ARA H_2S

Wearable hydrogen sulfide (H_2S) single gas detector, protecting workers from toxic industrial gases



Wearable H_2S Detector

ARA H_2S is a wearable single-gas detector designed to provide a clear warning of dangerous levels of hydrogen sulfide (H_2S). Its compact clip-on design attaches securely to workwear, positioning the detector close to the worker's breathing zone without restricting movement.

Designed for demanding industrial environments, ARA H_2S provides continuous monitoring with instantaneous audible, visual and vibrating alarms when H_2S concentrations reach dangerous levels. Its robust construction, intrinsic safety certification and IP67 rating make it suitable for use across challenging working environments where dependable personal gas detection is essential.

With 24 months of continuous, maintenance-free operation, ARA H_2S provides long-term protection without the need for frequent battery replacement. A 36-month hibernation model is also available, allowing the detector to be placed into hibernation when not in use and making it particularly suitable for contractors, consultants and workers who only visit site occasionally.

ARA H_2S is designed to withstand harsh industrial working conditions. Its IP67 rating provides protection against dust and water, while its intrinsically safe design and ATEX and IECEx certifications support use in hazardous areas.

The detector has an operating temperature range of -40 to +60 °C for H_2S, making it suitable for a wide range of challenging working environments.

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 H_2S Single Gas Detector



- Bright visual LED flash alarms for clear warning of dangerous H_2S 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 with 36-month hibernation model available

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

ARA H_2S is designed to provide continuous personal monitoring, giving workers an immediate warning when H_2S concentrations reach pre-set safety levels.

At just 92 g and 87 mm long, ARA H_2S is compact enough to be worn comfortably throughout the working day. Its sturdy clip attaches directly to workwear, keeping the detector close to the breathing zone while allowing the wearer to move freely.

ARA H_2S uses a three-signal alarm system, combining an audible alarm, flashing LED and vibration alarm to provide clear warnings when dangerous concentrations are detected. This provides additional reassurance in noisy, visually demanding or high-activity environments where a single alarm could potentially be missed. A daily self-test checks the audio, visual and vibration alarms, helping ensure the detector is functioning correctly.

ARA H_2S is designed to minimise maintenance requirements while providing long-term personal protection. Standard models operate continuously for 24 months, while the hibernation model can provide up to 36 months.

The lifetime countdown helps users plan for future projects, site shutdowns and detector replacement, while the display can show either the live H_2S reading or remaining instrument life.

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

- Confined space entry
- Plant maintenance and inspection
- Tank and vessel maintenance
- Plant turnaround processes
- First response safety
- Water and wastewater management



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	Hydrogen Sulfide (H_2S)
Detection Range	0 to 100 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 models: 24 months of operations (2 mins alarms per day) Hibernation models: 36 months of operation (2 mins per day and using sleep function)
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

This publication is not intended to form the basis of a contract and specification can change without notice.

ION Science Ltd
The Hive, Butts Lane, Fowlmere, Cambridgeshire, SG8 7SL, UK

T: +44 (0) 1763 208503
E: info@ionscience.com
W: www.ionscience.com

V1.2 UK