ODORGAS

Digital instrument for Odorant measurement.
For professional use only

Contents

EU Declaration of Conformity

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This Declaration of Conformity is issued under the sole responsibility of the manufacturer:

Huberg s.a.s.
Via Copernico, 18
39100 Bolzano(BZ)
ITALY

And its Authorised Representative:

QED Environmental Systems
Cyan Park – Unit 3
Coventry
CV2 4QP
UNITED KINGDOM

Product: RIVELGAS plus, EX-PEX plus, RIVELGAS combi and ODORGAS

Type of equipment: Portable gas detector for pre-localization, location and classification of gas leaks

The RIVELGAS plus, EX-PEX plus, RIVELGAS combi and ODORGAS described above is in conformity with the relevant Union harmonisation legislation:

2014/34/EU: Equipment and protective systems intended for use in potentially explosive atmospheres (ATEX)

Physical Technical Testing Institute (1026) and TÜV SÜD Product Service (0123) performed assessment against:

- 60079-0:2012/A11
- 60079-1:2014
- 60079-29-1:2007
- 60079-11:2012
- 50271:2010

Issuing certificate numbers FTZÚ 10 ATEX 0315X and TPS 11 ATEX 1 527 X

2014/30/EU: Electromagnetic capability (EMC)

- 61326-1:2013

Signed for and on behalf of:

Name: Mr. Huber Günther
Position: ATEX Commissioner
Done at: Huberg s.a.s
On: 3rd February 2021

www.qedenv.com

MISC0201-RIVELGAS Iss.02
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Warnings ATEX

The operating manual must be read and fully understood before using the equipment
This warning is in place so that the operator fully understands the product and its use within the application.
Battery must be replaced in a non-hazardous, safe area
Do not charge the device in a hazardous area OR only charge in a non-hazardous, safe area
Battery charging and communication (USB) must only be done in a non-hazardous, safe area with adapter
Do not use any other charging device
Do not open the device
Only the manufacturer or its authorised representatives can open the device for maintenance and repair
Unauthorised opening of the device invalidates the integrity, certification and guarantee of the product

Special conditions for safe use

- The equipment is intended to be used in ambient temperatures range from -20°C to +40°C. / -4°F to +104°F
- Data communication shall be performed in non-hazardous area with the appropriate accessory. Recharging of the equipment is only allowed in non-explosive environments by using the original recharging equipment.
- For maintenance or repair purposes the equipment may only be opened by the manufacturer

General Description

The ODORGAS is a hand-held digital gas detection instrument manufactured by QED Environmental Systems Ltd. The intended use of the ODORGAS is to measure concentrations of odorants in piped gas network applications.

The primary odorant measured is THT (Tetrahydrothiophene), the instrument is available with or without an integral pump.

With an internal memory for data storage of up to 3,000 readings, size of 145 x 70 x 33 mm / 5.7 x 2.75 x 1.3 inches and a weight of 350g / 12.34 Oz, the ODORGAS is an excellent and convenient instrument for measuring odorants.

ODORGAS has been certified with the intrinsic safety protection mode and has obtained the following marking:

II 2G Ex ib d IIC T4 Gb

Safety Instructions

It is the responsibility of the owner of the equipment to ensure that all personnel are adequately trained and the equipment is serviced and maintained in accordance with the applicable code of practice and this operating manual.
It is the responsibility of the owner to ensure that all personnel are adequately trained in the safety aspects of the gases being surveyed and appropriate procedures are followed.

The equipment should not be altered in any way other than described within this operating manual. Alterations or changes outside of this operating manual could make the equipment unsafe and invalidate the hazardous area certification.

Repair and maintenance of this equipment should be carried out in accordance with the applicable code of practice and this operating manual.
Only QED approved components are to be used with this equipment.

