Detector

AND YOUR ENVIRONMENT
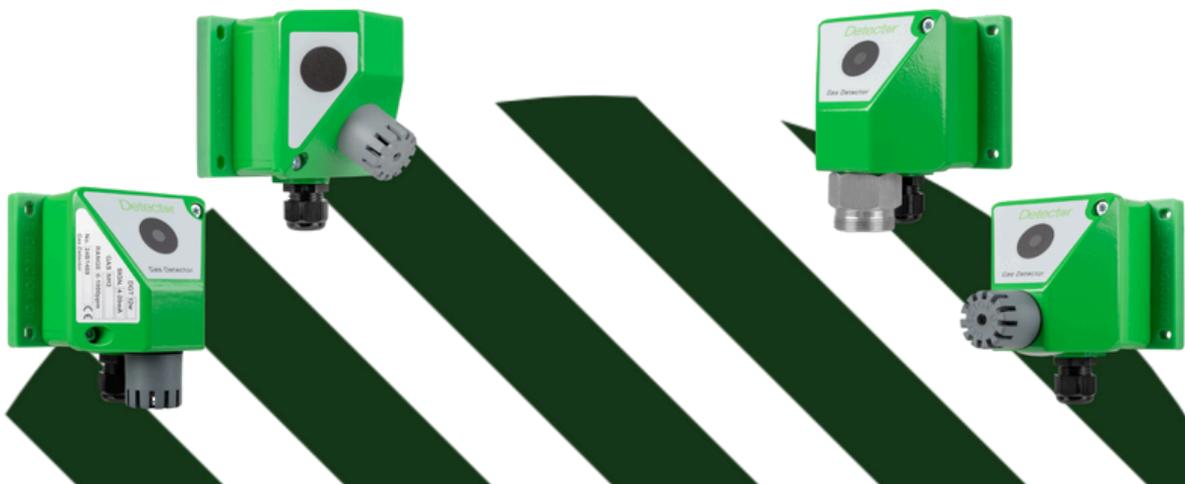## IS **SAFE**

VARIO

VARIO

VARIO product family offers a comprehensive range of fixed gas detectors for a wide variety of industrial and commercial environments. Manufactured by Detector in Turku, Finland, VARIO gas detectors combine high performance, reliability, and ease of use. With the VARIO product family, you can ensure safety by monitoring multiple gases across countless applications. We offer the right gas detector for every need.

VARIO gas detectors are suitable for monitoring a wide range of gases and offer various sensor technologies to ensure accuracy and safety in different environments. Each model is designed to meet specific operational requirements, whether it's detecting explosive, toxic, flammable, refrigerant gases or for indoor air quality monitoring.

The VARIO series includes the following models:
- **CAT** – Catalytic sensor for flammable gas detection
- **EC** – Electrochemical sensor for measuring toxic gases and oxygen
- **EC/M** – Electrochemical sensor for monitoring indoor air quality and carbon monoxide
- **SC** – Semiconductor-based sensor for detecting gas leaks

All VARIO series devices offer a long-lasting and cost-effective solution for gas monitoring and can be integrated into broader safety systems.

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VARIO (CAT)

– For monitoring flammable gases

VARIO CAT is a catalytic gas detector specifically designed for monitoring flammable gases. It quickly detects the presence of explosive gas concentrations and triggers an alarm before dangerous levels are reached. This makes it an ideal solution for industrial environments where flammable gases are part of the process.

- Detects gases such as methane, propane, and butane
- Fast response and accurate measurement
- Durable construction and long service life
- Easy integration with gas detection systems

Technical Specifications:

- Can be equipped with relay output and buzzer
- LED indicator light
- Catalytic sensor
- Selectable measuring range
- Replaceable sensor element with a lifespan of 5 years
- Wireless calibration
- Output signal: 4–20 mA
- Operating voltage: 24 VDC ±20%
- IP rating: IP 54 (IP 56 with HST protective case)
- Available for wall, ceiling, duct, or pipe mounting
- Dimensions: 89 mm x 89 mm x 69 mm (W x H × D)
- Weight: approx. 640 g

VARIO CAT GAS	Detection technology	Unit	Standard range	Max range	Typical sensor replacement interval (months)	Temperature range	Ambient humidity (non-condensing)	Response time T90
Acetylene (C2H2)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Gasoline	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Butane (C4H10)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Diesel	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Ethanol (C2H5OH)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Hexane (C6H14)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Heptane(C7H16)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Carbon Monoxide (CO)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Isopropanol (C3H8O)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Xylene (C8H1O)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Methane (CH4)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Methane (CH3OH)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Pentane (C5H12)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Propane (C3H8)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Toluene (C7H8)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Hydrogen (H2)	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s
Other flammable gases	Catalytic	% LEL	100	100	60	-40°C–+65°C	0–95 % RH	<20 s

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VARIO (EC)

– For Monitoring Toxic Gases and Oxygen Levels

VARIO EC is an electrochemical gas detector that accurately measures toxic gases and oxygen levels in the air. It is particularly well suited for environments where continuous monitoring is critical, such as the chemical industry, power plants, and laboratories.

