

Gas Sampling Attachment

When gas measuring inside cargo tank

R K INSTRUMENTS (S) PTE LTD

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[EDITION 4, VOLUME 8]

Our Model TGS-1 is compatible with other makers or specifications!

As we know that toxic gases from hydrocarbons are ***harmful*** to the human body and it is present in most ***crude oil tankers***. For all we know, it may be ***endangering*** to our lives. Therefore, it is important that we take the first precaution.

As such, it has come to a point where the ruling and safety is of a main concern! Therefore, measuring gas through open tank space is not acceptable.

The ***IMO 1978-resolution A.446*** states that “*portable instruments for measuring oxygen and flammable vapor concentration shall be provided. In addition, suitable arrangement shall be made on each cargo tank such that the condition of the tank atmosphere can be determined using these portable instruments.*” IMO also requires the minimizing of VOC exposure against crews. By these reasons, major inspectors strongly rest to carry Gas Sampling attachment.

TGS-1



In conjunction with this, ***R K Instruments*** takes this into consideration and manufactured the ***Gas Sampling Attachment, TGS-1*** for the usage for the ***chemical and oil tanker*** application in closed tank structure.

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Gas Sampling Attachment TGS -1



Our TGS-1 enables interchangeable adaptors for the different types of valves!

SPECIFICATIONS

Model	TGS-1
Connection	1" / 2" deck valve
Material	SUS 316 & BC
Hose	Anti-static 30m sampling hose with Riken quick coupling
Certifications / Approvals / Regulations	SOLAS
Accessories (Complete in an aluminum carrying case)	<ul style="list-style-type: none">i. Measuring probe with storage tubeii. 30m sampling hoseiii. 3-way valveiv. Spiral hose (1m) with quick couplingv. Thread adaptor



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The Gas Sampling Attachment, TGS-1, can be easily attached with Riken's portable gas detectors. The advantage of buying from us is that we do not require information such as the Hull No., or the deck valve in order to determine the right adaptor to use. With the TGS-1, it can be used either the 1" or 2" adaptor depending on the types of deck valve. It does not require much effort to change the adaptor. Additionally, we manufactured it in SUS316 grade for greater resistance to corrosion! With the TGS-1, measuring the tankscope makes it so much easier and hassle-free!!

PORTABLE MULTI GAS MONITOR

MODEL GX-8000



◆ Application

- Confined space
- Refineries/Petrochemical/Chemical plants
- Oil tanker/Gas carrier/Bulk carrier
- Chemical tanker
- Water/Wastewater treatment
- Fire services
- Telecommunication services
- Power plant
- Gas plant/Gas supplier services
- Utilities
- Coating field
- Fuel cell facilities

◆ Features

- Real-time detection of max. 5 ranges Combustibles 100vol% / 100%LEL, O₂, H₂S & CO
- Large simultaneous display with auto back lighting
- Strong sample drawing capability
- Loud alarm buzzer with 95dB
- 3 bright LED alarm windows
- ATEX Exia II CT4 approved
- Water and dust resistant IP67
- Lithium-ion rechargeable battery
- Compact and light weight
- Ergonomic design with waist strap for hands free operation
- Datalogging standard

COMPONENT DESIGNATIONS

The GX-8000 sets the new industry standard for rugged, reliable portable gas detection. It's tough, water proof design utilized features based on years of gas detection design experience, to assure that the instrument will operate properly to protect workers and property in all kinds of harsh gas detection applications.

LCD display

Large display shows all gases simultaneously

O₂

Alarm lamps

Three bright LED indications

Audible alarm

Loud distinct tone, 95dB with two openings

Switches

Easy operation and control with four switches

IrDA port

Combustible
(100vol%)

Combustible
(100%LEL)

