

MICROTECTOR II G450

Shortform operation manual

Firmware Version 3,40
205-000.36_OM_G450_Short.doc Version 24.09.2010



Ex-Ox-Tox Gasdetectie
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Detection principle

Electrochemical (EC): toxic gases and oxygen
Catalytic combustion (CC): combustible gases and vapours (up to 100 % LEL)

Operational conditions

-20...+55°C | 5...95% r.h.
700...1300hPa

Operational time

Up to 30 hours

Power supply

- NiMH II-battery pack, rechargeable, black housing
 $I_m=600\text{mA}$ (max. charging current)
or
- Alkaline-battery pack, not rechargeable, grey housing, with 2x size AA Duracell MN1500 LR6

Housing

Material: rubberized plastic
Dimensions: 75x110x55 mm (WxHxL)
Weight: 290 g
Protection: IP67

Approval

ATEX II 2G Ex ia d IIC
T4: NiMH II -20°C ≤ Ta ≤ +55°C
Alkaline -20°C ≤ Ta ≤ +45°C
T3: NiMH -20°C ≤ Ta ≤ +55°C
Alkaline -20°C ≤ Ta ≤ +55°C



For a proper performance of the device it is necessary to notice, that all charging contacts will always kept clean. Dirt can be removed with a slightly wet piece of cloth. Do not use solvents or cleaning agents!

Switching on	Hold right key [M] for 1 second to switch the detector on. A self test is effected and informs about the firmware version, the sensors, the detection ranges, the alarm-thresholds and the date of the next inspection. The G450 tests the sensors, monitors their adjustments and the intervals for bump test or calibration. The relevant messages are displayed when the detector starts up. If you push the right key (DETECT), or if you do not hit any key during the warm-up period, the detector goes into detection mode. By simultaneously pressing the middle and right key the AutoCal menu is started. By pressing the left key (AIR) the automatic fresh air adjustment commonly for all (enabled) sensors is started. When the detector is equipped with an oxygen sensor, its sensitivity is set to the normal 20.9%Vol. oxygen concentration which is present in fresh air. For switching off keep the right key [M] pressed for about 5 seconds.
Automatic zero point adjustment	
Switching Off	

Alarm type	Sensors	Number of alarms	Description
Instantaneous (AL)	Oxygen, combustible & toxic gases	3 3 2	Alarm is triggered if gas concentration exceeds or falls below a pre-set value. Alarm thresholds are adjustable.
Short-term average (STEL)	Toxic gases	1	Short-term values (STEL) are the average over a period of 15 minutes. The alarm is not latching but resets automatically when falling below STEL value.
Time weighted average (TWA)	Toxic gases	1	Long-term values (TWA) are the average over a working shift of 8 hours. The TWA alarm cannot be reset. It only turns off when the detector is being switched off.

Turn display by 180°	The display can be turned by 180° by shortly pressing the right and the left key simultaneously. This allows easy reading when carrying the detector on the belt.
ZOOM-display detection values, average and peak values	For reading individual values in Zoom mode, press the right key ZOOM . Press the key to display one value in Zoom mode. Pressing the right key repeatedly will indicate measurement values of the individual sensors in zoomed reading one after the other. When a zoomed value is displayed, hold ZOOM to change to detail reading of measurement value, maximum and average value.
PEAK display of peak values	In PEAK mode (activation by pressing the left key (PEAK)) PEAK values can be monitored and displayed. The display shows an animated symbol in the left bottom corner. Within the Zoom display the peak value is shown in the right top corner instead of the actual gas concentration.
PEAK memory reset	Press (RESET) in PEAK mode and the PEAK memory will be reset to the actual gas concentration. Press (RESET) in ZOOM display and the PEAK memory and the PEAK value memory will be reset to the actual gas concentration.
De-activate PEAK mode	Pressing (PEAK) de-activates the PEAK mode.
Lights (lamp)	If the battery pack provides the torch function, the lights can be turned on by pressing the left key for about 3 seconds pressing the left key shortly turns them off.
Service mode Access code	The service mode is activated by pressing the middle key (RESET) for about 5 seconds. The service mode allows adjusting the G450 by changing certain program parameters. Several menu points are only accessible by entering a special code. The access code prevents important functions from being changed incidentally or by unauthorized persons. In service mode the alarms are not triggered. The main menu is the first menu point in the service mode. It allows to adjust different options: Location (= entering a location) User (= entering of user identification) Data logger (= setting of data logger functions) Signal (= setting of confidence beep) Service (= opens service menu) AutoCal (= calibration with fresh air or test gas) Options (= setting of contrast and alarm volume 103 dB / 90 dB))
Main menu	The menu control is self-explanatory: different key functions will always be shown in the display by symbols above each key.
Service menu	By choosing main menu point Service the service menu will be opened. In the service menu the G450 can be adjusted by changing the program parameters. From here you can go to the system menu to select different options: Bump test (status, date of last and next bump test, interval) Calibration (status, date of last and next calibration, interval) Inspection (date of next inspection) Time (date + time) Options (selection of menu language, vibration alarm on/off, latching alarm on/off, auto store on/off) Sensor selection (activation resp. de-activation of individual sensors) AutoCal - Air (= adjustment with fresh air) AutoCal - Gas (= adjustment with gas) Information (= information about detector type, software version, serial number and battery type)
System menu	
Sensor specific functions	The selection of sensors allows adjusting sensor specific functions. Zeroing Calibration Adjustment of alarm thresholds Calibration data Information (sensor type, serial number, detection range, temperature range)

**The detector must not be charged in hazardous areas.
The detector must not be opened in hazardous areas and the battery resp. rechargeable module must not be replaced in hazardous areas.**