Micro III Pump

Remote Sampling

Operations Manual

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Introduction

For Your Safety

Like any piece of complex equipment, the Micro III motorized pump will do the job it is designed to do only if it is used and serviced in accordance with the manufacturer's instructions.

CAUTION: For safety reasons, this equipment must be operated and serviced by qualified personnel only. Read and understand the instruction manual completely before operating or servicing this device.

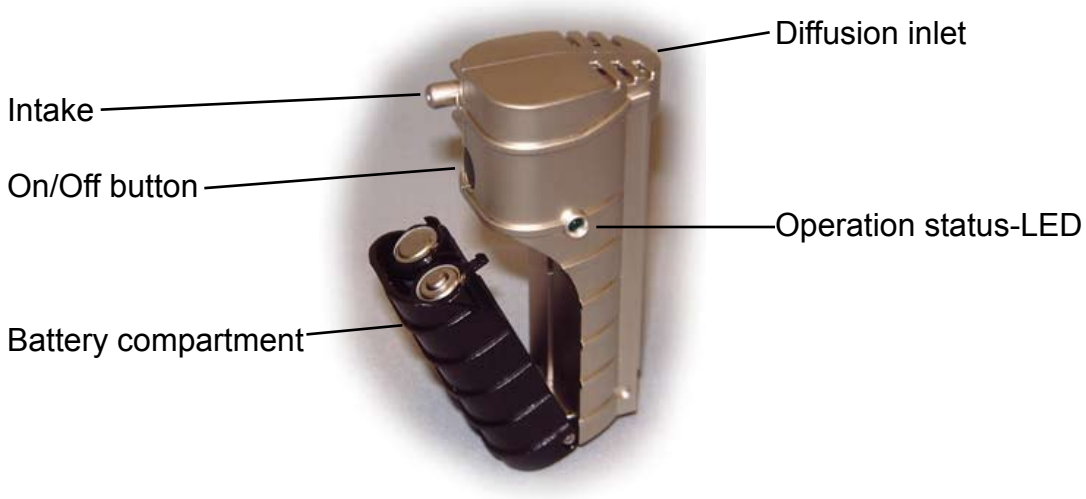
The warranties made by GfG with respect to the product are voided if the product is not used and serviced in accordance with the instructions in this manual. Please protect yourself and your employees by following them. The above does not alter statements regarding GfG's warranties and conditions of sale and delivery.

Application and Use

Together with the MICRO III or the Micro IV detector the MICRO III-pump is designed for personal safety under atmospheric conditions. The pump samples the gas by means of an intake towards the sensor. For this purpose a hose gets attached to the intake, whose ending reaches into the space that needs to be monitored. The MICRO III-pump warns the user by means of a visible alarm if the amount of the sampled gas is insufficient (flow alarm) or if an internal fault occurs.

General description and Design

The MICRO III–pump is a very small and handy complementary module for the MICRO III / IV and gets attached to the MICRO III / IV so that the two units form a whole. For this purpose just slide off the battery cover of the MICRO III / IV and slide the pump on. The pump allows testing for gases without being exposed to this atmosphere.



Operational Notes

General hints

Note! Airstreams can cause false measurements. The air that enters the detector by the diffusion inlet can distort the concentration of the sampled gas. To avoid such an inflow of air, please cover the diffusion inlet with your hand. Make sure that the diffusion inlet is not completely closed to avoid a pressure increase inside the sensor.

For sampling gases from sewers, rooms or drains, a hose (with or without a telescopic probe) that is plugged into the intake can be used. As the response time heavily depends on the internal volume of the intake hose, the length should be as short as possible.

For the sample to reach the sensor allow 1 second for each foot of hose (3 seconds per meter) plus sufficient time for the readings to stabilize.

Turning On the Pump

Press the on/off button to turn the pump on. With sufficient battery capacity the pump motor starts after a short delay (approximately 1 second). The battery capacity is indicated by flashing signals (see Test Battery Capacity).

The proper operation of the pump is indicated by a continuously lit green LED (see Test Battery Capacity).

Turning Off the Pump

Press the on/off button to turn the pump off. The pump should be turned off after detection to prevent unnecessary use of the batteries.

Confidence signal

During sampling, a green LED remains continuously lit to indicate trouble free operation.

Flow Alarm

If the sampled gas amount is too low (<0.25 l / min) or if the power supply to the pump motor is interrupted, the unit's LED flashes as an alarm.

Flow alarm signal

Approximately 5 LED-pulses per second

Reason: Gas flow is blocked or sampling line is bent. For proper operation, make sure that the gas passageway is free.

