



SIEMENS

Gas Analysis Isn't Exactly Your Only Priority? Luckily For You, It's Ours.

SIPROCESS GA700 – effortless gas analytics from Siemens.

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# Easier Than Ever

SIPROCESS GA700 – The New Generation  
of Continuous Gas Analytics.



**Your competent partner  
for innovative complete  
solutions in modern  
process gas analytics.**

Precise, long-lasting, reliable: in modern process gas analytics, Siemens has been known worldwide for many years for its outstanding quality and technology as well as its comprehensive range of products. With our engineering expertise developed over years, we have taken up the challenge to successfully combine proven techniques with innovative solutions that satisfy the demands of our customers.

Now, with SIPROCESS GA700, Siemens has not only developed a new production series, but also a new concept for process gas analytics: the system of modularity. This unique modular concept offers our customers indispensable advantages in the field of continuous gas analytics.

**Areas of Application for the SIPROCESS GA700:**

- Process control and optimization in incineration plants
- Process monitoring in chemical and petrochemical plants
- Quality control of high purity gases

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# Simply More Options.

## SIPROCESS GA700 – A New Level of Flexibility in Precision Measurement.

**For those who need flexible solutions to respond quickly to changing requirements.**

Three analysis modules, two housing types, one operational display unit: there's a system behind the new Siemens production series – a unique, modular concept that provides you with more flexibility for the diverse range of market requirements, thus making process analytics easier than ever.

Now for the first time, two analysis modules fit into each of the two housing types. The combination<sup>1</sup> of the modules OXYMAT 7, CALOMAT 7, and ULTRAMAT 7 offers many advantages for continuous gas analytics: combined measurements and interfering gas corrections in one device, fast and easy replacing of modules, and thus particularly economic retrofitting or conversion, and operating of all modules effortlessly by just one display unit.

### **The Rack and Wall-Mounted Housing.**

For the new SIPROCESS GA700, the platform is available in two housing types: the new 19" rack housing in three height units and the wall-mounted housing. Both units can now house two analyzer modules, saving space at the place of operation.

From the local user interface, the communication interfaces, the remote user interface to the basic electronics and software, both housings are uniform in terms of their equipment and setup. This simplifies the system integration of the various analyzers.

### **The Plug & Measure Principle.**

Insert the module, plug in, turn on, and begin measuring – after setup, module configuration takes place fully automatically. It's easier than ever.

<sup>1</sup> Currently, there are still limitations on certain combinations.