- Accurate and reliable measurement for a wide range of toxic gases
- Suitable for monitoring gases such as carbon monoxide (CO), hydrogen sulfide (H$_2$S), and oxygen (O$_2$)
- Excellent service life and low maintenance costs
- Easy to calibrate and maintain
- Optional heating element allows installation in colder-than-usual environments

Technical Specifications:

- Electrochemical sensor
- Measuring range determined by the sensor element
- Replaceable sensor element lifespan: 2 years
- Wireless calibration
- Output signal: 4–20 mA
- Operating voltage: 16–36 VDC
- IP rating: IP 54 (IP 56 with HST protective case)
- Available for wall, ceiling, duct, or pipe mounting
- Dimensions: 89 mm × 89 mm × 69 mm (W × H × D)
- Weight: approx. 450 g

VARIO EC GAS	Detection technology	Unit	Standard range	Max range	Typical sensor replacement interval (months)	Temperature range	Ambient humidity (non-condensing)	Response time T90
Ammonia (NH3)	Electrochemical	ppm	500	1000	24	-40°C–+50°C	15–95% RH	<55 sec
Ethylene Oxide (C2H4O)	Electrochemical	ppm	100	500	24	-30°C–+50°C	15–95% RH	<200 sec
Hydrogen Fluoride (HF)	Electrochemical	ppm	10	50	24	-20°C–+50°C	15–95% RH	<120 sec
Oxygen (O2)	Electrochemical	% Vol	25	30	24	-30°C–+50°C	5–95% RH	<10 sec
Carbon Monoxide (CO)	Electrochemical	ppm	300	2000	24	-30°C–+50°C	15–95% RH	<30 sec
Chlorine (CL2)	Electrochemical	ppm	5	50	24	-20°C–+50°C	15–95% RH	<45 sec
Chlorine Dioxide (CLO2)	Electrochemical	ppm	2	2	24	-20°C–+50°C	15–95% RH	<120 sec
Methanol (CH3OH)	Electrochemical	ppm	100	200	24	-40°C–+50°C	15–95% RH	<25 sec
Ozone (O3)	Electrochemical	ppm	1	10	24	-20°C–+50°C	15–95% RH	<60 sec
Sulfur Dioxide (SO2)	Electrochemical	ppm	20	500	24	-30°C–+50°C	15–95% RH	<30 sec
Hydrogen Sulfide (H2S)	Electrochemical	ppm	50	500	24	-40°C–+50°C	15–95% RH	<60 sec
Silane (SiH4)	Electrochemical	ppm	10	100	24	-20°C–+50°C	15–95% RH	<60 sec
Hydrogen Chloride (HCL)	Electrochemical	ppm	20	100	24	-20°C–+50°C	15–95% RH	<70 sec
Nitrogen Dioxide (NO2)	Electrochemical	ppm	20	200	24	-30°C–+50°C	15–95% RH	<40 sec
Nitric Oxide (NO)	Electrochemical	ppm	50	1500	24	-30°C–+50°C	15–95% RH	<30 sec
Hydrogen (H2)	Electrochemical	ppm	10000	20000	24	-20°C–+50°C	15–95% RH	<110 sec

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VARIO (EC/M)

– Versatile Gas Detector for Air Quality Monitoring

VARIO EC/M is specifically designed for monitoring carbon monoxide and overall air quality. It is a multifunctional solution for indoor environments where gas concentrations can impact safety and working conditions.

- Suitable for monitoring exhaust gases and carbon monoxide (CO)
- Accurate and reliable measurement technology
- Easy to install and operate in various environments
- Can be integrated into intelligent air quality management systems
- Commonly used in parking garages and power plants

Technical Specifications:

- Electrochemical sensor
- Selectable measuring range
- Replaceable sensor element with a lifespan of 5 years
- Wireless calibration
- Output signal: 4–20 mA
- Operating voltage: 16–36 VDC, regulated
- IP rating: IP 54 (IP 56 with HST protective case)
- Available for wall, ceiling, duct, or pipe installation
- Dimensions: 89 mm x 89 mm x 69 mm (W x H x D)
- Weight: approx. 350 g

VARIO EC/M GAS	Detection technology	Unit	Standard range	Max range	Typical sensor replacement interval (months)	Temperature range	Ambient humidity (non-condensing)	Response time T90
Carbon Monoxide	Electrochemical	ppm	300	1000	60	-20°C–+50°C	10–95% RH	<50 sec

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VARIO (SC)

– Semiconductor-based detector for gas leak detection

VARIO SC utilizes semiconductor technology and is specifically developed for detecting gas leaks. It is an excellent choice for environments where monitoring of gas pipelines or storage tanks is critical.

- Detects, for example, organic compounds and hazardous gas leaks
- Compact and durable design
- Excellent sensitivity to low gas concentrations
- Suitable for a wide range of industrial and food industry applications, as well as parking facilities

Technical specifications:

- Relay: 24 VDC, 1 A
- Buzzer: 80 dB
- LED indicator light
- Semiconductor sensor
- Selectable measuring range
- Replaceable sensor element lifespan: 3 years
- Selectable output signal (4–20 mA, 0–20 mA, 0–10 V, 2–10 V)
- Operating voltage: 24 VDC / VAC ±20%
- IP rating: IP 54 (IP 56 with HST protective case)
- Available for wall, ceiling, duct, or pipe mounting
- Dimensions: 89 mm x 89 mm x 69 mm (W x H x D)
- Weight: approx. 390 g

VARIO SC GAS	Detection technology	Unit	Standard range	Max range	Typical sensor replacement interval (months)	Temperature range	Ambient humidity (non-condensing)	Response time T90
Car Exhaust Gases	Semiconductor	ppm	300	1000	36	-30°C–+40°C	15–90 % RH	<10 s
R123	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R1234ze	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R134A	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R21	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R22	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R245fa	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R401A	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R402A	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R125	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R4134A	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R407C	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R410A	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R450A	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R507	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
R513A	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s
Other refrigerants	Semiconductor	ppm	1000	3000	36	-30°C–+40°C	15–90 % RH	<10 s

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You can find our other products and accessories at:

www.detector.fi/en

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Jotta ympäristösi olisi turvallinen