CO

Sample gas inlet

Sample gas outlet

Charging port

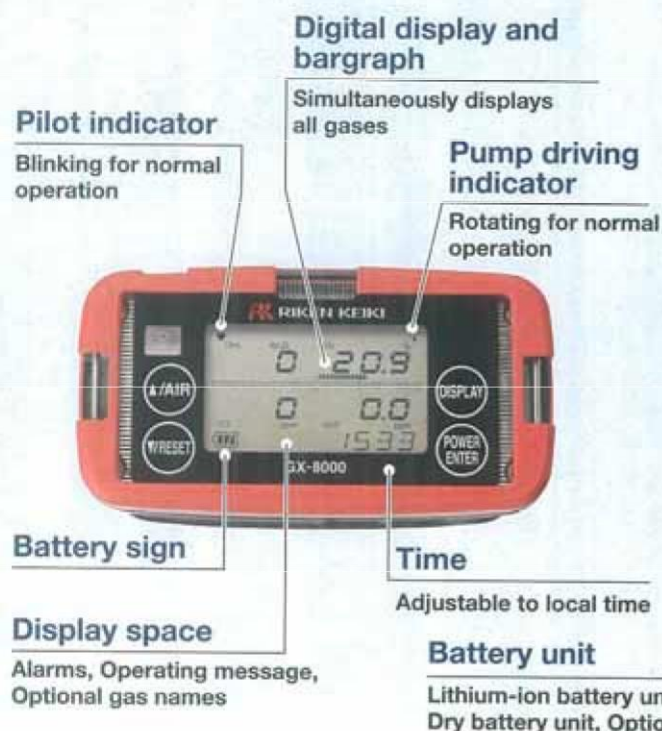
Waist strap fitting

Optional

H₂S



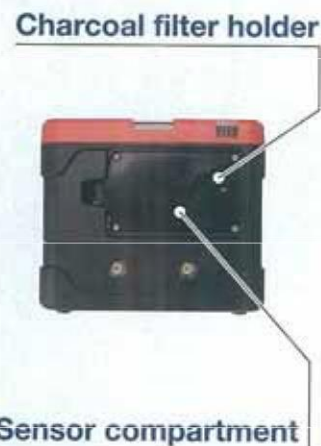
Display screen example



Side view



Rear view



Direct readout combustibles

Standard	LEL	Detection range
iso-Butane $i-C_4H_{10}$	1.8vol%	0-100%LEL/0-100vol%
Methane CH_4	5.0vol%	0-100%LEL/0-100vol%
Hydrogen H_2	4.0vol%	0-100%LEL/0-100vol%

Option (factory setting)	LEL	Detection range
Acetylene C_2H_2	1.5vol%	0-100%LEL
Methylalcohol CH_3OH	5.5vol%	0-100%LEL
MEK $CH_3COC_2H_5$	1.8vol%	0-100%LEL
n-Hexane $CH_3(CH_2)_4CH_3$	1.2vol%	0-100%LEL
Toluene $C_6H_5CH_3$	1.2vol%	0-100%LEL

LEL values according to the directive by TIIS edition RIIS-TR-79-1 in 1979.
TIIS : Technology Institution of Industrial Safety

Data logger download via IrDA communication



GX-8000 gas combinations available

		Combustibles 0-100vol%	Combustibles 0-100%LEL	O ₂ 0-40.0%	H ₂ S 0-100.0ppm	CO 0-500ppm
Four gases/ Five ranges	Type-A	●	●	●	●	●
Four gases	Type-B		●	●	●	●
Three gases	Type-C		●	●	●	
	Type-D		●	●		●
Two gases/ Three ranges	Type-E	●	●	●		
Two gases	Type-F		●	●		

Please specify gas combinations when ordering

Specifications

MODEL GX-8000

Target gas	Combustibles (CH ₄ , i-C ₄ H ₁₀ , H ₂ , others)		Oxygen (O ₂)	Hydrogen sulfide (H ₂ S)	Carbon monoxide (CO)
Detection principle	Thermal conductivity	Catalytic combustion	Galvanic cell	Electrochemical	Electrochemical
Detection range (Increments)	0-100vol% (1vol%)	0-100%LEL (1%LEL)	0-40.0% (0.1%)	0-100.0ppm (0.5ppm)	0-500ppm (1ppm)
Gas alarm	N/A	1st : 10%LEL 2nd : 50%LEL	1st : 19.5% 2nd : 23.5%	1st : 10.0ppm 2nd : 30.0ppm TWA : 10.0ppm STEL : 15.0ppm	1st : 25ppm 2nd : 50ppm TWA : 25ppm STEL : 200ppm
Types of alarm	Gas alarm : Latching, 2 alarms Failure alarm : Flow failure, Sensor failure, Battery failure, Circuit failure, Calibration failure				
Display of alarm	LED : LED's flash Buzzer : Buzzer sounds alternating between a low and high pitch Visual indication : Indication value flashes. Alarm message displays and flashes.				
Alarm sound	More than 95dB (A) at 30cm				
Display	Digital LCD with auto backlight Digital display (7 segments) and digital bargraph (25 segments)				
Sampling method	Sample Draw, Minimum 0.75L/min				
Power source	Lithium-ion battery, Standard (3 hours for a full charge) AA Alkaline battery (3pcs), Option				
Continuous operation	Lithium-ion battery : more than 12 hours AA Alkaline battery : more than 6 hours				
Operating temp & humidity	-20~+50°C, -4~+122°F below 95%RH (Non-condensing)				
Dimensions & Weight	Approx. 154(W) × 81(H) × 127(D) mm, Approx. 1.1kg Approx. 6.1"(W) × 3.1"(H) × 4.9"(D), Approx. 2.4lb				
Ingress proof rating	Equivalent to IP67				
Explosion proof	Intrinsically safe Exia II CT4				
Approvals	IECEX, ATEX, TIIS MED, HK, CE mark, all approvals submitted and pending				
Additional features	Complying to IEC60079-29-1 Indication to show energizing (pilot indicator and pump driving indicator), Pump stop function, Bump test function, IrDA communication, Data logger, Password protection				

Specifications subject to change without notice

Standard accessories

- AC powered charger
(Input : AC100V~AC240V, 50/60Hz)
(Output : DC12V, 1.25A)
- Gas sampling probe
- Gas sampling hose (Spiral 1m)
- Lithium-ion battery unit BUL-8000
- Neck/shoulder strap
- Instruction manual

Optional accessories

- Dry battery unit BUD-8000
- Gas sampling hose 8m with float type sampling head
- Gas sampling hose 30m with plummet
- Filter tube
- Junction tube
- Diluter adapter (for bulk carrier application)
- Waist strap
- Sampling probe holder on the neck/shoulder strap
- Leather carrying case
- Storage box for marine use
- Carrying box
- Calibration gas set
- Flow control demand valve
- Datalogging software

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