915MHz USA
868MHz Europe

# Microtector III G888

4 - 7 **Sensor** Personal Gas Monitor
with remote multiple instrument monitoring,
two way communication and Man Down options

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## Measurable gases

| | | |
|---|---|---|
| **TOX** Toxic gases | **OX** Oxygen | **EX** Flammable gases |
| **CO₂** Carbon dioxide | **CO** Carbon monoxide | |

### Record-breaking

The G888 is the world's smallest and lightest 4-7 sensor personal gas monitor with optional Radio communication. The G888 can detect toxic, flammable gases & vapours along with Oxygen depletion and enrichment. Numerous sensor combinations and comprehensive accessories ensure the G888 can can be used in a wide range of industry applications.

### Easy operation

The main functions - peak display, EX LED lamp, alarm reset, display zoom and rotating display can all be controlled with a simple keystroke and the device has a convenient 3 button user menu.

### Man-down alarm

The G888 has been equipped with a man-down alarm. The time interval for when the alarm should be triggered can be individually set and password protected so that in critical cases no time is lost while initiating rescue measures.

### Wireless live measurement data

The G888 can send real-time data by radio to a central GfG-Link or an operation centre.

### PC and tablet

The visualisation software, GfG-Connect, can be used on Windows®-based PCs or tablets. Up to 20 devices can be displayed as a list or with a detailed view.

Status display with an integrated Ex-protected lamp

Time

A crocodile clip ensures safe retention

Radio reception with signal strength

Battery status

Display of the measured value

Key assignment

Graphic display with zoom function can be rotated through 180°

Easy operation with 3 keys

LED alarm bar

5 sensor sockets

3 smart **EC** sensors
1 **CC** sensor
1 smart **IR** sensor

Data logger for 30,000 measured values

Optical alarm system with colour change on the display

IrDA interface and optional radio

Alarm horn with 103dB(A) and vibration alarm

Integrated explosion protected lamp

Robust, slip-resistant and water-proof housing (IP67)

## Housing features

Antistatic explosion protected housing

Soft impact-proof 2K housing

Enclosure type of protection IP67



868 MHz ca. 700 m
915 MHz ca. 300 m

Device user

USB dongle and PC

868 MHz ca. 700 m
915 MHz ca. 300 m

Device user

GfG-Link

### GfG-Link

The GfG-Link can connect from 1-4 or 5-10 devices. Both the user name of the device and the current measurement data is displayed on the GFG Link. The lifesaving man down alarm has a special status and is amplified by an unmistakable acoustic signal sequence and a red flashing alarm display. The GfG-Link display represents all connected devices and their current status. The "open field" range is approximately 700m (1400m radius)

### Pager function

The GFG-Link can send short messages to the G888 and you can choose between free text on a PC or preconfigured standard messages with the GfG-Link. The short messages can be confirmed from the G888 with short standard replies such as "OK".

### Alarm simulation

In order to prepare your personnel for an emergency, the G888 is equipped with a training mode. It is possible to simulate instrument alarms via PC or the



Range monitoring

Green: all values ok
Yellow: Pre-alarm
Red: Main alarm / Man down alarm



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## Alarms

| | | |
|---|---|---|
| **Man Down** Man down alarm | **Vibration alarm** | **103** Alarm buzzer 103 dB (A) |
| **Three-coloured traffic light alarm** | **KZW LZW** Short term values and long term values | |

## Sensor Options

Several versions are available:
One version is:
1x combustible catalytic (**CC**), 1x infra- red (**IR**), up to 3x electrochemical (**EC**).
The design of the G888 allows different sensor combinations ensuring most industry requirements are met.

## Sensors

Using the best quality sensors ensures reliability, better accuracy, quick response and reduced cross sensitivity. Using "smart" sensors" makes servicing easier.

## The infrared principle (NDIR)

With only one IR measuring chamber, carbon dioxide and hydrocarbons can be simultaneously yet precisely detected as the sensor uses up to four gas-specific wavelengths. Absorption paths and wavelengths are perfectly adapted to gases and measuring ranges. Damage to the sensor by silicone compounds or hydrogen sulphide can be excluded with IR technology. The IR sensor has the advantage of heat tone sensors so that it is not damaged even at the highest gas concentrations.

