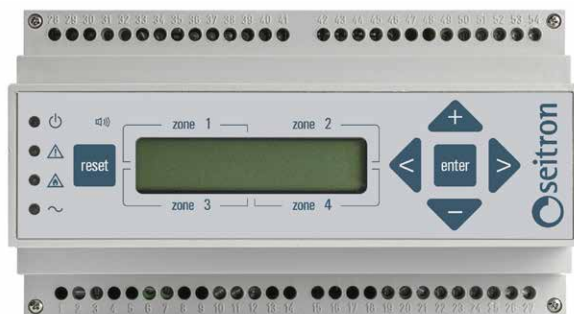Power Consumption: 6 W
Sound Intensity: 100 dB/m

29
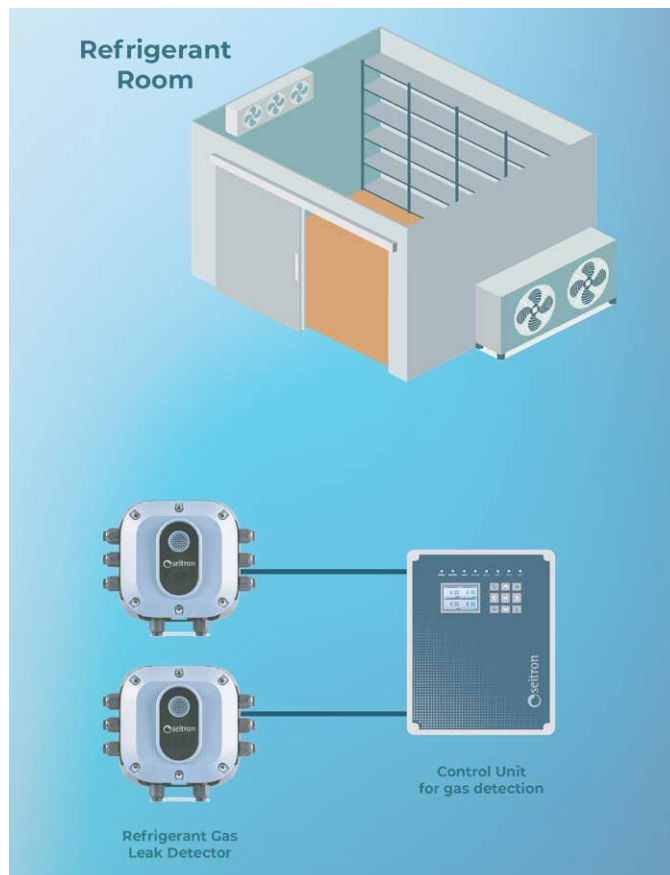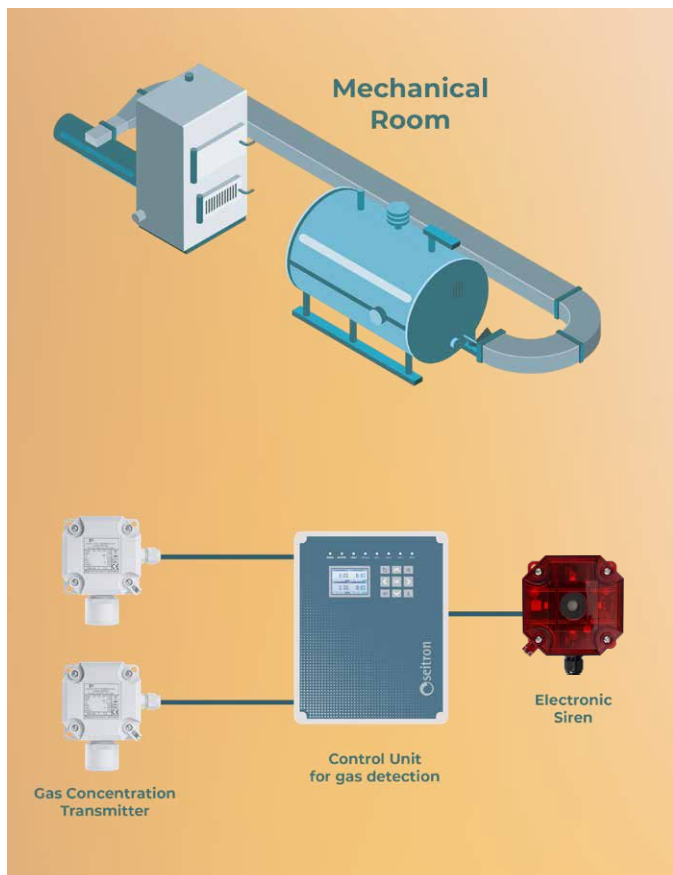
Programmable Control Unit
with 2..8 Zones - 4..20 mA

