

# Multitec<sup>®</sup> 540

## Technical Data Sheet

**Distributed by:**  
 Linc Energy Systems  
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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>

Features	
Display	monochromatic graphic display, 320 x 240 pixels
Buzzer	frequency 2.4 kHz, volume 80 dB (A) / 1 m
Signal light	red
Pump	vacuum: > 250 mbar volume flow: typically 50 l/h ±20 l/h
Interface	USB 2.0
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 (millibar)
Pressure at gas inlet	-175 – 65 hPa (millibar)
Protection rating	IP54

<b>Power supply</b>	
Power supply	NiMH rechargeable or disposable alkaline batteries, size AA
Operating time, typical	at least 6 h
Battery capacity	2000 mAh
Battery voltage	rechargeable batteries: 4 x 1.2 V disposable batteries: 4 x 1.5 V
Charging time	approx. 3 h (complete charge), depending on capacity
Charging temperature	0°C – 30°C
Charging voltage	12 V DC
Charging current	max. 1 A

<b>Infrared sensor CH4 (interspace)</b>	
Measuring range	0 ppm – 1.00 % vol.
Indication range	0 ppm – 2.5 % vol.
Resolution	50 ppm (0 – 950 ppm) 0.01 % vol (0.10 – 2.50 % vol.)
Response times	$t_{50} < 9$ s, $t_{90} < 17$ s
Temperature range	-20 °C – 40 °C
Measuring error	±15 % of measured value (linearity), at least ±100 ppm
Interference	all hydrocarbons
Lifetime, expected	5 years

<b>Infrared sensor CH4 (gas measuring)</b>	
Measuring range	0 – 100 % vol.
Resolution	0.1 % vol. (0 – 79.9 % vol.) 1 % vol. (80 – 100 % vol.)
Response times	$t_{50} < 9$ s, $t_{90} < 17$ s
Temperature range	-20 °C – 40 °C
Measuring error	±1.5 % from end of measuring range
Interference	all hydrocarbons
Lifetime, expected	5 years

<b>Infrared sensor CO2 (gas measuring)</b>	
Measuring range	0 – 100 % vol.
Resolution	1 % vol.
Response times	$t_{90} < 20$ s
Temperature range	-20 °C – 40 °C
Measuring error	±1.5 % from end of measuring range
Interference	none
Lifetime, expected	5 years

<b>Electrochemical sensor oxygen O2 (gas measuring)</b>	
Measuring range	0 – 25 % vol.
Resolution	0.1 % vol.
Response times	$t_{90} < 15$ s
Warm-up time	approx. 1 min
Temperature range	-20 °C – 40 °C
Measuring error	$\pm 3$ % or $\pm 0.3$ % vol. ( $\pm 3$ digits)
Interference	none
Lifetime, expected	24 months

<b>Electrochemical sensor carbon monoxide CO (gas measuring)</b>	
Measuring range	0 – 500 ppm
Resolution	1 ppm
Response times	$t_{90} < 30$ s
Warm-up time	approx. 1 min
Temperature range	-20 °C – 40 °C
Measuring error	$\pm 10$ % or $\pm 3$ ppm ( $\pm 3$ digits) $\pm 5$ ppm (long-term stability as per EN 45544)
Interference	at 20°C <ul style="list-style-type: none"> <li>• 3000 ppm H2: approx. 1000 ppm CO</li> <li>• 100 ppm NO: approx. 25 ppm CO</li> </ul>
Lifetime, expected	36 months

<b>Electrochemical sensor hydrogen sulphide H2S (gas measuring)</b>	
Measuring range	0 – 2000 ppm
Resolution	1 ppm (0 – 100 ppm) 2 ppm (100 - 998 ppm) 0.02 % vol. / 200 ppm (0.10 - 0.2 % vol.)
Response times	$t_{90} < 30$ s
Warm-up time	approx. 1 min
Temperature range	-20 °C – 40 °C
Measuring error	$\pm 3$ % or $\pm 3$ ppm ( $\pm 3$ digits) $\pm 3$ ppm (long-term stability)
Interference	at 20°C <ul style="list-style-type: none"> <li>• 100 ppm CO: approx. 1 ppm H2S</li> <li>• 1000 ppm H2: approx. 7 ppm H2S</li> </ul>
Lifetime, expected	24 months

Subject to technical changes.