

EX-TEC® HS 680



EX-TEC® HS 680 · 660 · 650 · 610
Combination measuring devices for gas supply
with integrated ethane detector

The new standard

Products from the new **EX-TEC® HS** family combine ergonomics with cutting edge technology.

Thanks to its innovative design this range offers the user the right instrument for different applications. You can find more details about the appliance configuration opposite.

All appliances from the **EX-TEC® HS** family meet the requirements of DVGW worksheet 465-4 (The German Technical and Scientific Association for Gas and Water).

Notes

Ergonomics / operation

- Operated by jog dial, function keys and menu navigation
- Large matrix display with backlight
- Power supply via 4 changeable AA-size rechargeable or disposable batteries
- Quick charging in 4 h, normal charging 10 h, can also be charged without docking station
- PC communication via USB

Safety

- Explosion protection (CENELEC):
 Ex II 2 G EEx ib d IIB T4, IIC when used with carrying bag TG8

Measuring technology

- Selective infrared sensors for hydrocarbons and carbon dioxide
- Fast and highly-sensitive semiconductive sensor
- Three optional electrochemical sensors for oxygen and toxic gases
- Gas type setting: methane (standard), propane and butane (optional)
- Optional: Ethane analysis to distinguish natural gas/marsh gas without any other accessories



Applications



Application		Measurement ranges	Active principle
Inspection above-ground		0 ppm ... 10 % vol. CH ₄	Gas-sensitive semiconductor Infrared sensor
Measuring in bar holes		0.0 ... 100 % vol. CH ₄ 0 ... 30 % vol. CO ₂	Infrared sensor Infrared sensor
Inspection of confined spaces		0 ppm ... 100 % vol. CH ₄	Gas-sensitive semiconductor Infrared sensor
Inspection indoors		0 ppm ... 100 % vol. CH ₄	Gas-sensitive semiconductor Infrared sensor
Warning Ex		0 ... 100 % LEL CH ₄	Infrared sensor
Warning ExTox		0 ... 100 % LEL CH ₄ 0 ... 5 % vol. CO ₂ 0 ... 25 % vol. O ₂ (optional) 0 ... 100 ppm H ₂ S (optional) 0 ... 500 ppm CO (optional)	Infrared sensor Infrared sensor Electrochemical sensor Electrochemical sensor Electrochemical sensor
Measuring gas purity		0.0 ... 100 % vol. CH ₄	Infrared sensor
Ethane analysis		CH ₄ , CH ₄ , C ₂ H ₆ , C ₃ H ₈ (optional)	Gas-sensitive semiconductor / gas chromatograph

Ethane analysis

Increased safety and efficiency with innovative technology

The new **EX-TEC® HS** product family helps the user clearly detect leaks in underground pipes..

To avoid costly and time-consuming pointless excavations, it must be absolutely certain that the gas is actually leaking from a natural gas pipeline.

Locating the exact position of the leak also keeps shaft work to a minimum.

EX-TEC® HS appliances offer new possibilities in this respect.

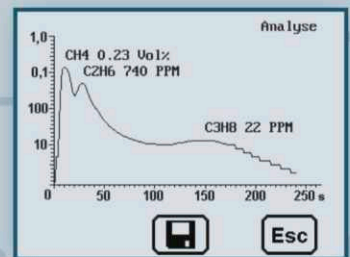
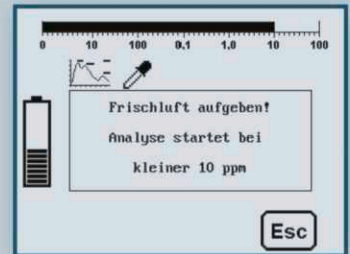
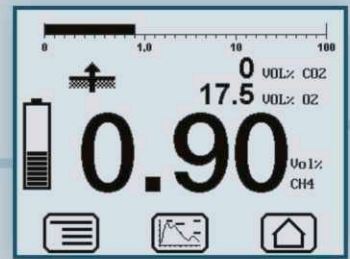
If the gas has dispersed over a wide area, it is often difficult to pinpoint the leak exactly. In many cases the gas gathers under fixed surfaces and spreads over long distances.

The optional oxygen sensor can also display the oxygen minimum at the same time as the methane maximum. This minimum, with its smaller diffusion area, is used to locate complex leaks more precisely.

The integrated ethane detector easily picks up whether the gas is natural gas or marsh gas. The user does not need any extra accessories or specialist knowledge.

The **EX-TEC® HS 680/660** guides the user through the ethane analysis with prompts.

The definitive result can be saved and further processed on the PC using the integrated USB port.



Applications methane

Choosing a model

Model	Inspection above-ground	Inspection indoors	Warning EX	Warning ExTox	Inspection of confined spaces	Measuring in bar holes	Measuring gas purity
EX-TEC® HS 680	X	X	X	X	X	X	X
EX-TEC® HS 660	X	X			X	X	X
EX-TEC® HS 650			X	X		X	X
EX-TEC® HS 610						X	X

X = integrated

Additional equipment

Model	Ethane detector	XT O ₂ sensor	XT CO sensor	XT H ₂ S sensor 100 ppm
EX-TEC® HS 680	O	O	O	O
EX-TEC® HS 660	O	O		
EX-TEC® HS 650		O	O	O
EX-TEC® HS 610		O		

O = optional



Technical data

Detectable gases:	Gas database with calibration for methane, carbon dioxide and other gases, e.g. propane, butane
Operating time:	min. 8.0 h
Power supply:	4 NiMH batteries, 4 AA-size rechargeable or disposable batteries
Type of protection:	IP54
Operating temperature:	-10 °C ... +40 °C
Storage temperature:	-25 °C ... +50 °C
Pressure:	950 hPa to 1100 hPa
Humidity:	15% r.h. to 90% r.h., non condensing
Dimensions (W x D x H):	148 x 57 x 205 mm 253 mm (incl. supporting bracket)
Weight:	approx. 1000 g

Accessories

- Charging equipment for 12 V~, 24 V~ and 230 V~
- Docking station/wall mount
- Carrying case
- Gas detecting probes/localisation probes
- Test sets and test gases



System case for network survey



- 1 EX-TEC® HS 680
- 2 Docking station TG 8
- 3 AC/DC adapter
- 4 Probe hose
- 5 Flexible hand probe
- 6 Localisation probe
- 7 Bell probe