Micro IV

Full Featured Personal Monitor

smart
GasDetection
Technologies **GfG**

Simple, pocket-sized single gas detector for personal safety

Durable, compact design

The Micro IV is compact, robust and very easy to use. It is designed to be used in the harshest environments. The Micro IV has a protective rubber boot to withstand hard knocks and drops.

Easy operation

The Micro IV keeps gas detection simple. Most day-to-day functions are controlled with a single button, and calibration is fully automatic. Simply select the calibration mode from the keypad, insert into the adapter and flow gas to the sensor. The GfG Autocal® feature automatically makes the adjustments and updates the information in the instrument's on-board memory.

Large graphic display

The Micro IV detector features a large backlit easy-to-read graphic display that provides a continuous readout for the sensor installed. By pressing a single button, additional information such as Peak, STEL and TWA readings may be displayed.

Widest range of sensors

Micro IV detectors are available for use with a wide range of long-lasting, interchangeable smart-sensors for the detection of O_2, H_2S, CO, NH_3, SO_2, Cl_2, ClO_2, PH_3, NO_2, HCN, HCl, ETO, HF, O_3, NO, H_2 and more.

Up to 6 months of battery life

The Micro IV delivers up to 3,000 hours of continuous operation from a single off the shelf AA alkaline battery. Battery replacement, when needed, can be completed in less than 30 seconds and requires no tools.

Loud, vibrating and visual alarms warn users

The Micro IV detector features a loud alarm (95 db at 12 inches), a built-in vibrating alarm and a bright multi-directional visual LED alarm light.

Clip-on attachment

The Micro IV comes with a heavy duty alligator clip that allows the detector to be conveniently clipped on to clothing and if so desired near the breathing zone.

Each Micro IV comes complete with a protective rubber boot, alkaline battery, belt clip and manual. Optional accessories include slide-on motorized pump, PC connection interface, docking station, calibration gas, kits and regulators.

Lifetime warranty

The Micro IV carries a lifetime warranty on non-consumable components and two or more years of warranty on most sensors. Select sensors such as O_2, H_2S and CO carry a full three year warranty against failure.

The Micro IV is meant for personal safety in ambient conditions and is approved for use in potentially explosive areas.

Complete the package with data interface, pump and docking station

DI220 Data Interface

Data accessible in common format

The data interface DI220 allows the configuration and transmission of measured data from the Micro IV single gas detector to a PC. The program stores the measured data in TXT or CSV format. This format can be read by common software such as Microsoft Excel® or Access®. In addition, a bump test and a calibration can be performed manually with the DI220.

Easy operation

The DI220 is linked to a PC by means of a USB cable. The DI220 has a connection for the gas supply and gas outlet. To initiate a configuration, data communication or operation of a calibration, simply place the Micro IV with the diffusion opening facing downward into the DI220, making certain that the diffusion opening lies over the two gas inlets and reference the Micro IV Configurator software on the PC monitor.

Calibration Adapter

Calibration procedure

To perform a calibration, place the Micro IV into the calibration adapter with the diffusion opening facing downward toward the gas inlet. Flow the correct gas into the calibration adapter using the tubing provided. Make sure that the Micro IV is exposed to a constant test gas flow for appoximately 3 minutes.

Motorized Smart Pump

Reliable personal safety

The pump, together with the Micro IV detector, is designed for personal safety in hazardous atmospheric conditions. Just slide off the battery cover of the Micro IV and slide the pump on so that the two units form a whole. The pump samples the gas by means of an intake near the sensor. A hose is attached to the intake, so that the end may extend into the area that needs to be monitored (e.g. sewer). The pump warns the user with a green flashing LED if the amount of the sampled gas is insufficient (flow alarm) or if an internal fault occurs.

Ideal for harsh environments

The motorized pump may also be used in extraordinary harsh conditions, such as extreme heat, where it may be desirable to protect the instrument under protective clothing; using a tube the pump can draw air samples from the breathing zone.

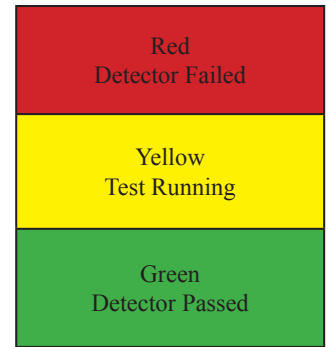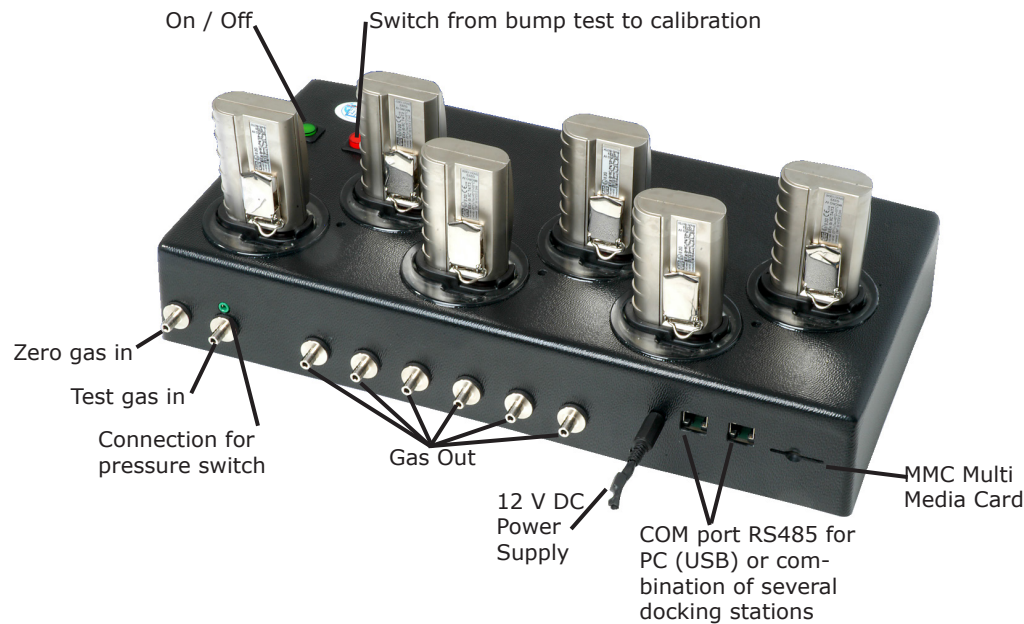## DS220 Docking Station