RYM02M2 2-channel control unit
RYM02M1 4-channel control unit
RYM02M0 8-channel control unit

The industrial gas detection unit RYM02M allows monitoring of gas concentration up to a maximum of 8 zones.
To each zone it is possible to connect a tranmitter with
4 .. 20 mA output signal to detect toxic or combustible gas leakages (SY--, SX--, SW--, series).
The control unit has obtained the ATEX type report according to EN IEC 60079-0:2018 and performance standard EN 60079-29-1:2016.

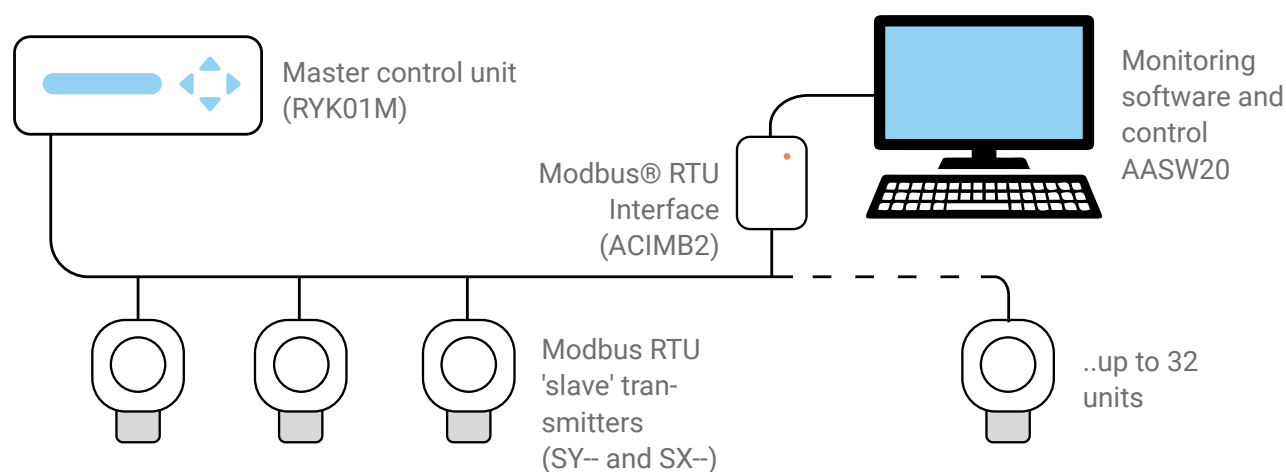# Programmable Control Unit
32-channel Modbus

RYK01M

This device is a 'MASTER' control unit for the detection of gas leaks with Modbus® RTU communication protocol.
Up to 32 transmitters (slaves) can be connected to the controller. Each transmitter can detect a specific gas and can communicate its status via Modbus® registers.

AASW20
Multi-zone GAS system monitoring software

ACIMB2
Modbus® RTU Interface

Master control unit (RYK01M)

Modbus® RTU Interface (ACIMB2)

Monitoring software and control AASW20

Modbus RTU 'slave' tran-smitters (SY-- and SX--)

..up to 32 units

Multizone Gas Systems
Monitoring Software

Gas Master is the PC software for managing and monitoring RYK01M control units connected via ACIMB2 gateways. The software allows you to configure and display the status of the connected control units.
Each control unit is displayed as a stand-alone tab.
The 32 sensors (maximum) of each control unit are grouped together to provide visualisation of detected gas levels, alarms and control unit configuration.

