



Multitec[®] 545/540

Series

Type/model	<ul style="list-style-type: none">• Multitec 545: 066 13• Multitec 540: 066 12
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Certificates

Certificate	TÜV 07 ATEX 553353 X <ul style="list-style-type: none">• II 2G Ex db eb ib IIB T4 Gb basic device without leather bag for:<ul style="list-style-type: none">◦ CH₄, C₃H₈, C₄H₁₀, C₉H₂₀, H₂S, CO• II 2G Ex db eb ib IIC T4 Gb basic device with leather bag for:<ul style="list-style-type: none">◦ CH₄, C₃H₈, C₄H₁₀, C₉H₂₀, H₂S, CO, H₂
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Device data

Dimensions (W x D x H)	approx. 148 x 57 x 205 mm (5.83 x 2.24 x 8.07 in) approx. 148 x 57 x 253 mm (5.83 x 2.24 x 9.96 in) with supporting bracket
Weight	approx. 1000 g (35 oz), depending on equipment

Features

Display	monochrome, 320 x 240 pixel
Buzzer	<ul style="list-style-type: none">• frequency: 2,4 kHz• volume: 80 dB (A) / 1m (3.28 ft)
Signal light	red
Pump	<ul style="list-style-type: none">• vacuum: > 250 mbar• volume flow: typically 50 l/h ±20 l/h• pump error (F100) depending on volume flow:<ul style="list-style-type: none">◦ ≤ 20 l/h F100 certain◦ > 20 l/h – ≤ 35 l/h F100 possible
Interface	USB 2.0
Memory	8 MB
Control	<ul style="list-style-type: none">• ON/OFF key• 3 function keys• jog dial
Sensors	<ul style="list-style-type: none">• IR for flammable gases (CH₄)• IR for CO₂ optional: <ul style="list-style-type: none">• EC for CO, H₂, H₂S, O₂

Operating conditions*

Operating temperature	-20 – 40°C (-4 °F – 104 °F)
Humidity	5 – 90% r.h., non-condensing
Atmospheric pressure	800 – 1100 hPa
Pressure at gas inlet	-175 – 65 hPa
Protection rating	IP54
Position of use	any

*Optional sensors can affect the operating conditions of the device.

Storage conditions

Storage temperature	-25 – 60°C (-13 °F – 140 °F) temperatures above 40°C (104 °F) reduce the service life of the sensors
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Power supply

Power supply	4 cells, type Mignon AA, optionally: <ul style="list-style-type: none"> • rechargeable batteries: NiMH • disposable batteries: Alkaline
Operating time, typical	at least 6 h
Battery capacity	2000 mAh
Charging time	approx. 3 h (complete charge), depending on capacity
Charging temperature	0 – 35°C (32 to 95 °F)
Charging voltage	12 V DC (max. 1 A)

Data transmission

Communication	USB
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Gas types

Default	CH ₄ , CO ₂
Optional	CO, H ₂ , H ₂ S, O ₂

Sensors

Note:

when using probes, the specified response times are longer.

Note for EC sensors:

at temperatures below 0 °C (32 °F) the specified response times and decay times may be longer.

Methane CH₄ (Interspace application)

Type	infrared sensor (IR)	
Use	Multitec 545/540	
Measuring range	0 ppm – 1.00% vol.	
Indication range	0 ppm – 2.5% vol.	
Resolution	<ul style="list-style-type: none"> • 50 ppm (0 – 950 ppm) • 0.01% vol (0.10 – 2.50% vol.) 	
Response times	t ₅₀ < 9 s	t ₉₀ < 17 s
Warm-up time	< 60 s	
Temperature range	-20 – 40 °C (-4 °F – 104 °F)	
Measuring error	±15% of measured value (linearity), at least ±100 ppm	
Interference, known	all hydrocarbons C _x H _y	
Lifetime, expected	5 years	
Adjustment	test gas concentration: <ul style="list-style-type: none"> • zero point: hydrocarbon-free, clean air • CH₄: 1% vol., utilisable 0.50 – 1.00% vol. 	

Methane CH₄ (Gas measuring application)

Type	infrared sensor (IR)	
Use	Multitec 545/540	
Measuring range	0 – 100% vol.	
Resolution	<ul style="list-style-type: none"> • 0.1% vol. (0 – 79.9% vol.) • 1% vol. (80 – 100% vol.) 	
Response times	t ₅₀ < 9 s	t ₉₀ < 17 s
Warm-up time	< 30 s	
Temperature range	-20 – 40 °C (-4 °F – 104 °F)	
Measuring error	±1.5% of measured value, at least ±0.5% vol.	
Interference, known	all hydrocarbons C _x H _y	
Lifetime, expected	5 years	
Adjustment	test gas concentration: <ul style="list-style-type: none"> • zero point: hydrocarbon-free, clean air • CH₄: <ul style="list-style-type: none"> ◦ 100% vol. ◦ gas mixture 60% vol. CH₄ / 40% vol. CO₂ 	

