ARA SO_2

Wearable sulfur dioxide (SO_2) detector for personal industrial monitoring



Wearable SO_2 Detector

ARA SO_2 is a compact, wearable single-gas detector for personal sulfur dioxide monitoring, designed to alert workers when SO_2 concentrations exceed pre-set safety levels. Its lightweight, low-maintenance design clips securely to workwear, providing continuous monitoring throughout the working shift without getting in the way.

With simple one-button operation, live SO_2 readings and instantaneous alarms, ARA SO_2 provides clear, reliable warning for workers operating in environments where sulfur dioxide may be present.

ARA SO_2 has been designed around straightforward operation, with single-button control making the detector easy to use in the field. Workers can quickly access the live reading and detector information without navigating complicated menus.

A built-in self-test checks the audio, visual and vibrating alarms, helping provide confidence that the warning system is functioning correctly before use. User-configurable self-test, bump-test and calibration intervals can also be set according to site procedures.

When sulfur dioxide concentrations exceed the configured safety levels, ARA SO_2 provides audible, visual and vibrating alarms to alert the wearer. High and low alarm thresholds can be adjusted to suit individual monitoring requirements, helping ensure the detector provides an appropriate warning for the application.

The combination of three alarm methods is particularly useful in busy industrial environments, where workers may not immediately notice a visual or audible warning alone.

Key Features

- **Instantaneous Alarms**
  Instant alarms provide immediate warning of dangerous H_2S concentrations
- **Daily Self Test**
  Self-test feature verifies performance of audio, visual and vibrating alarms
- **Adjustable High and Low Alarms**
  Adjustable alarms allow settings to be configured for site requirements
- **Robust Design**
  IP67 rating protects the instrument against dust and water
- **Event Logging**
  Logging records the most recent 30 events for review



ARA SO_2 Single Gas Detector



- Bright visual LED flash alarms for clear warning of dangerous SO_2 concentrations
- Clear LCD screen
- Single button operation providing a simple user experience
- ATEX IECEx and North American certfication (CAN/CSA)
- Compatible with ARA PC software via IR Link to adjust multiple parameters
- Loud 95 dB audible alarm sounder
- Self-test function verifying audible, visual and vibrating alarms
- 24-month continuous battery life

ARA DOCK4

The ARA DOCK4 is a bump test and calibration station that can test up to 4 ARA Single Gas Detectors simultaneously reducing gas usage and testing time. The ARA DOCK4 is simple to operate and records calibration and bump test reading along with the serial number, date and time.



ION Science's ARA DOCK4 streamlines gas detector maintenance with automatic bump test and calibration capabilities. ARA DOCK4 is compatible with all ARA models* (ARA 100/100H/200/200H/300/400) to perform essential procedures for device maintenance.

*The dock is configured for one gas type at a time (e.g. CO, O_2 H_2S, SO_2).

With simple, intuitive button controls, ARA DOCK4 seamlessly handles critical tasks such as bump testing, calibration, vibration alarm testing, LED testing, and event log transfers. Additionally, it conveniently logs ARA unit serial numbers, along with corresponding test dates and times.

Featuring user-configurable instrument options on ION PC via USB, ARA instruments can be quickly and efficiently configured. With its internal battery for rapid deployment and standalone operation, ARA DOCK4 can also be powered from an external power source and mounted on a wall or desk for added flexibility.



Additionally, ARA DOCK4 features an internal storage space for gas cylinders, adding to its compact and user-friendly design.

Additional Features

Sulfur dioxide can be encountered across a range of industrial processes, making reliable personal monitoring an important part of worker safety. ARA SO_2 continuously monitors the atmosphere around the wearer and provides an immediate warning when SO_2 reaches configured alarm levels.

Its compact 92 g format can be worn comfortably throughout a working shift, while the secure clip keeps the detector positioned close to the worker. The live SO_2 reading can be displayed at all times, providing a clear indication of current exposure conditions.