697051434

INDUSTRIAL RANGE TRANSMITTERS
METAL CASE FOR ATEX 1 ZONES
SX

Technical Features

Filter	Sintered stainless steel
Case	Die-cast aluminium
Dimensions	168x138x89 mm
IP Rating	IP6X

CE 0051 IMQ 15 ATEX 0003 X

II 2G Ex db $_{IIB+H2}$ T6 Gb
II 2D Ex tb IIIC T85°C Db

Gas	Measuring Range	Output Signal	Certificate	Code
Methane	50% L.I.E.	4 .. 20 mA + Modbus	IMQ 15 ATEX 003 X	SXMX14M1Y
	100% L.I.E.	4 .. 20 mA + Modbus	IMQ 15 ATEX 003 X	SXMX16M1Y
LPG	50% L.I.E.	4 .. 20 mA + Modbus	IMQ 15 ATEX 003 X	SXGX14M1Y
	100% L.I.E.	4 .. 20 mA + Modbus	IMQ 15 ATEX 003 X	SXGX16M1Y
Petrol Vapours	50% L.I.E.	4 .. 20 mA + Modbus	IMQ 15 ATEX 003 X	SXVX14M1Y
	100% L.I.E.	4 .. 20 mA + Modbus	IMQ 15 ATEX 003 X	SXVX16M1Y
CO	0 .. 500 ppm	4 .. 20 mA + Modbus	IMQ 15 ATEX 003 X	SXCX11M1Y

COMMERCIAL RANGE TRANSMITTERS
METAL CASE FOR ATEX 1 ZONES
SW

Technical Specifications

Filter	Sintered stainless steel
Case	Die-cast aluminium
Dimensions	100x134x60 mm
IP Rating	IP66

CE 0051 IMQ 20 ATEX 0006

II 2G Ex db IIC T6 Gb
II 2D Ex tb IIIC T85°C Db

Gas	Measuring Range	Output Signal	Certificate	Code
Methane	50% L.I.E.	4 .. 20 mA	IMQ 20 ATEX 006	SWMX1411
LPG	50% L.I.E.	4 .. 20 mA	IMQ 20 ATEX 006	SWGX1411
Petrol Vapours	50% L.I.E.	4 .. 20 mA	IMQ 20 ATEX 006	SWVX1411
Hydrogen	50% L.I.E.	4 .. 20 mA	IMQ 20 ATEX 006	SWHX1411

The transmitter codes indicated refer to cases with:
- 3x 3/4" NPT inlet (SX-X)
- 1x 3/4" NPT (SW-X) inlet, opposite the sensor

ACCESSORIES

ACSR02
Siren with light and sound indicator
Power Supply: 7 .. 30 Vdc
Power Consumption: 2 W
Sound Intensity: 100 dB/m

ACSR03
Siren with light and sound indicator
Power Supply: 85 .. 264 Vac, 50 .. 60 Hz
Power Consumption: 6 W
Sound Intensity: 100 dB/m

ACAL10
Power supply with
input 100 .. 240 Vac; 50 .. 60 Hz
and 13,8 Vdc output; Integrated battery
charger

Maintenance and Service

Service Turnaround

In-person or remote training

Tech Support

A high-quality, up-to-date and certified instrument in compliance with current standards is essential in carrying out your work in the best possible way, while minimizing liability.

- Gases (O_2, CO, CO_2, NO, NO_2, SO_2, CxHy)
- Temperature
- Pressure
- Humidity
- Current
- Air Flow
- Refrigeration Gases

Services offered:
- Calibration
- Annual certification
- Training
- Repairs
- Field technical support in real time
- Field calibrations

24-48 Hr Turnaround

seitron
Americas