Overview of the instrument

User Interface

1a

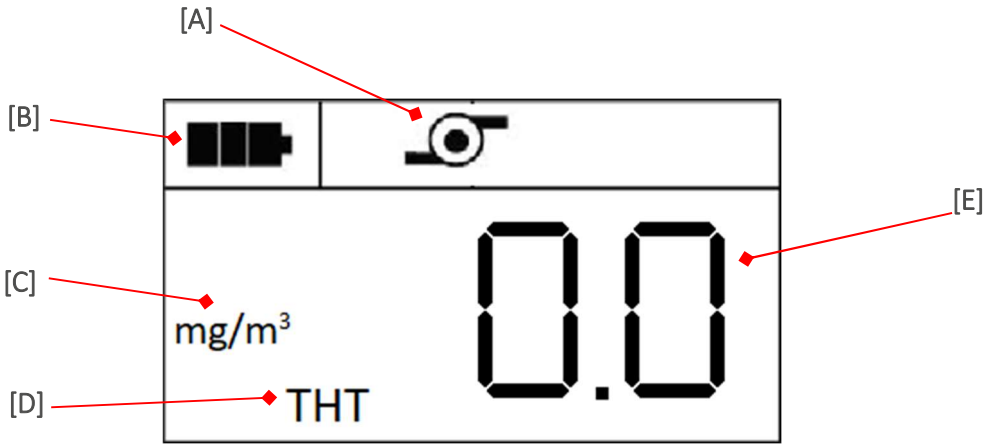
	Description
[1]	ON/OFF button + Backlight + Enter key
[2]	Function button
[3]	Scroll Key
[4]	Buzzer
[5]	LED Alarm Lights ●●
[6]	Gas inlet port

1b

Battery Charger Connections

The ODORGAS comes complete with its own charging base. Simply locate the ODORGAS into the charging cradle and switch on the power supply.

Display



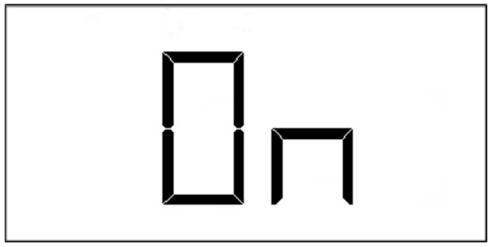
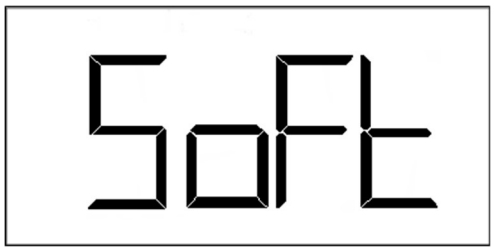
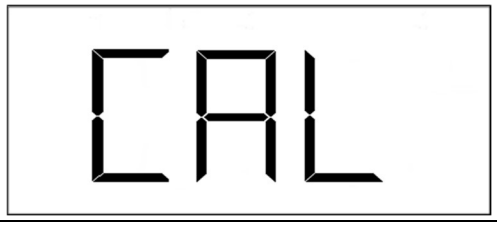
2a

SECTOR	DESCRIPTION
[A]	Pump status
[B]	Battery status
[C]	Unit of measurement
[D]	Odorant type
[E]	Measurement of Odorant

2b

Instrument functions

Switch On

Press the ON/OFF [1] button for 2 seconds, until the display is activated.	
The start sequence includes several steps: - Display check. - Information about the firmware version of the instrument, serial number of the instrument and next calibration date.	
The instrument will warm up and calibrate itself. This typically will take up to 30 seconds. The instrument's functions are not available during the warm up period.	
Once the warm up and calibration are complete, the two LED lights ●● [5] will blink and the alarm will sound. **The ODORGAS is now ready for use.**	

Switch OFF

Press and hold the ON/OFF key for a few seconds.

A counter on the display will count down from 4 to 0 and the instrument will then power down. You must hold the ON/OFF key for the duration of the count down.

Pump Function

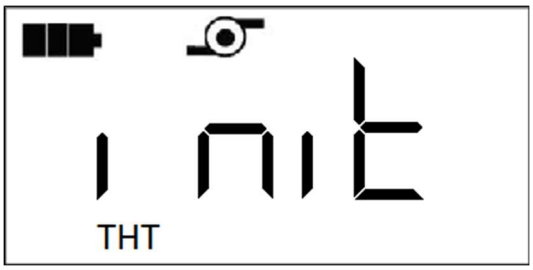
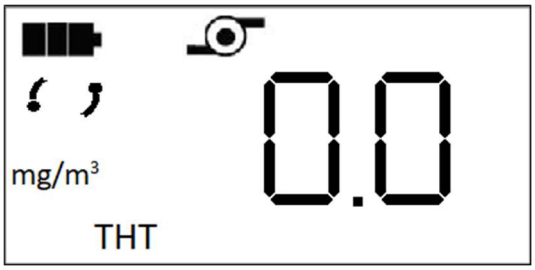
The pump (if fitted) will automatically begin to run when the instruments enters its main read screen.