## Large display & zoom function

The clear graphic display can be rotated through 180° and can be conveniently read in any position it is worn, e.g. if you have attached it to your work clothes you have both hands free and can keep an eye on all the displayed values. The zoom function of the display facilitates the reading of the device while other PPE is worn e.g under a breathing mask or without the need for reading glasses.

Main alarm:
Highest alert level

Pre-alarm: Caution!

All measured values
in the normal range

## Alarm thresholds

The alarm thresholds for oxygen and combustible gases as well as two current limits for toxic gases and explosion alarms provide comprehensive protection for the user.

- **L**ong**T**erm**V**alue (**LTV** or (**TWA**)
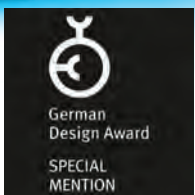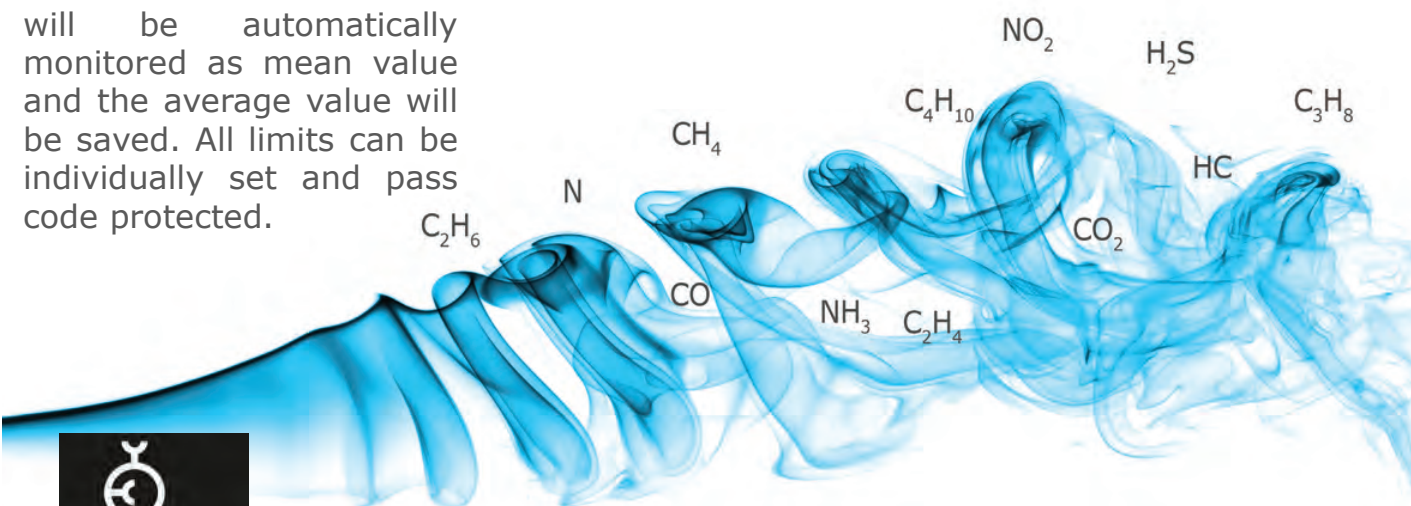- **S**hort**T**erm**V**alue (**STV**) or (**STEL**)

will be automatically monitored as mean value and the average value will be saved. All limits can be individually set and pass code protected.

## Data logger

The integrated data logger simultaneously records up to 12 measured values and saves internally up to 30,000 measured values (500 hours at 1 minute logging intervals). The saved data can be conveniently read via the smart cap or drop-in charger.

## Safety meets design

The G888 combines technical innovation with captivating design. An independent committee of experts have commended the outstanding performance in design and functionality, with special consideration given to the size and weight of the device.

