

## Technical data sheet

### Multitec<sup>®</sup> 560

Device data	
Dimensions (W x D x H)	approx. 148 x 57 x 205 mm approx. 148 x 57 x 253 mm with supporting bracket
Weight	approx. 1000 g, depending on equipment

Certificates	
Certificate	TÜV 07 ATEX 553353 X II2G Ex d e ib IIB T4 Gb basic device without leather bag for: CH <sub>4</sub> , C <sub>3</sub> H <sub>8</sub> , C <sub>4</sub> H <sub>10</sub> , C <sub>9</sub> H <sub>20</sub> , H <sub>2</sub> S, CO II2G Ex d e ib IIC T4 Gb basic device with leather bag for: CH <sub>4</sub> , C <sub>3</sub> H <sub>8</sub> , C <sub>4</sub> H <sub>10</sub> , C <sub>9</sub> H <sub>20</sub> , H <sub>2</sub> S, CO, H <sub>2</sub> BVS 09 ATEX G 001 X, PFG 08 G 002 X (applies to CH <sub>4</sub> , CO <sub>2</sub> , O <sub>2</sub> , CO, H <sub>2</sub> S)

Device elements	
Display	monochromatic graphic display, 320 x 240 pixels
Buzzer	frequency 2.4 kHz, volume 80 db (A) / 1 m
Signal light	red
Pump capacity	vacuum > 250 mbar, volume flow approx. 50 l/h
Interface	USB
Memory	8 MB
Operation	ON/OFF key, 3 function keys, jog dial

Operating conditions	
Operating temperature	-20 °C – +40 °C
Storage temperature	-25 °C – +60 °C (temperatures above 40 °C reduce the lifetime of the sensors)
Humidity	5 – 90 % r.h., non-condensing
Atmospheric pressure	800 – 1100 hPa
Protection rating	IP54

<b>Power supply</b>	
Power supply	NiMH rechargeable or disposable alkaline batteries, type Mignon (AA)
Operating time, typical	at least 8 h
Charging time	approx. 3 h (complete charge) depending on capacity
Charging voltage	12 V DC, max. 1 A

<b>Data transmission</b>	
Communication	USB

<b>Infrared sensor CxHy % LEL range</b>	
Measuring range	0 – 4.4 % vol. (CH <sub>4</sub> ), 0 – 100 % LEL
Resolution	0.05 % vol.
Response times	t <sub>50</sub> < 8 s (CH <sub>4</sub> ), t <sub>90</sub> < 14 s (CH <sub>4</sub> )
Warm-up time	17 s
Measuring error	short-term stability: ±2 % LEL long-term stability: ±4 % LEL linearity: ±3 % LEL (2 months)
Interference	all hydrocarbons
Lifetime, expected	5 years

<b>Infrared sensor CxHy % vol. range</b>	
Measuring range	0 – 100 % vol. (CH <sub>4</sub> )
Resolution	0.1 % vol. (0 – 9.9 % vol.) 1 % vol. (10 – 100 % vol.)
Response times	t <sub>50</sub> < 9 s (CH <sub>4</sub> ), t <sub>90</sub> < 17 s (CH <sub>4</sub> )
Measuring error	±2 % vol.
Interference	all hydrocarbons
Lifetime, expected	5 years

**Infrared sensor CO2 TOX range**

Measuring range	0 – 5 % vol.
Resolution	0.02 % vol.
Response times	t <sub>90</sub> < 20 s
Decay time	t <sub>10</sub> < 14 s
Warm-up time	17 s
Measuring error	long-term stability: 8 % from measured value or 0.02 % vol. linearity: ≤4 % from measured value or ≤0.02 % vol. (3 months)
Zero point deviation	0.04 % vol.
Interference	none
Lifetime, expected	5 years

**Infrared sensor CO2 % vol. range**

Measuring range	0 – 100% vol.
Resolution	0.1 % vol. (0 – 9.9 % vol.) 1 % vol. (10 – 100 % vol.)
Response times	t <sub>90</sub> < 20 s
Measuring error	±1.5 % from upper range value
Interference	none
Lifetime, expected	5 years

**Electrochemical sensor oxygen O2**

Measuring range	0 – 25 % vol.
Resolution	0.1 % vol.
Response times	t <sub>90</sub> < 30 s
Warm-up time	approx. 1 min
Temperature range	-20 °C – +40 °C
Measuring error	linearity: ±1.5 % or ±0.3 % vol. (±3 digits) long-term stability: 0.2 % vol. (3 months)
Interference	none
Lifetime, expected	24 months

**Electrochemical sensor carbon monoxide CO**

Measuring range	0 – 500 ppm
Resolution	1 ppm
Response times	t <sub>90</sub> < 30 s
Decay time	t <sub>10</sub> < 24 s
Warm-up time	approx. 1 min
Temperature range	-20 °C – +40 °C
Measuring error	linearity: 2 % from measured value or 1 ppm long-term stability: ≤ 10 % from measured value or ≤ 1 ppm (3 months)
Zero point deviation	7 ppm
Interference	at 20 °C – 3000 ppm H <sub>2</sub> : approx. 1000 ppm CO – 100 ppm NO: approx. 25 ppm CO
Lifetime, expected	36 months

**Electrochemical sensor hydrogen sulphide H<sub>2</sub>S TOX range**

Measuring range	0 – 100 ppm
Resolution	1 ppm
Response times	t <sub>90</sub> < 60 s
Decay time	t <sub>10</sub> < 90 s
Warm-up time	approx. 1 min
Temperature range	-20 °C – +40 °C
Measuring error	linearity: ±2% or ±1ppm long-term stability: 10 % from measured value or ≤ 1 ppm (3 months)
Zero point deviation	1 ppm
Interference	– 100 ppm CO: approx. 1 ppm H <sub>2</sub> S – 1 % vol. H <sub>2</sub> : approx. 10 ppm H <sub>2</sub> S – 100 ppm NO <sub>2</sub> : approx. 3 ppm H <sub>2</sub> S
Lifetime, expected	24 months

<b>Electrochemical sensor hydrogen sulphide H<sub>2</sub>S gas measuring</b>	
Measuring range	0 – 2000 ppm
Resolution	1 ppm (up to 100 ppm) 2 ppm (from 100 ppm)
Response times	t <sub>90</sub> < 60 s
Decay time	t <sub>10</sub> < 90 s
Warm-up time	approx. 1 min
Temperature range	-20 °C – +40 °C
Measuring error	linearity: ±3 % or ±3 ppm long-term stability: 10 % from measured value or 5 ppm (3 months)
Zero point deviation	2 ppm
Interference	– 100 ppm CO: approx. 2 ppm H <sub>2</sub> S – 1 % vol. H <sub>2</sub> : approx. 10 ppm H <sub>2</sub> S – 100 ppm NO <sub>2</sub> : approx. 4 ppm H <sub>2</sub> S
Lifetime, expected	24 months

106654 – 01.09.2014 – Subject to technical changes.