Carbon dioxide CO₂

Type	infrared sensor (IR)
Use	Multitec 545/540
Measuring range	0 – 100% vol.
Resolution	<ul style="list-style-type: none"> • 0.1% vol. (0 – 9.9% vol.) • 1% vol. (10 – 100% vol.)
Response times	t ₉₀ < 20 s
Warm-up time	< 30 s
Temperature range	-20 – 40°C (-4 °F – 104 °F)
Measuring error	±1.5% vol.
Zero point deviation	0.04% vol.
Interference, known	none
Humidity	5 – 90% r.h., non-condensing <ul style="list-style-type: none"> • short term: 0% r.h
Lifetime, expected	5 years
Adjustment	test gas concentration: <ul style="list-style-type: none"> • zero point: carbon dioxide-free, clean air • CO₂: <ul style="list-style-type: none"> ◦ 100% vol. ◦ gas mixture 60% vol. CH₄ / 40% vol. CO₂

Oxygen O₂

Type	electrochemical sensor (EC)
Use	Multitec 545/540
Measuring range	0 – 25% vol.
Indication range	0 – 30% vol.
Resolution	0.1% vol.
Response times	t ₉₀ < 30 s
Warm-up time	up to 90 s
Temperature range	-20 – 40 °C (-4 °F – 104 °F)
Measuring error	<ul style="list-style-type: none"> • linearity: ≤ 1.5% of measured value, minimum ≤ 0.3% vol. • long-term stability: ≤ 0.2% vol. (3 months)
Drift	< 2% within 3 months
Interference, known	none
Humidity	5 – 90% r.h., non-condensing <ul style="list-style-type: none"> • short term: 0% r.h
Lifetime, expected	2 years
Adjustment	test gas concentration: <ul style="list-style-type: none"> • zero point: <ul style="list-style-type: none"> ◦ oxygen-free air ◦ 100% vol. N₂ ◦ 100% vol. CH₄ • O₂: 20.9% vol., e.g. clean air

Carbon monoxide CO

Type	electrochemical sensor (EC)	
Use	Multitec 545/540	
Measuring range	0 – 500 ppm • lower limit: ◦ 0 – 100 ppm: 4 ppm ◦ > 100 ppm: 11 ppm	
Indication range	0 – 600 ppm	
Resolution	1 ppm	
Response times	t ₉₀ < 30 s	
Decay times	t ₁₀ ≤ 25 s	
Warm-up time	up to 90 s	
Temperature range	-20 – 40 °C (-4 °F – 104 °F)	
Measuring error	• ±3 %, minimum ±3 ppm (±3 digit) • long-term stability ◦ test gas: ≤ 4% of measured value ◦ zero point (fresh air): ≤ 1 ppm	
Drift	< 10% within 6 months	
Zero point deviation	• 0 – 100 ppm: 3 ppm • > 100 ppm: 13 ppm	
Interference, known	at 20°C (68 °F) • C ₂ H ₂ 100 ppm: approx. 90 ppm CO • C ₂ H ₄ 100 ppm: approx. 96 ppm CO • Cl ₂ 15 ppm: approx. 1 ppm CO • H ₂ 200 ppm: approx. 30 ppm CO • H ₂ S 50 ppm: approx. 1 ppm CO • NH ₃ 50 ppm: approx. 0 ppm CO • NO 50 ppm: approx. 15 ppm CO • SO ₂ 20 ppm: approx. 0 ppm CO	
Humidity	15 – 90% r.h., non-condensing • short term: 0% r.h	
Lifetime, expected	3 years	
Adjustment	test gas concentration: • zero point: clean air • CO: 40 ppm, utilisable 10 – 150 ppm	

Hydrogen H2

Type	electrochemical sensor (EC)	
Use	Multitec 545/540	
Measuring range	0 – 1000 ppm	
Indication range	0 – 1200 ppm	
Resolution	5 ppm	
Response times	t ₉₀ < 60 s	
Decay times	t ₁₀ ≤ 60 s	
Warm-up time	up to 90 s	
Temperature range	-20 – 40 °C (-4 °F – 104 °F)	
Measuring error	±10 %, minimum ±15 ppm (±3 digit)	
Drift	< 10% within 6 months	
Zero point deviation	±10 ppm (±2 digit)	
Interference, known	at 20°C (68 °F)	
	• CO 200 ppm	approx. 150 ppm H ₂
	• H ₂ S 25 ppm	approx. -0.5 ppm H ₂
	• N ₂ O 20 ppm	approx. -1 ppm H ₂
	• NO 50 ppm	approx. 20 ppm H ₂
	• S ₂ O 20 ppm	approx. -1 ppm H ₂
Humidity	15 – 90% r.h., non-condensing	
	• short term: 0% r.h	
Lifetime, expected	3 years	
Adjustment	test gas concentration:	
	• zero point:	clean air
	• H ₂ :	1000 ppm, utilisable 100 – 1000 ppm