$NO_2$   $H_2S$

$C_4H_{10}$   $C_3H_8$

$CH_4$   HC

N   $CO_2$

$C_2H_6$

CO   $NH_3$   $C_2H_4$

*The sensor cover of the Microtector III G888 can be individually designed with colours, if desired. In this way, you can distinguish differently equipped devices at a glance.*

# Smart device management

### Smart Cap
- Adapter for the manual test gas injection
- Data interface and connection to the PC

### DIC drop in Charger
- Charger for controlled charging
- Data interface and connection to the PC
- Avoiding charging errors by capacity monitoring of the battery

### Test station TS400
- The on-site solution for daily instrument testing with gas (Bump Test)
- All results logged to in-built SD Card - No PC necessary
- Can produce documentation of each test performed
- Minimises cost of gas and test time
- Mobile — simple and rapid operation
- Complies with the provisions of the DGUV information 213-056 (T021) and 213-057 (T023) for visual control

### Docking station DS400
- Fully automatic Calibration or funtional (Bump) Test
- Can produce documentation of each test performed incl.Calibration Certs
- Quick & Easy to use
- No PC required for the operation - data saved to SD Card
- Single Gas Bottle connection - Single or Multi-Mix Gas Bottle
- Charging option
- Complies with the provisions of the DGUV information 213-056 (T021) and 213-057 (T023) for the functional control

### Docking station DS404
- Fully automatic Calibration or funtional (Bump) Test
- Can produce documentation of each test performed incl.Calibration Certs
- Quick & Easy to use
- No PC required for the operation - data saved to SD Card
- Four Gas Bottle connection - Single Gas / Multi Gas / Exotic Mixes
- Charging option
- Complies with the provisions of the DGUV information 213-056 (T021) and 213-057 (T023) for the functional control

### GfG-PolyLink 4
### GfG-PolyLink 10
- Monitoring of 4 or 10 x G888
- Intuitive operation
- ATEX certified
- Range of 1400m

### Holster with belt
- Optimum protection

### USB Dongle for Radio communications

- Open Field 700m
- Other antennas on request

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# Technical Data

## Microtector III G888

**Electrochemical (EC) measuring principle:**
**Up to 3 different sensors:**
Toxic gases and oxygen
(ppm / Vol.-%)

**Catalytic sensor (CC):**
Flammable gases and vapours
(up to 100% LEL)

**Infrared (IR):**
Carbon dioxide (Vol.-%)
Hydrocarbons
(100 % LEL and Vol.-%)

**Expected service life of the sensor**
Up to 5 years; depending on the sensor type

**Device version:**
**G888C**
3x electrochemical sensors (EC)
1x catalytic sensor (CC)
1x infrared double sensor (IR1, IR2/IR3)

**Measuring gas supply:**
Diffusion

**Display:**
Illuminated LCD graphics display with colour change for the alarm display can be turned by 180°, automatic zoom for best readability

**Alarms:**
Three or two current value and two exposure level alarms, battery alarm depending on the type of gas

**Optical alarm:**
Colour of the display depends on the alarm status of the device   (green/orange/red), 360° all-round red LED

**Acoustical alarm:**
103 dB (A) loud and can be
Reduced to 90 dB (A)

**Temperature:**
Operation:                        -20°C .. +50°C
Storage:                          -25°C .. +55°C
                                  (Recommended 0 .. +30°C)

**Humidity:**
Operation and storage:            5 .. 95 % rh

**Pressure:**
Operation and storage: 70 .. 130 kPa

**Zero point / Sensitivity adjustment:**
User-friendly, automatic adjustment via AutoCal function, manual adjustment in the sensor menu

**Energy supply:**
NiMH battery

**Charging:**
Charging and trickle charging via the charger or docking station

**Device runtime depending on the equipment:**
8h          EC+CC+IR+radio
10h         EC+CC+IR
21h         EC+CC(PS)

**Charging times:**
About 6h if the battery is flat
About 3h after a shift
(with EC+CC+IR sensors)

**Dimensions:**
68 x 100 x 30 mm (WxHxD)
Display diagonal 55 mm

**Housing material:**
Rubberised polycarbonate

**Protection class:**
IP67

**Automatic maintenance reminder:**
Display when switching on

**Data logger:**
About 500h data recording
(interval of 1 minute)
30,000 measured values,
12 values simultaneously
Intervals can be set (1 s - 60 min)
Recording of mean /peak / instantaneous values can be selected

**Type examination certificate:**
BVS 15 ATEX E 064X
IECEx BVS 15.0056X

**Labelling and ignition protection class:**
ATEX for G888C
II 2G Ex ia db IIC T4 Gb
I  M2 Ex ia db I Mb
IECEx
Ex ia db IIC T4 Gb
Ex ia db I Mb

**Weight:**
up to 265g depending on the sensor equipment