# SIPROCESS GA700

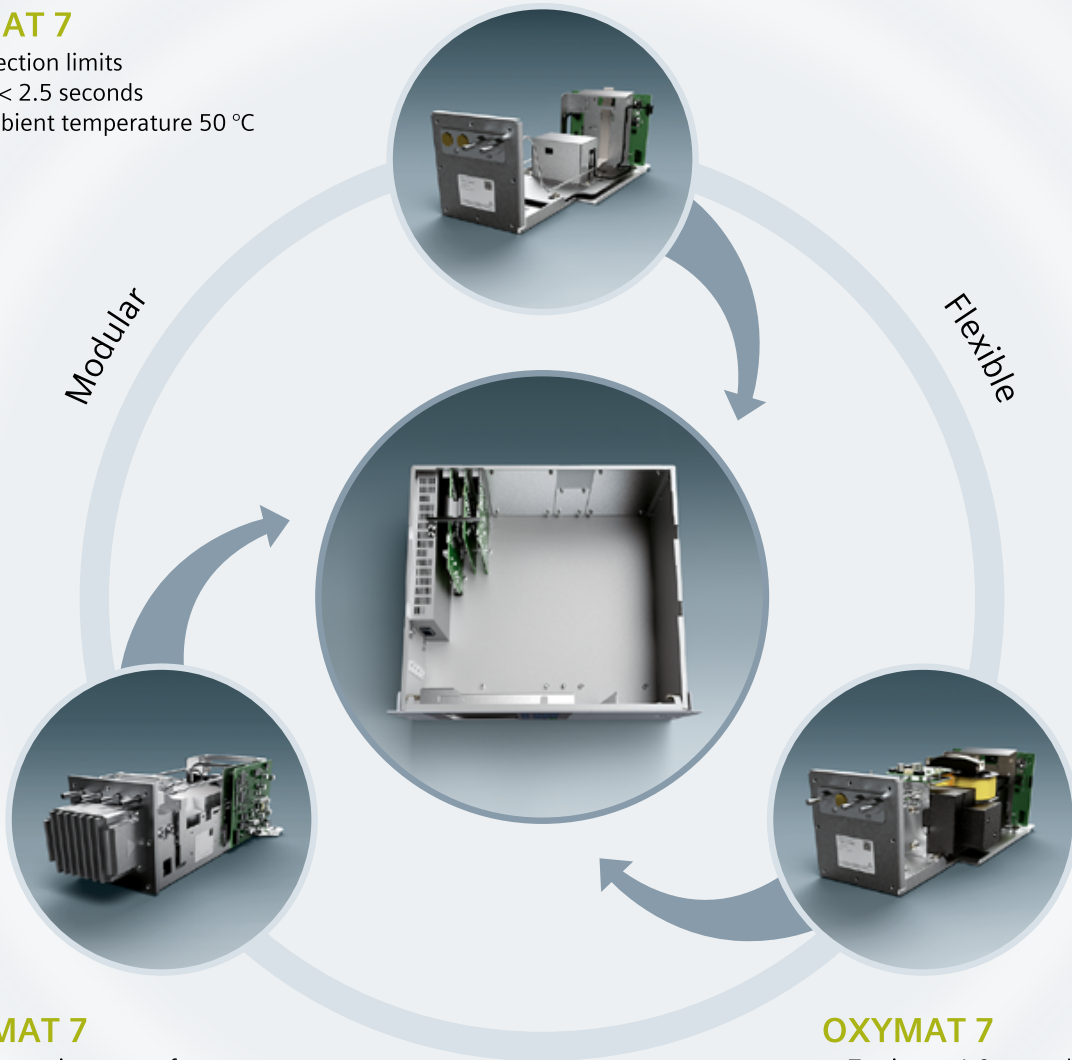
Gas analysis has never been easier.

## CALOMAT 7

- Low detection limits
- $T_{90}$  time < 2.5 seconds
- Max. ambient temperature 50 °C

Modular

Flexible



## ULTRAMAT 7

- Preventive maintenance feature
- Low detection limits
- Low maintenance costs

## OXYMAT 7

- $T_{90}$  time < 1.9 seconds
- Max. ambient temperature 50 °C
- Physically suppressed zero point

Plug & Measure



## Simply Compelling: The Advantages for You.

- Flexibility through individual analytical solutions
- Plug & Measure enables easy retrofitting and conversion
- Uniform operating concept for all housings and analyzers
- High efficiency due to reduced downtime