Hydrogen sulphide H₂S

Type	electrochemical sensor (EC)
Use	Multitec 545
Measuring range	0 – 5000 ppm • lower limit: 1 ppm
Indication range	0 – 6000 ppm
Resolution	• 1 ppm (0 – 100 ppm) • 2 ppm (100 - 998 ppm) • 0.02% vol. / 200 ppm (0.10 - 0.5% vol.)
Response times	t ₉₀ < 60 s
Decay times	t ₁₀ < 90 s
Warm-up time	up to 120 s
Temperature range	-20 – 40 °C (-4 °F – 104 °F)
Measuring error	• ±3% or ±3 ppm (±3 digits) • ±3 ppm (long-term stability)
Drift	< 10% within 6 months
Zero point deviation	2 ppm
Interference, known	at 20°C (68 °F) • CO 200 ppm: approx. 2 ppm • SO ₂ 20 ppm: approx. 3 ppm • NO ₂ 200 ppm: approx. -30 ppm • H ₂ 100 ppm: approx. 2 ppm
Humidity	15 – 90% r.h., non-condensing • short term: 0% r.h
Lifetime, expected	2 years
Adjustment	test gas concentration: • zero point: clean air • H ₂ S: 180 ppm, utilisable 10 – 1200 ppm

Hydrogen sulphide H₂S

Type	electrochemical sensor (EC)
Use	Multitec 540
Measuring range	0 – 2000 ppm • lower limit: 1 ppm
Indication range	0 – 2400 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 < 60 s
Decay times	t ₁₀ < 90 s
Warm-up time	up to 120 s
Temperature range	-20 – 40 °C (-4 °F – 104 °F)
Measuring error	• ±3% or ±3 ppm (±3 digits) • ±3 ppm (long-term stability)
Drift	< 10% within 6 months
Zero point deviation	2 ppm
Interference, known	at 20°C (68 °F) • H ₂ 2% vol.: approx. 150 ppm H ₂ S • Isopropanol 1% vol.: approx. 0 ppm H ₂ S • NH ₃ 1000 ppm: approx. 0 ppm H ₂ S
Humidity	15 – 90% r.h., non-condensing • short term: 0% r.h
Lifetime, expected	2 years
Adjustment	test gas concentration: • zero point: clean air • H ₂ S: 180 ppm, utilisable 10 – 1200 ppm

Diensten van EURO-INDEX

EURO-INDEX is fabrikant van BLAUWE LIJN en importeur/distributeur van diverse A-merken test- en meetinstrumenten. Wij leveren naast instrumenten ook de diensten om het gebruik hiervan in uw bedrijfsvoering te optimaliseren. Dit omvat uiteraard onderhoud, reparatie en kalibratie van instrumenten, maar ook kennisdeling via de EURO-INDEX Academy en verhuur van meetinstrumenten.

Geautoriseerd Service Centrum

EURO-INDEX is van de meeste merken in ons assortiment een Geautoriseerd Service Centrum. Dit betekent dat uw instrumenten worden behandeld door technici die zijn opgeleid door de fabrikant en beschikken over de juiste gereedschappen en software. Er worden uitsluitend originele onderdelen toegepast en de garantie van uw instrument blijft intact, net als de certificering (ATEX, EN50379, etc.).

Kalibratielaboratorium

Ons moderne service- en kalibratielaboratorium beschikt over een RvA accreditatie naar NEN-EN-ISO/IEC 17025. Deze accreditatie geldt voor grootheden, zoals gespecificeerd in de scope bij [accreditatienummer K105](#).



Kijk voor een overzicht van al onze diensten op euro-index.nl/diensten

KWS®

KWS® is een unieke kalibratieformule voor uw test- en meetinstrumenten met periodiek onderhoud en kalibratie tegen vaste, lage kosten.

Uw kalibratiecertificaten zijn digitaal beschikbaar via Mijn KWS (gratis webportaal en app) en door de QR-code te scannen van de kalibratiesticker op het instrument.

Verhuur van meetinstrumenten

Er zijn diverse situaties waarbij huren handig is:

- U heeft tijdelijk extra toestellen nodig.
- Uw eigen meetinstrument wordt onderhouden en/of gekalibreerd.
- U moet een eenmalige meting verrichten.

EURO-INDEX Academy

- Trainingen (individueel en klassikaal)
- Cursussen, infosessies en workshops
- Demonstratie- en instructievideo's
- Whitepapers



Servicebalie



Onderhoud, reparatie en kalibratie



Cursussen en workshops



Kalibratielaboratorium

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