

# RIKEN KEIKI 04-series

Personal single gas monitors for H<sub>2</sub>S, CO, NH<sub>3</sub>, Cl<sub>2</sub>, HCN, NO<sub>2</sub>, PH<sub>3</sub>, SO<sub>2</sub> and O<sub>2</sub>

Robust, long lasting, and cost effective for easy and reliable gas detection.

## Product description

Riken Keiki 04-series personal single gas monitors, designed to detect H<sub>2</sub>S (Hydrogen sulfide), CO (Carbon monoxide), NH<sub>3</sub> (Ammonia), Cl<sub>2</sub> (Chlorine), HCN (Hydrogen cyanide), NO<sub>2</sub> (Nitrous oxide), PH<sub>3</sub> (Phosphine), SO<sub>2</sub> (Sulfur dioxide) and O<sub>2</sub> (Oxygen).

Rugged design, dust and water-resistant (IP-67), protected by a replaceable rubber boot. Digital display, visual, audible, and vibration alarms as standard. Data log from 5 to 300 hours. Operates up to 9,000 hours (CO and H<sub>2</sub>S) on alkaline batteries. Maintenance friendly with easy calibration, replacement of sensors, filters and batteries. 3 years sensor warranty.



## Features

- ✓ Real-time measurement
- ✓ Continuously operate for over one year (CO and H<sub>2</sub>S)
- ✓ CO with H<sub>2</sub> elimination option
- ✓ CO & O<sub>2</sub> Dual Sensor option
- ✓ Clear display with auto back lighting
- ✓ Loud alarm buzzer, light and vibration.
- ✓ Intrinsically Safe ATEX Exia II CT4 approved
- ✓ IP67 water and dust resistant
- ✓ Compact, light weight, ergonomic design
- ✓ Optional waist strap for hands free operation
- ✓ Up to 9,000 hours on operation on alkaline batteries (CO and H<sub>2</sub>S)
- ✓ Data logging as standard
- ✓ 3 years sensor warranty

## Applications

- ✓ Personal monitoring
- ✓ Maritime industry
- ✓ Refineries/Petrochemical
- ✓ Wastewater treatment
- ✓ Occupational health
- ✓ Chemical plants
- ✓ Hazardous material
- ✓ Water
- ✓ Fire service
- ✓ Mining

## Common specifications

Sampling method	Diffusion type
Alarm type	Gas alarms: Three-step alarms, STEL alarm, TWA alarm, OVER alarm Fault alarms: Sensor connection/disconnection, low battery level, calibration failure, clock abnormality, system abnormality
Alarm pattern	Self-latching or auto-reset
Alarm indications	Flashing lamp, intermittent audible buzzer, flashing gas concentration readout, vibration
Buzzer volume	80 dB or louder (at 30 cm)
Power Source * 2	AAA alkaline batteries (×2)
Explosion-proof construction	Intrinsically safe explosion-proof construction <alkaline batteries>ATEX: II1G Ex ia IIC T4 Ga/IECEX: Ex ia IIC T4 Ga/Japan Ex: Ex ia IIC T4 Ga <Ni-MH batteries>ATEX: II1G Ex ia IIC T3 Ga/IECEX: Ex ia IIC T3 Ga/Japan Ex: Ex ia IIC T3 Ga
Certifications	ATEX, IECEX, Japan Ex, CE Marking
Protection level	IP66/67
External dimensions/weight	Approx. 54 mm (W) × 67 mm (H) × 24 mm (D) (excluding projections)/approx. 93 g
Functions	Data logger, vibration, STEL alarm, TWA alarm, quick calibration, peak value display, temperature display

