

## Quick Reference Guide

### Measurement method

Electrochemical measurement cell (EMC)

### Environmental conditions (operation)

Temperature: -20 to +45 °C/+55 °C

Humidity: 5 to 95 % RH

Air pressure: 70 to 130 kPa

### Operating time

9 months (10 hours of use/work day) or 90 days (24/7)\*

\*Using unleaded O<sub>2</sub> sensors will decrease the operating time.

### Power supply

Interchangeable alkaline battery (1x AA)

May only be replaced with the battery specified in the operation manual!

### Battery type

INDUSTRIAL by DURACELL ID1500 AA (LR6)

DURACELL Procell PC1500 LR6 AA

### Housing

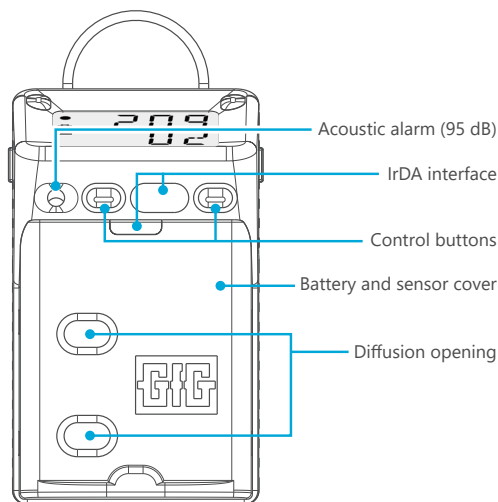
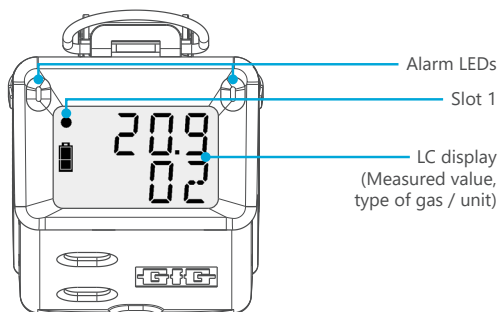
Material: Polycarbonate / rubberized plastic

Dimensions: 49 x 84 x 32 mm (W x H x D)

Weight: 115 to 125 g

(including sensors, battery and fastening clip)

IP rating: IP54



**Do not open the device in potentially explosive areas!**

**Replace the battery outside of potentially explosive areas only!**

**Do not use solvents or cleaning agents for cleaning!**

### ATEX certification

Micro 5 G222E

⊕ I M1 Ex ia I Ma

-20 °C ≤ Ta ≤ +55 °C

⊕ II 1G Ex ia IIC T3 Ga

-20 °C ≤ Ta ≤ +55 °C

⊕ II 1G Ex ia IIC T4 Ga

-20 °C ≤ Ta ≤ +45 °C

### Turning on the device

Briefly press the right button.

### Self-test / warm-up phase

As soon as the device is turned on, the two red LEDs above the display will flash to indicate the boot process and the self-tests have been started. The parameters of the inserted sensors (gas, measuring range, alarm thresholds, STEL, TWA) are shown during this process. A warm-up timer will indicate the remaining duration of the starting phase. The device will give an acoustic signal when the warm-up phase is completed.

### Measuring mode

After the self-test is completed, the MICRO 5 will switch to measuring mode. The LC display will show the measured value as well as the type of gas or measuring range (alternating). If you equipped two sensors, the display will alternate between them. The MICRO 5 is a gas detector for 1 or 2 gases. If the measured value of the sensor in slot 1 is currently displayed, the device will indicate that by showing a ● in the upper left corner of the screen. If the measured value of the sensor in slot 2 is displayed, this dot is not visible.

### Turning off the device

To turn off the device, hold down the right button for the duration of the initiated acoustic shut-down countdown.

Type of alarm	Sensors	Alarm level	Description
Current value (AL)	<ul style="list-style-type: none"> <li>» Oxygen</li> <li>» Combustible gases</li> <li>» Toxic gases</li> </ul>	3 3 2	Are activated immediately when the current gas concentration exceeds or falls below (O <sub>2</sub> ) a set value. The current value alarms can be set individually.
Short-term exposure limit (STEL)	» Toxic gases	1	The short-term exposure value (STEL) indicates the mean value of the past 15 minutes.
Time-weighted average (TWA)	» Toxic gases	1	The time weighted average (TWA) monitors the exposure to gas over the past 8 hours.

#### Rotating the display by 180°

Briefly press the left and right buttons simultaneously to rotate the display by 180°. This will make it easier to read when wearing the device on your person.

#### Charging status of the battery

Briefly press the right button to make the device display the exact charging status of the battery (in percent). Additionally, the battery icon will inform you about the approximate charging status:



> 50 %



<= 50 % and > 15 %

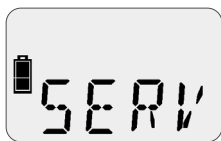


<= 15 % and > 5 %



<= 5 %

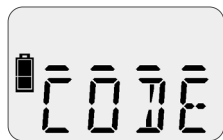
#### Service menu



The service menu is only accessible via an access code. This prevents important functions from being changed accidentally or by unauthorized people. All alarms are deactivated while in service mode.

Press the left button for more than 1 second to activate the service menu. Enter four-digit access code:

#### Access code



- » Briefly pressing the left button = value + 1
- » Holding down the left button = value - 1
- » Briefly pressing the right button = Move one digit to the right / confirm
- » Holding down right button = Move one digit the left

If you enter an incorrect code, the notification **WRNG** (wrong) will be displayed and the device switches back to measuring mode.

Information on the setting possibilities, the adjustment and calibration can be found in the operation manual.

### Typical Sensors with their measuring ranges and alarm thresholds

Type of gas	H <sub>2</sub>	O <sub>2</sub>	CO	H <sub>2</sub> S	NO	NH <sub>3</sub>	HCN	HCl	C <sub>2</sub> H <sub>4</sub> O	ClO <sub>2</sub>	COCl <sub>2</sub>	PH <sub>3</sub>	SiH <sub>4</sub>	HF	Cl <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>	SO <sub>2</sub>
Measuring range	4.0 Vol.-%	25.0 Vol.-%	500 ppm	100 ppm	100 ppm	200 ppm	50 ppm	30 ppm	20 ppm	2.0 ppm	2.0 ppm	10.0 ppm	20 ppm	10.0 ppm	10.0 ppm	1.0 ppm	30 ppm	10.0 ppm
Alarm A1	0.4	19.0	30	5	2.5	20	5	5	2	0.2	0.1	0.3	5	1.0	0.5	0.1	2	1.0
Alarm A2	0.6	17.0	60	10	5.0	40	10	10	4	0.4	0.2	0.4	10	2.0	1.0	0.2	4	2.0
Alarm A3	0.8	23.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Test gas	1.0	20.9	200	50	50	100	50	10	20	1.0	1.0	5.0	5	10.0	5.0	0.7	20	10.0

More gases and measuring ranges on request.

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