Six detectors simultaneously

The DS220 is a six position, fully automatic docking station. The docking station makes bump test and calibration easy and all maintenance records are stored automatically. The docking station fully tests sensor response, alarms and other fuctionality.

Operation

Simply push the green switch to turn the docking station on or off. The docking station may be equipped with up to six detectors simultaneously. The bump test begins automatically. Before starting the test, push the red button to select between bump test or calibration. Test results are indicated by yellow, red and green status LEDs. All information about the bump test and calibration of the individual detectors is stored on an MMC (if installed) and can be transferred to a PC by means of a card reader or directly if the MMC is installed and the docking station is connected to a PC.

A bump test or calibration can only be done for Micro IV detectors for the same gas and detection range. Changing these parameters can be performed through the configuration software. The DS220 is only for use with O2, CO, H2S, SO2 and H2 calibration gases.

Docking Station Design

On / Off

Switch from bump test to calibration

Zero gas in

Test gas in

Connection for pressure switch

Gas Out

12 V DC Power Supply

COM port RS485 for PC (USB) or combination of several docking stations

MMC Multi Media Card

Red	Detector Failed
Yellow	Test Running
Green	Detector Passed

The test results are similar to a traffic light signal for each detector.

TECHNICAL DATA: MICRO IV

Ranges & Resolution for Sensors:

Sensor	Range	Resolution
Ammonia (NH_3)	0 - 500 ppm	5 ppm
	0 - 200 ppm	1 ppm
Carbon monoxide (CO)	0 - 2,000 ppm	1 ppm
	0 - 1,000 ppm	1 ppm
	0 - 300 ppm	1 ppm
Carbon monoxide (CO-H)	0 - 500 ppm	1 ppm
	0 - 300 ppm	1 ppm
Chlorine (Cl_2)	0 - 10.0 ppm	0.1 ppm
Chlorine dioxide (ClO_2)	0 - 2.00 ppm	0.01 ppm
Ethylene oxide (C_2H_4O)	0 - 20.0 ppm	0.1 ppm
Hydrogen (H_2)	0 - 2,000 ppm	2 ppm
	0 - 4.00% vol	0.01% vol
	0 - 1.00% vol	0.01% vol
Hydrogen chloride (HCl)	0 - 30.0 ppm	0.2 ppm
Hydrogen cyanide (HCN)	0 - 50.0 ppm	0.5 ppm
Hydrogen fluoride (HF)	0 - 10.0 ppm	0.1 ppm
Hydrogen sulfide (H_2S)	0 - 100.0 ppm	0.1 ppm
Hydrogen sulfide (H_2S)	0 - 500 ppm	1.0 ppm
Nitric oxide (NO)	0 - 100 ppm	1 ppm
Nitrogen dioxide (NO_2)	0 - 50.0 ppm	0.2 ppm
Oxygen (O_2)	0 - 25% vol	0.1%/vol
Ozone (O_3)	0 - 1.00 ppm	0.01 ppm
Phosgene ($COCL_2$)	0 - 2.00 ppm	0.01 ppm
Phosphine (PH_3)	0 - 10.00 ppm	0.05 ppm
Silane (SiH_4)	0 - 40.00 ppm	0.05 ppm
Sulphur dioxide (SO_2)	0 - 10.00 ppm	0.05 ppm

Other Specifications:

Dimensions:	3.5x1.85x1 in (88x47x25 mm)
Weight:	2-4 oz (57-113 g)
Power:	1 single "AA" battery
Operation time:	Up to 3,000 hours
Alarms:	Vibrating: Standard
	Audible: 95 db (12 inches)
	Visual: Multi-directional LEDs
Housing:	IP-54
Temperature range:	-4 to +131°F (-20 to +55°C) ambient
Humidity range:	5 to 95% r.h. (non-condensing)
Pressure range:	700 to 1,300 hPa

Standard Accessories:
Specified sensors
Rubber boot
Alkaline battery
Belt clip
Manual

Optional Accessories:
Slide-on motorized pump, 10 feet of tubing and probe
Hand aspirated pump
PC connection data interface
Six unit Docking Station (The DS220 is only for use with O_2, CO, H_2S, SO_2 and H_2 calibration gases.)
Calibration gas, kits and regulators

Approvals:
Intrinsic safety: c-UL-us
Class I, Division 1, Groups A, B, C, and D
Temperature Code T3C

Warranty:
Limited lifetime on instrument and electronics. Two years on most sensors, three years on select sensors including O_2, CO, and H_2S. Optional six year warranty available.

Refer to GfG complete warranty for details.

Specifications subject to change without notification