## Gases & Detectable Ranges

Gas	Part # (Model)	Detection Range (Increments)	Alarm Set Points	Continuous Operation
Hydrogen Sulfide (H <sub>2</sub> S)	73-0063 HS-04	0 – 100.0 ppm (0.1 ppm)	A1: 5 ppm	9,000 hours
			A2: 30.0 ppm	
			A3: 100.0 ppm	
			TWA 1.0 ppm	
			STEL 5.0 ppm	
Carbon Monoxide (CO)	73-0065 CO-04	0 – 2000 ppm (1 ppm)	A1: 25 ppm	9,000 hours
			A2: 50 ppm	
CO (-H <sub>2</sub> )	73-0067 CO-04C	0 – 2000 ppm (1 ppm)	A3: 1200 ppm	6,200 hours
			TWA 25 ppm	
			STEL 200 ppm	
Oxygen (O <sub>2</sub> )	72-0018 OX-04	0 – 40% Vol. (0.1%)	A1: 19.5 Vol.	3,000 hours
			A2: 18.0 Vol.	
			A3: 23.5 Vol.	
Dual Sensor CO / O <sub>2</sub>	73-0069 CX-04	CO 0 – 2000 ppm (1 ppm)	A1: 25 ppm	4,600 hours
			A2: 50 ppm	
			A3: 1200 ppm	
			TWA 25 ppm	
		CO 0 – 2000 ppm (1 ppm)	STEL 200 ppm	
			A1: 19.5 Vol.	
Ammonia (NH <sub>3</sub> )	73-0077 SC-04	0 – 400.0 ppm (0.5 ppm)	A2: 18.0 Vol.	3,000 hours
			A3: 23.5 Vol.	
			A1: 25.0 ppm	
			A2: 35.0 ppm	
			A3: 300.0 ppm	
Chlorine (Cl <sub>2</sub> )	73-0075 SC-04	0 – 10.00 ppm (0.05 ppm)	TWA 25.0 ppm	3,000 hours
			STEL 35.0 ppm	
			A1: 1.0 0 ppm	
			A2: 2.0 0 ppm	
			A3: 10.00 ppm	
TWA 0.50 ppm				
STEL 1.00 ppm				

## Gases & Detectable Ranges

Gas	Part # (Model)	Detection Range (Increments)	Alarm Set Points	Continuous Operation
Hydrogen Cyanide (HCN)	73-0071 SC-04	0 – 30.0 ppm (0.1 ppm)	A1: 5.0 ppm	3,000 hours
			A2: 10.0 ppm	
			A3: 30.0 ppm	
			TWA 4.7 ppm	
			STEL 10.0 ppm	
Nitrogen Dioxide (NO <sub>2</sub> )	73-0073 SC-04	0 – 20.00 ppm (0.05 ppm)	A1: 2.0 ppm	
			A2: 4.0 ppm	
			A3: 20.00 ppm	
			TWA 0.50 ppm	
			STEL 1.00 ppm	
Phosphine (PH <sub>3</sub> )	73-0079 SC-04	0 – 20.00 ppm (0.01 ppm)	A1: 0.30 ppm	
			A2: 0.60 ppm	
			A3: 1.00 ppm	
			TWA 0.30 ppm	
			STEL 1.00 ppm	
Sulfur Dioxide (SO <sub>2</sub> )	73-0081 SC-04	0 – 100.00 ppm (0.05 ppm)	A1: 2.00 ppm	
			A2: 5.00 ppm	
			A3: 100.0 ppm	
			TWA 2.00 ppm	
			STEL 5.00 ppm	

### Accessories:

- AAA alkaline (×2) or Ni-MH (eneloop) batteries (×2)  
(specify at time of order)
- Rubber protection cover (×1)
- Alligator clip (×1)

### Optional:

- Belt clip
- Heat-resistant case
- Dust filter
- Other filters
- Calibration cap
- Hand strap
- Arm band
- Data logger management program

# The Bruusgaard System



TBS is a unique turnkey portable gas detection solution, giving you increased safety and substantial cost savings through standardised instruments, routines, training and procurement.

## Logistic Support

At any given time we know the status of all vessels and sites covered by The Bruusgaard System. We consolidate all shipments and make sure you have everything you need on board until next scheduled delivery. This results in fewer shipments and substantial savings!

- Year round follow up of instruments, spares and consumables
- Handling of all shipments & logistics
- Annual reports per vessel including budgeting



## Safety

QA – strict routines and logging

- Crew are able to use instruments and follow routines correctly
- Instruments are in proper working condition at all times
- Instruments are calibrated at correct intervals
- Sensors and other items are replaced at correct intervals
- Usage of instruments is logged, including abnormal observations
- Traceability – instrument history and usage
- Routines and procedures can merge into the overall QA-system

Effective and proven training is an integrated part of The Bruusgaard System.

## Instruments

All the equipment used for gas detection and calibration is placed in a custom-made wall cabinet. Including Log & Instruction Manual, which are crucial to maintaining the safety integrity.

- Standardised vessel specific gas detector solutions
- Total solutions including all equipment and routines necessary for efficient and safe use, storage and maintenance

## Cost Savings

Some of our customers have been able to go from 8 to 10 suppliers down to 1 – translating into cost savings of up to 40-50%. For one vessel, this could be thousands of dollars annually, and for a whole fleet, the cost savings can be dramatic. This is achieved through:

- One contact for worldwide supply of spares & gases
- All service and calibration can be done on site.
- Reductions of instrument types from 10-12 to 2-3

Reduced maintenance costs through:

- On board calibration
- Fewer instruments on board
- No need for spares on board
- One PO per year
- Increased safety
- Less use of administrative time