Attention: During a low flow alarm, proper detection in connection with the Micro III/IV monitor cannot be assured.

Battery capacity

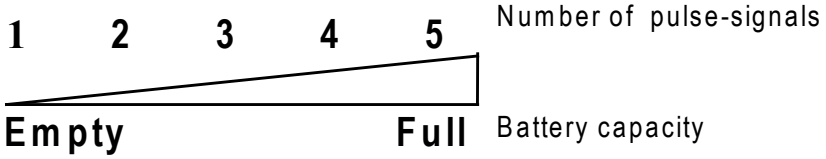
The MICRO III-pump is powered by two 1.5 V AA alkaline batteries. These batteries allow a continuous operation of up to 8 hours. The operational time may be reduced by increased load of the pump motor (e.g. through bent sample hose).

The correct battery type is: DURACELL PROCELL MN 1500 LR6 AA

The pump automatically turns off, if the battery voltage falls below the minimum level needed for proper functioning.

Test of battery capacity

Once the pump is turned on, the battery capacity is automatically indicated by means of the number of flashes of the green LED. To activate the battery test, turn the pump on (press the on/off button).



After indicating the battery capacity, the LED stays dark for 2 seconds before the confidence signal appears.

Battery Replacement

NOTE: The pump must not be opened in a potentially hazardous environment. You must not replace the battery in hazardous areas.

Always turn the pump off before replacing the batteries.

Check for the correct polarity of the new 1.5 V AA alkaline batteries.

The correct battery type is: **DURACELL PROCELL MN1500 LR6 AA**.

To replace the batteries, separate the pump from the Micro III / IV (slide upwards). Inside the pump cover is a release button for the battery compartment. The battery cover can then be folded back, the old batteries can be taken out and new ones can be placed into the battery compartment.

NOTE:

- Batteries must not be replaced in potentially hazardous environments.
- Check for the correct polarity of the new batteries (see the picture).

Processor Fault

The unit continuously checks its processor. If a fault is recognized a visual alarm is given.
Solution: Change battery, if the fault is not resolved, send unit to the manufacturer.

Approximately 10 LED-pulses per second.

Appendix

Cleaning

Give the Micro III pump a short visual check after use. Use a damp cloth to remove stains or dirt from the casing. Never use solvents or cleaning agents!

Maintenance and repair

Depending on application conditions and technical requirements, maintenance should be done in intervals required by the application. Maintenance includes measures which retain the operational status of the Micro III pump.

- Visual check for damages
- Check pump battery capacity
- Check confidence signal
- Check sampling performance
- Check low flow alarm

In addition to the above, we recommend getting the pump checked for proper functioning by an expert in combination with the (at least) annual maintenance of the Micro III/IV monitor.

Service

Service should only be done by the manufacturer or an authorized service center. Only genuine spare parts must be used for service and repair.

Spare parts and accessories

Description	**Part-No.**
Battery Duracell Procell MN 1500 LR6 AA	1318201
Battery compartment with release button	1318340
AQUA-SHIELD splash water protection, 15 units	1318205
Sampling probe	1000214
Telescopic probe CrNi-steel 1,36m	1000205
Special dust/water filter, pack of 3	1000207
Special sampling hose 3m, anti static, with dust/water filter	1000208
Special sampling hose 3m, anti static, with dust/water filter and flow indicator	1000209
Viton hose, solvent resistant, for H2S, fuel vapors etc.	On request
Float probe	On request

Technical Data

Type:	MICRO III – pump
Display:	Green LED
Pump performance:	0.50 l/min for 0 mm Wc 0.40 l/min for 300 mm Wc
Alarms:	Visual battery alarm, visual flow alarm for falling below min. flow or hardware fault (interrupt)
Gas supply:	Inlet for pump operation, otherwise diffusion
Climate conditions: for operation: for storage:	 -20...+55 (45)°C -25...+55°C (recommended 0...+30°C)
Power supply: Operational time: Readiness for operation:	2 batteries type AA 1.5 V / Duracell Procell MN 1500 LR6 AA up to 8 hours continuous operation (depending on load) up to 2 years if turned off
Casing: Material: Dimensions: Weight: Protection:	 Polycarbonate, metalised 43 x 92 x 32 mm (WxHxD) 97 g IP40
Approval: Electromagnetic Compatibility: Labelling and ignition protection:	 as per EN50270 type 2 and EN55022 Class B only when used with Duracell Procell MN 1500 LR6 AA

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