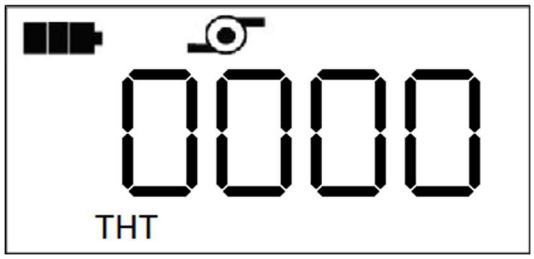
Backlight

To operate the backlight, short-press the ON/OFF key once.

TAKING READINGS

Measuring and storing readings

To begin the measurement process, press and hold the function key. 	
The screen will display these symbols.	
Press the ON/OFF key to begin the measurement process. 	
If successfully measuring, the screen will display two arrows moving in a circular motion.	
The reading process will take approximately 4 minutes. Once the reading cycle is complete, the two LED lights ●● [5] will flash and the buzzer [4] will sound intermittently.	

The user will be prompted to save the reading against an identification number.	
At the identification number prompt, the digit ready to be altered will flash. To change the number, use the scroll key.  To move to the next number, use the function key.  To store the reading, short-press the ON/OFF key. 	

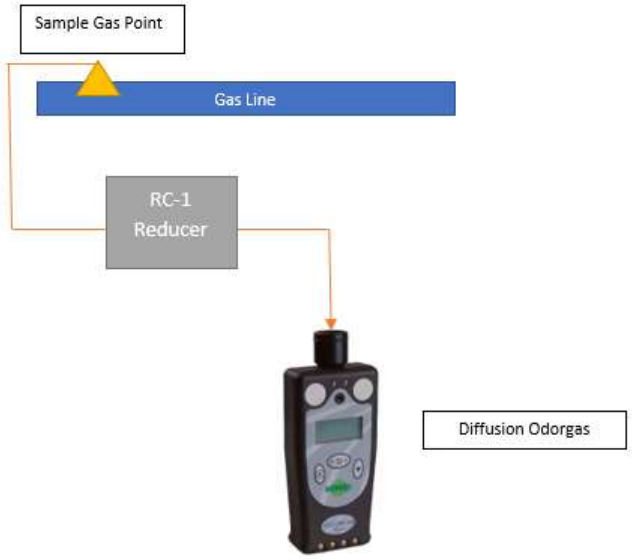
Recommended accessories

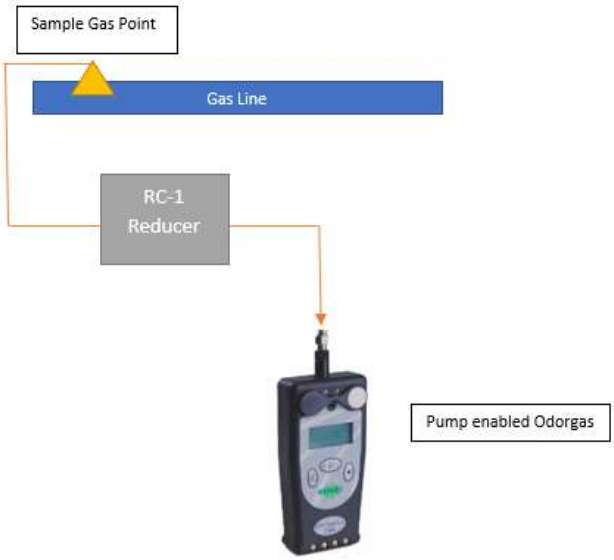
RC-1 Adapter for high pressure & flow.

