



VARIOTEC® 660

Series

Type/model	065 40
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Certificates

Certificate	explosion protection test EU type examination certificate: TÜV 07 ATEX 553353 X
Marking	II 2G Ex db eb ib IIC T4 Gb

Device data

Dimensions (W × D × H)	- approx. 148 × 57 × 205 mm (5.83 x 2.24 x 8.07 in) - approx. 148×57×253 mm (5.83 x 2.24 x 9.96 in) with supporting bracket
Weight	approx. 1000 g (35 oz)
Material	housing: polycarbonate

Features

Display	monochrome, 320×240 pixels	
Buzzer	- frequency: 2.4 kHz - volume: 80 dB (A) / 1 m (3.28 ft)	
Signal light	red	
Pump	- vacuum: - volume flow: - inspection above ground, measuring in bar holes, gas measuring, plants applications: - structure application: - ethane analysis application during sampling: - pump error (F100) depending on volume flow: ≤ 20 l/h > 20 l/h – ≤ 35 l/h	> 250 mbar typically 50 l/h ±20 l/h - approx. 50 l/h - approx. 40 l/h - approx. 50 l/h - F100 certain - F100 possible
Interface	USB 2.0 Type B	
Memory	8 MB	
Control	- ON/OFF key 3 function keys - jog dial	
Sensors	- SC for CH₄, H₂ - IR for CH₄ - TC for H₂	
Filter	replaceable dust filter	

Operating conditions

Operating temperature	-20 – 40°C (-4 – 104 °F)
Humidity	5 – 90 % r.h., non-condensing
Atmospheric pressure	800 – 1100 hPa
Pressure at gas input	max. 100 mbar
Protection rating	IP54
Position of use	any

Storage conditions

Storage temperature	-25 – 60°C (-13 °F – 140 °F) temperatures above 40°C (104 °F) reduce the lifetime of the rechargeable batteries.
Humidity	5 – 90 % r.h., non-condensing
Atmospheric pressure	800 – 1100 hPa

Power supply

Power supply	4 cells, type Mignon AA, optionally: • rechargeable batteries: NiMH • disposable batteries: alkaline
Operating time, typical	min. 7 h
Charging time	approx. 3 h (full charge), depending on capacity
Charging temperature	0 – 35°C (32 – 95 °F)
Charging voltage	12 V DC (max. 1 A)

Data transmission

Communication	USB 2.0 Type B
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Gas types

Default	• CH₄ • H₂
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Sensors

Note:

When using probes, the specified response times are extended.

Methane CH₄ (Measuring in bar holes, Gas measuring applications)

Type	infrared sensor (IR)	
Measuring range	0 – 100% vol.	
Indication range	0 – 120% vol.	
Resolution	0 – 10% vol. 10 – 100% vol.	0.1% vol. 1% vol.
Response times	100% vol.	t ₉₀ < 10 s
Warm-up time	< 30 s	
Temperature range	-20 – 40°C (-4 – 104 °F)	
Measuring error	- CH₄: ±5% of the measured value, minimum 1% vol. - C_xH_y: > ±5% of the measured value, minimum 1% vol.	
Interference, known	all hydrocarbons	
Lifetime, expected	5 years	
Test gases	- zero point: clean air - CH₄: 1.0% vol. in synth. air 100% vol.	

Hydrogen H₂ (Measuring in bar holes, Gas measuring applications)

Type	thermal conductivity (TC) sensor with hydrocarbon compensation	
Measuring range	0 – 100% vol.	
Indication range	-5 – 120% vol.	
Resolution	1% vol.	
Response times	100% vol. H ₂ :	t ₉₀ < 10 s
Warm-up time	< 90 s	
Temperature range	-20 – 40°C (-4 – 104 °F)	
Measuring error	±3% vol.	
Interference, known	- all gases with a different thermal conductivity at 20 °C (68 °F): 10% vol. CO₂ -1 – 0% vol.	
Lifetime, expected	5 years	
Test gases	- zero point: clean air - H₂: 100% vol.	

Methane CH₄, hydrogen H₂ (Inspection above ground, Plants, Structure applications)

Type	thermal conductivity sensor (TC)	
Measuring range	- CH₄: 0 – 2.2% vol. - H₂: 0 – 2.0% vol.	
Indication range	-5 – 10% vol.	
Resolution	0.1% vol.	
Response times	- CH₄: 2.2% vol. t₉₀ < 10 s - H₂: 2.0% vol. t₉₀ < 10 s	
Warm-up time	< 30 s	
Temperature range	-20 – 40°C (-4 – 104 °F)	
Measuring error	- CH₄: ±25% of measured value, minimum 0.3% vol. - H₂: ±20% of measured value, minimum 0.2% vol.	
Interference, known	- all gases with a different thermal conductivity at 20 °C (68 °F), typically: - Gas type CH₄: 1% vol. H₂ < 4.5% vol. 1% vol. C₃H₈ < 0.6% vol. - Gas type H₂: 1% vol. CH₄ < 1.0% vol. 1% vol. C₃H₈ < 1.2% vol.	
Lifetime, expected	5 years	
Test gases	- zero point: clean air - CH₄: 1.0% vol. in synth. air 100% vol. - H₂: 100% vol.	