ARA SO_2 stores the 50 most recent events, providing a record of detector activity that can be downloaded to the ARA PC software using the ARA IR Link. This includes information useful for reviewing alarms and monitoring detector use.

The ARA PC software also allows users to configure settings including user ID, high and low SO_2 alarm levels, self-test intervals and bump-test intervals, giving organisations greater control over how detectors are deployed and managed.

With an IP67 rating, ARA SO_2 is designed to withstand dust and water ingress in demanding working conditions. Its ATEX and IECEx certification enables use in hazardous areas where appropriately certified personal gas detection equipment is required.

ARA Range Overview

Part Number	Name	Description
ARA100	ARA Single Gas H_2S Standard	ARA H_2S single gas detector with 24-month lifetime
ARA100H	ARA Single Gas H_2S Hibernation	ARA H_2S single gas detector with 36-month lifetime
ARA200	ARA Single Gas CO Standard	ARA CO single gas detector with 24-month lifetime
ARA200H	ARA Single Gas CO Hibernation	ARA CO single gas detector with 36-month lifetime
ARA300	ARA Single Gas O_2 Standard	ARA O_2 single gas detector with 24-month lifetime
ARA400	ARA Single Gas SO_2 Standard	ARA SO_2 single gas detector with 24-month lifetime
ARADOCK4	ARA 4-Station Docking Station	Bump test and calibration station for up to 4 ARA Single Gas detectors



Common Applications

- Sulfur recovery units
- Confined space entry
- Industrial plant maintenance and turnaround
- Emergency response and Hazmat
- Utilities and power generation
- Environmental field research



Spares & Accessories



ARA Calibration Cap

Calibration cap for applying test gas during bump tests and calibration of the ARA Single Gas Range.

P/N 908200



ARA IR Link and USB Cable

Infrared communication link and USB cable for connecting ARA detectors to a computer.

P/N 908201



ARA DOCK4 Carry Case

Protective carry case for transporting and storing the ARA DOCK4 docking station.

P/N 908223



ARA DOCK4 Wall Mount Kit

Wall-mounting kit for securely installing the ARA DOCK4 docking station.

P/N 908224



ARA 4-Station Docking Station

Four-station docking system for charging, bump testing and calibrating ARA detectors.

P/N ARADOCK4

Pioneering Gas Sensing Technology. ionscience.com

Technical Specifications

Sensor	Single plug-in electrochemical cell
Detects	Sulfur Dioxide (SO_2)
Detection Range	0 to 50 ppm
Alarms	Audio alarm: 95 dB at 10cm Visual alarm: LED Vibrating alarm: vibrator operates from -10 °C up to +60 °C
Display	Liquid crystal display (LCD)
User Options	User ID Low Alarm High Alarm Displayed Data (live reading or lifetime remaining) Bump-test interval Calibration interval Self-test interval
Event Log Storage	Last 30 events
Battery	3.6 Vdc, 1.6 Ah, lithium battery
Battery Life	Standard model: 24 months of operations (2 mins alarms per day)
Shelf Life	12 months
Operating Temperature	-40 °C to +60 °C
Humidity	5 to 95% RH
Ingress Protection Rating	IP67
Weight	92 g (3.2 oz)
Dimensions	87 x 50 x 29 mm (3.4 x 2 x 1.1 in)
Certification and Approvals	ATEX: CML 18ATEX2340 IECEx: Ex ia IIC T4 Ga CML 18.0158 IEC 60079-0:2017 IEC 60079-11:2011 KCS: KTL 19-KB2BO-0387 North American Hazardous Location: Class I, Division 1, Groups A, B, C and D, T4 Class 1, Zone 0, AEx ia IIC T4 Ga Ex ia IIC T4 Ga
Applicable Standards	CAN/CSA C22.2 No. 60079-0:19 CAN/CSA C22.2 No. 60079-11:14 ANSI/UL 60079-0 7th Edition ANSI/UL 60079-11 6th

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