To ensure you achieve the most accurate readings possible from your device, the ideal sampling conditions should be met (Between 150 – 300ml / 0.005 ft^3 - 0.01 ft^3 per minute flow & Less than 0.4 bar / 5.8 PSI pressure). In the event of high sample pressure and flow (above 300ml / 0.01 ft^3 per minute and over 0.4 bar / 5.8 PSI pressure) QED recommends using the RC-1 adapter to reduce your sample to a controlled level similar to the ideal window of operation.

RC-1 Order Reference Number H-900035

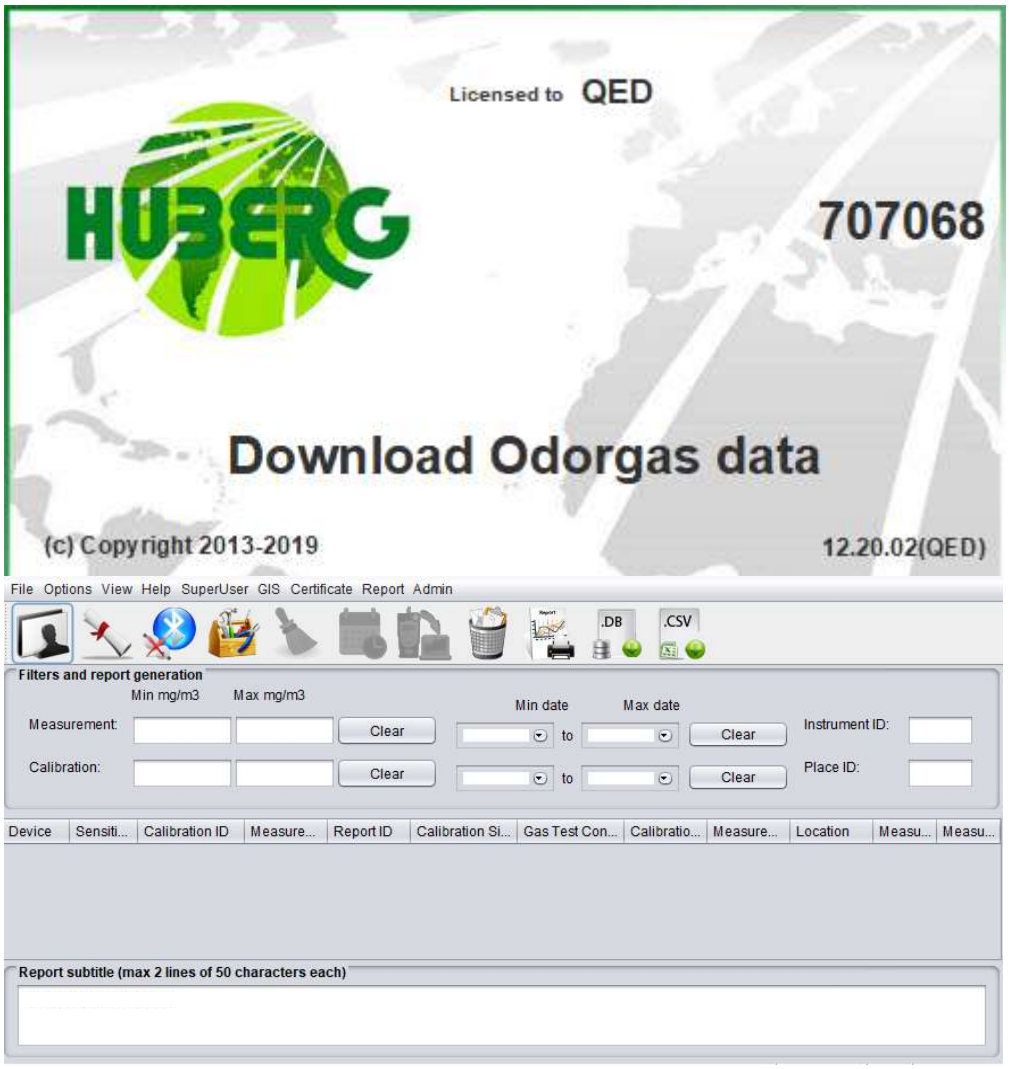
Connect your RC-1 between your sample point and your Odorgas unit as per the diagrams below:





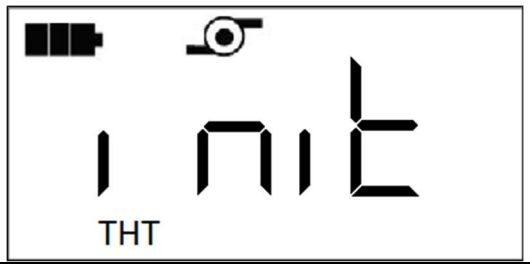
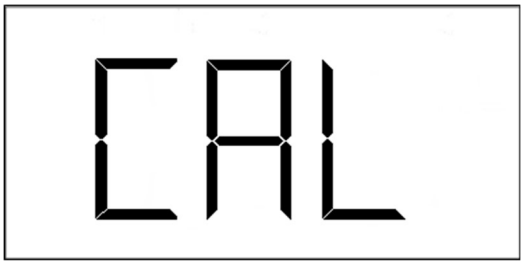
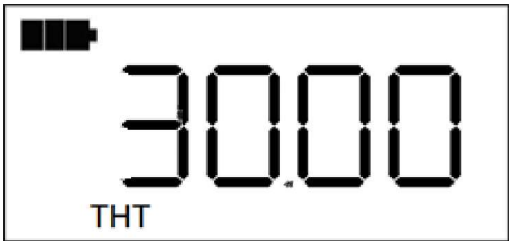
Odorsoft Download PC software. H-707068

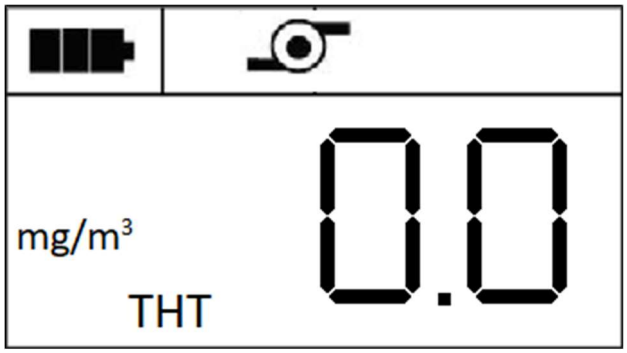
For downloading and exporting of all collected Odorgas data.
Please contact sales@qedenv.co.uk for more information.



Function Key Menu

User calibration

Press and hold the left function key until ‘INIT’ appears.	
Use the right scroll key to reach ‘PASS’ then press ON/OFF key to select.	
Enter the default passcode ‘1001’ then the ON/OFF key for OK. This will take you back to the reading screen.	
Press and hold the left scroll key again, until ‘INIT’ appears.	
Press the right scroll key to reach ‘CAL’.	
Type-in and Deliver your concentration of gas and then press ON/OFF key for OK. An internal timer will start, lasting 4 minutes, after which the instrument will automatically store the updated calibration data.	

Allow the instrument to reset to zero gas reading.	
Press and hold the left function key until 'INIT' appears again.  Use the right scroll key to find 'TEST' screen. 	
The Instrument will say **test fail** or **test pass** depending on whether the result is within tolerance.	

Escape Option

To quit an active reading, or quit the function menu, press the left function  key once, then the right scroll key  until the abbreviation '**ESC**' appears. Select it using the ON/OFF key. 

To alter the passcode?

Use the scroll key until the word ‘PASS’ is displayed then use the ON/OFF key to select.

At the passcode number prompt, the digit ready to be altered will flash.

To change the number, use the scroll key.

To move to the next number, use the function key.

To store the passcode use the ON/OFF key.

WARRANTY

The QED Warranty terms and conditions for the Odorgas can be found on the QED website in the downloads section, or alternatively by using the link below & searching ‘**warranty**’.

‘https://www.qedenv.com/downloads’

APPENDIX A – Safe Use of The Instrument

The information contained in these safety instructions must be followed in addition to the warnings in the user manual supplied to the customer.

WARNING: Do not use the instrument ODORGAS in a classified area if the version of the apparatus is not certified ATEX.

- It is recommended to the user to have knowledge of the PPE Regulation (EU) 2016/425 relative to the personal protective equipment.