Methane CH₄, hydrogen H₂ (Inspection above ground, Plants, Structure applications)

Type	gas-sensitive semiconductor (SC)	
Measuring range	0 – 1% vol.	
Indication range	0 – 1.5% vol.	
Resolution	• 0 – 10 ppm • 10 – 100 ppm • 100 – 999 ppm • 0.1 – 0.5% vol. • 0.5 – 1.0% vol.	1 ppm 2 ppm 20 ppm 0.02% vol. (200 ppm) 0 – 1% vol.
Response times	when adding test gas directly at the gas input: • CH₄: 10 ppm: t₉₀ < 7 s 1000 ppm: t₉₀ < 8 s • H₂: 10 ppm: t₉₀ < 5 s 1000 ppm: t₉₀ < 6 s	
Warm-up time	approx. 1 min	
Temperature range	-20 – 40°C (-4 – 104 °F)	
Measuring error	• CH₄: ±30% of measured value • H₂: ±30% of measured value	
Interference, known	• all hydrocarbons • water vapour, CO, CO₂ at 20 °C (68 °F), typically: • gas type CH₄: ○ 100 ppm H₂ < 100 ppm ○ 100 ppm C₃H₈ < 80 ppm ○ Water vapour (< 80% r.h.) < 1 ppm ○ 40 ppm CO < 15 ppm ○ 2% vol. CO₂ < 25 ppm • gas type H₂: ○ 100 ppm CH₄ < 120 ppm ○ 100 ppm C₃H₈ < 100 ppm ○ Water vapour (< 80% r.h.) < 1 ppm ○ 40 ppm CO < 10 ppm ○ 2% vol. CO₂ < 20 ppm	
Lifetime, expected	4 years	
Test gases	use the conditioner for all test gases! • zero point: clean air • CH₄: ○ 10 ppm in synth. air ○ 100 ppm in synth. air ○ 1000 ppm in synth. air ○ 1.0% vol. in synth. air • H₂: ○ 10 ppm in synth. air ○ 100 ppm in synth. air ○ 1000 ppm in synth. air ○ 1.0% vol. in synth. air	

Ethane detector

Type	gas chromatograph
Gases, separable	CH ₄ , C ₂ H ₆ , C ₃ H ₈
Sensor, used	gas-sensitive semiconductor
Measuring range	0 – 12000 ppm
Separating capacity	25 ppm
Resolution	1 ppm
Measurement time	4 min
Warm-up time	approx. 1 min
Measuring error	±30% of measured value
Lifetime, expected	5 years
Test gas	test gas concentration: • zero point: clean air • gas mixture: 1% vol. CH₄ / 100 ppm C₂H₆ in synth. air

Diensten van EURO-INDEX

EURO-INDEX is fabrikant van BLAUWE LIJN en importeur/distributeur van diverse A-merken test- en meet-instrumenten. Daarnaast leveren wij een groot aantal diensten om het gebruik van deze instrumenten in uw bedrijfsvoering te optimaliseren. Dit omvat onderhoud, reparatie en kalibratie van de instrumenten, maar ook kennisdeling via EURO-INDEX Academy en verhuur van instrumenten.

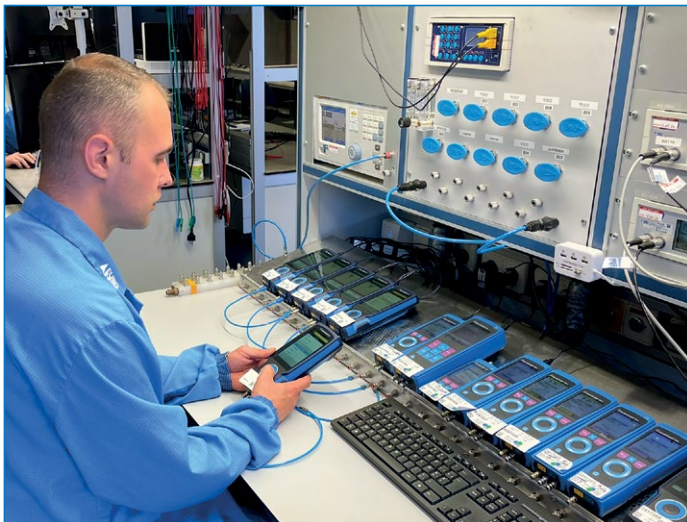
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Kalibratielaboratorium

Ons service- en kalibratielaboratorium is BELAC-geaccrediteerd volgens de norm EN-ISO/IEC 17025. De accreditatie geldt voor grootheden en meetbereiken zoals vermeld in de gewaarmerkte bijlage met certificaatnummer [760-CAL](#).

[Meer info](#)



KWS®

KWS® is een 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 op de kalibratiesticker van het instrument.

[Meer info](#)

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.

[Meer info](#)

EURO-INDEX Academy

- Trainingen, infosessies en workshops
- Demonstratie- en instructievideo's
- Application notes

[Meer info](#)



Servicebalie



Onderhoud, reparatie en kalibratie



Trainingen en seminars



Kalibratielaboratorium

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