

# MICROTECTOR II G460

## Short-form operation manual



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### Detection principle

Electrochemical (EC): toxic gases and oxygen

Catalytic combustion (CC): combustible gases and vapours (up to 100 %LEL)

Infrared (IR): Carbon dioxide

**Operational conditions** -  
 20...+50 °C | 5...95% r.h. |  
 700...1300hPa

**Operational time**  
 up to 20 hours

### Power Supply

1. NiMH battery pack, rechargeable, black housing,  $I_m=0.6$  A (max. charging current) **or**
2. Alkaline battery pack, not rechargeable, grey housing, with 2x Mignon Size AA Duracell MN1500 LR6

### Housing

Material: Rubberized plastic  
 Dimensions: 75 x 110 x 55 mm  
 (WxHxD)

Weight: 350g  
 Protection: IP67

### Approval

ATEX © II 2G Ex ia de IIC

T4: NiMH II -20°C ≤ Ta ≤ +50°C  
 Alkaline -20°C ≤ Ta ≤ +45°C

T3: NiMH II -20 °C ≤ Ta ≤ +50 °C  
 Alkaline -20 °C ≤ Ta ≤ +50 °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!

<b>Switching On</b>	Hold right key <b>ON</b> for 1 second to turn the detector on. A self-test is effected and informs about software version, sensors, detection ranges, alarm thresholds and date of next inspection. The G460 tests the sensors and monitors their adjustments and the intervals für bump test and calibration. The relevant messages are displayed when the detector starts up.
<b>Switching Off</b>	For <b>switching off</b> keep the right key <b>OFF</b> pressed for about 5 seconds.

<b>AutoCal</b>	By simultaneously pressing the middle and right key the AutoCal-menu is started. By pressing the right key <b>(AIR)</b> the automatic fresh air adjustment is started. When the detector is equipped with an oxygen sensor, its sensitivity is set to the normal 20.9 Vol% oxygen which are present in fresh air.
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Alarm type	Sensors	Number of Alarms	Description
<b>Instantaneous (AL)</b>	oxygen, combustible and toxic gases	3 3 2	A <b>threshold alarm</b> is triggered, if the gas concentration exceeds (for O <sub>2</sub> ) or falls below a pre-set value. The alarm thresholds are adjustable.
<b>Short-term average (STEL)</b>	toxic gases	1	<b>Short-term exposure levels (STEL)</b> are the average over a period of 15 minutes. The alarm is not latching but resets automatically when falling below the STEL value.
<b>Time weighted average (TWA)</b>	toxic gases	1	<b>Time weighted average (TWA)</b> refers to a working shift of 8 hours. The TWA alarm cannot be reset. It only turns off when the detector is switched off.

<b>Turn display by 180°</b>	The display can be turned by 180° by pressing the right and the left key simultaneously and then releasing them. This allows easy reading when carrying the detector on the belt.
<b>Zoom-display</b> <b>Detection values, average and peak value</b>	For reading individual values in <b>Zoom</b> mode, press the right key <b>ZOOM</b> . Press the key shortly, to display one value in <b>Zoom</b> mode. Shortly 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, press <b>ZOOM</b> long to change to detail reading of measurement value, maximum and average value.
<b>Peak display</b>	In <b>Peak</b> mode (activation by pressing the left key <b>PEAK</b> ) <b>peak values</b> can be monitored and displayed. The display shows an animated symbol in the left bottom corner.
<b>Peak memory reset</b>	Within the zoom display the peak value is shown in the right top corner instead of the actual gas concentration. Press <b>RESET</b> in Peak mode and the Peak memory will be reset to the actual gas concentration. Press <b>RESET</b> in Zoom mode and the Peak memory and the maximum hold memory will be reset to the actual gas concentration.
<b>Deactivation</b>	Pressing <b>PEAK</b> de-activates the the <b>Peak</b> mode.
<b>Lights (lamp)</b>	If the detector provides the torch function, the lights can be turned on by pressing for about 3 seconds resp. turned off by pressing again (shortly).
<b>Service mode</b>	The <b>service mode</b> is activated by pressing the middle key <b>RESET</b> for about 4 seconds. The service mode allows to adjust the G460 by changing certain program parameters.
<b>Access code</b>	Some menu points are only accessible by entering a special <b>access code</b> . The access code prevents important functions from being changed incidentally or by unauthorized persons. In service mode the alarms are not triggered.
<b>Main menu</b>	The <b>Main menu</b> is the first menu point in the service mode. It allows to adjust different options: <ul style="list-style-type: none"> <li>• <b>Location</b> (= Entering a location)</li> <li>• <b>User</b> (= Entering of user identification)</li> <li>• <b>Data logger</b> (= Setting of data logger functions)</li> <li>• <b>Signal</b> (= Setting of confidential bleep)</li> <li>• <b>Service</b> (= Opens service menu)</li> <li>• <b>AutoCal</b> (= Calibration with fresh air or test gas)</li> <li>• <b>Options</b> (= Setting of contrast and alarm volume)</li> </ul> The menu control is self-explanatory: Several key functions will always be shown in the display by markings above each key.
<b>Service menu</b>	By choosing main menu point <b>Service</b> the service menu will be opened. In the service menu the G460 can be adjusted by changing of program parameters.
<b>System menu</b>	From here you can go to to the system menu to select different options: <ul style="list-style-type: none"> <li>• <b>Bump test</b> (status, date of last and next Bump test, interval)</li> <li>• <b>Calibration</b> (status, date of last and next calibration, interval)</li> <li>• <b>Inspection</b> (= Date of next inspection)</li> <li>• <b>Time</b> (= Date and time)</li> <li>• <b>Options</b> (selection of menu language, vibration alarm on/off, latching alarm on/off, autostore on/off)</li> <li>• <b>Sensor selection</b> (= activation resp. de-activation of individual sensors)</li> <li>• <b>AutoCal – Air</b> (= adjustment with fresh air)</li> <li>• <b>AutoCal – Gas</b> (= adjustment with fresh air)</li> <li>• <b>Information</b> (= Information about detector type, software version, serial number and battery type)</li> </ul>
<b>Sensor specific functions</b>	The selection of <b>Sensors</b> allows to adjust sensor specific functions: <ul style="list-style-type: none"> <li>• Zeroing (= zeropoint adjustment)</li> <li>• Calibration (= adjustment of the sensitivity)</li> <li>• Adjustment of alarm thresholds</li> <li>• Calibration data (=date and status of last zero and sensitivity calibration)</li> <li>• Information (= sensor information: sensor type, serial number, detection range, temperature range)</li> </ul>

**The detector must not be charged in hazardous locations. The detector must not be opened in hazardous locations and therefore battery resp. rechargeable battery must not be changed.**