It is advised to the user operating in ATEX area, to be equipped with a complete antistatic Personal Protection Equipment (PPE), in combination with conductive or dissipative ground, and shoes with a resistance below $10^8\Omega$, in agreement with the following regulation and standard: Regulation (EU) 2016/425 on personal protective equipment (PPE) to be applied as of 21 April 2018; EN 1127-1:2019 (Explosive atmospheres. Explosion prevention and protection - Basic concepts and methodology); the PD CLC/TR-60079-32-1 2018 'explosive atmospheres, Electrostatic hazards guidance. and IEC TS 60079-32-1-2013+AMD1 2017.

WARNING: Do not open the device.

Other precautions for the usage

- The charging of the batteries must be in a safe place with the appropriate external adapter.
- The instrument is dedicated to measurements in ambient air or can accept gas mixture containing non-corrosive chemical products. In case of the presence of gas mixture except that hydrocarbon and neutral gases, contact your QED distributor to verify the compatibility with the device.

Testing and maintenance

The checks and maintenance of certified equipment should be performed according to the criteria of the standard EN60079-17.

Repair

In the event of malfunction or damage, please contact QED (or an authorised distributor) for support.

Conformity

The apparatus type ODORGAS is usable in gas explosive atmosphere of group IIC and temperature class T4 for an ambient temperature from -20°C to +40°C.
The apparatus is category 2 and may be used in areas 1 and 2.

The following are applied to the apparatus:
Certificate number:

PS 11 ATEX 1 572 X

FTZU 10 ATEX 0315X

 Marking: II 2 G Ex ib d IIC T4 Gb

II: 2nd group equipment intended for use in areas with an explosive gas atmosphere other than mines
2: Category two (suitable for installation in zone 1 and zone 2, not for zone 0)
G: Only for gas, not for dust
d Flameproof protection method
ib: Intrinsically safe protection method
IIC Gas group, suitable for gases of IIA (e.g. Methane), IB (e.g. Ethylene) and IIC (e.g. Hydrogen)
T4: Temperature class (max. surface temperature 135°C)
Gb: Equipment protection level EPL, high protection

APPENDIX B – Technical Specifications

Target gas	TetraHydroThiophene (THT)
Measurement ranges	
Minimum threshold	
Accuracy	+/-10% relative to reading
Environmental working conditions	Temperature: -20°C to 40°C / -4°F to +104°F (in a non-condensing atmosphere) Relative humidity: <90% non-condensing
Power supply	Nickel metal hydride rechargeable battery pack Recharging duration: 4 hours
Operational time	12 hours at 20°C / 68°F
Case	Carbon reinforced polyamide with fiberglass Dimensions: L x w x h = 145 x 70 x 33 mm / 5.71" x 2.76" x 1.30" Weight: 0.35Kg / 0.77lbs(in operation)
Protection level	IP65
Environmental storage conditions (excluding batteries)	Humidity: < 95% relative humidity Temperature: -40°C to +60°C / -40°F to +140°C
Sampling flowrate	0.2 l/min / 200cc/min
User interface	Display: 40mm x 20mm / 1.57" x 0.79" 3 'Tactile' soft membrane push buttons
Alarms	Audio / Visual
Sound level of the buzzer (30cm)	85dBA
Indicators of the device status	Measurement mode Battery level Pump
Electrical connections	Multiplug for battery charger and for a communication with a computer.
Gas connections	Quick-connect gas inlet coupling with locking mechanism: suction rod on the right side. Quick-connect gas outlet coupling.

APPENDIX C - Information On Disposal For Users Of Waste Electrical & Electronic Equipment

The wheelie bin symbol displayed on electrical equipment supplied by QED signifies that the apparatus must not be disposed of through the normal municipal waste stream but through a registered recycling scheme.

The Waste Electrical and Electronic Equipment Directive (WEEE) make producers responsible in meeting their obligations, with the fundamental aim of reducing the environmental impact of electrical and electronic equipment at the end of its life.

QED is registered with the Environmental Agency as a producer and has joined a recycling scheme provider that manage and report on our electrical waste on our behalf.

Note: When your instrument is at the end of its life, please contact your local distributor, or our sales team at QED on +44(0)333 800 0088 or email sales@qedenv.co.uk, who will advise you on the next step in order to help us meet our obligations.

QED Environmental Systems
Cyan Park, Unit 3
Jimmy Hill Way
Coventry
CV2 4QP
United Kingdom

sales@qedenv.co.uk