# Simply Easier to Operate.

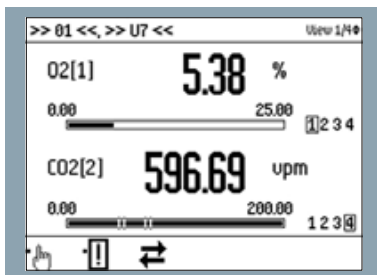
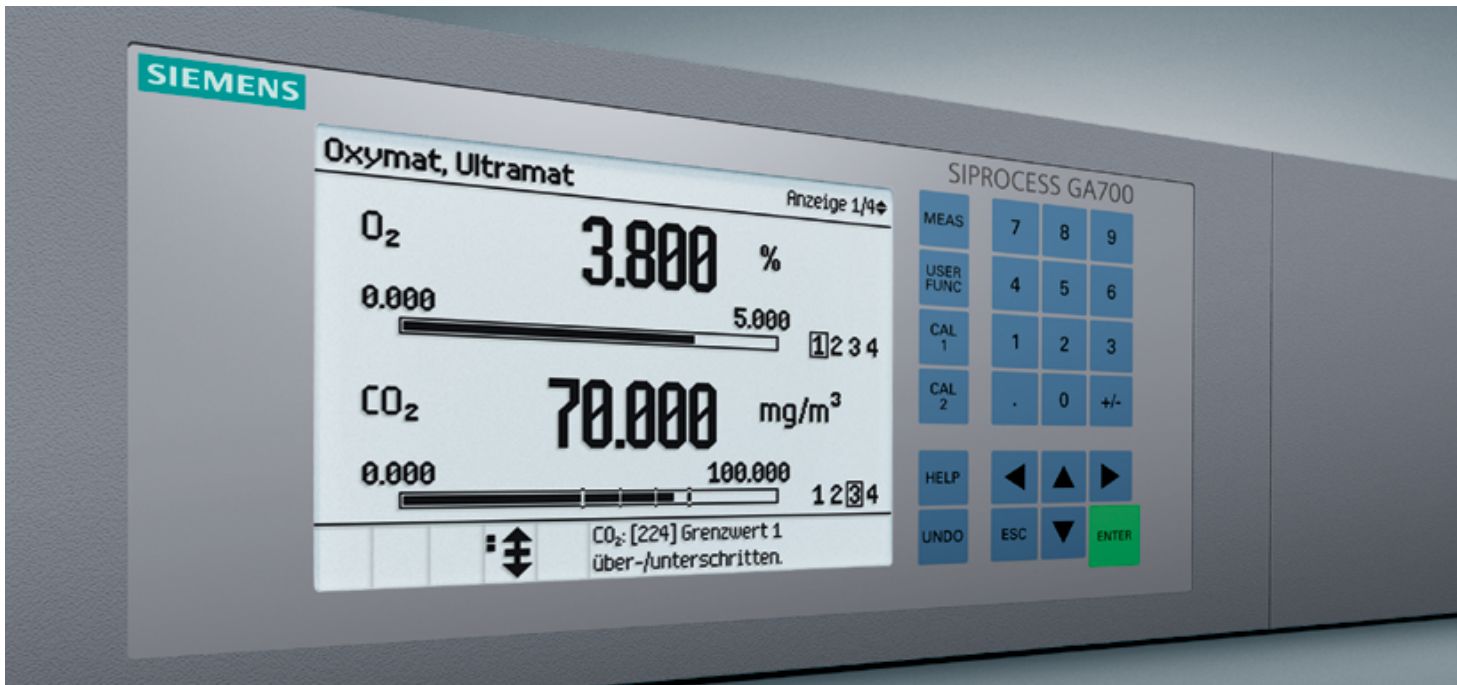
## It Speaks for Itself – The Menu Navigation of the SIPROCESS GA700.

For those who want a device with intuitive operation.

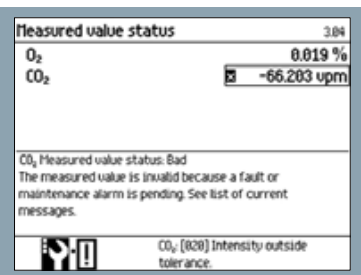
Uniform, straightforward, multilingual: all SIPROCESS GA700 modules are controlled by an identical operating concept. The uniform construction of the housing and the newly developed universal operating concept combine the proven characteristics of the well-established Series 6. The operating guide is very user-friendly, easy to understand, and now available in ten

languages – including Chinese, Japanese, and Korean.

In addition, the customer-specific settings can be saved and transferred quickly when replacing a module. This minimizes error sources and downtime. Moreover, the quick-start guide helps you get started using the device smoothly.



Adjustable view of the measured values



Clearly structured software menus



Same structure for all analysis modules

# Simply More Service Expertise.

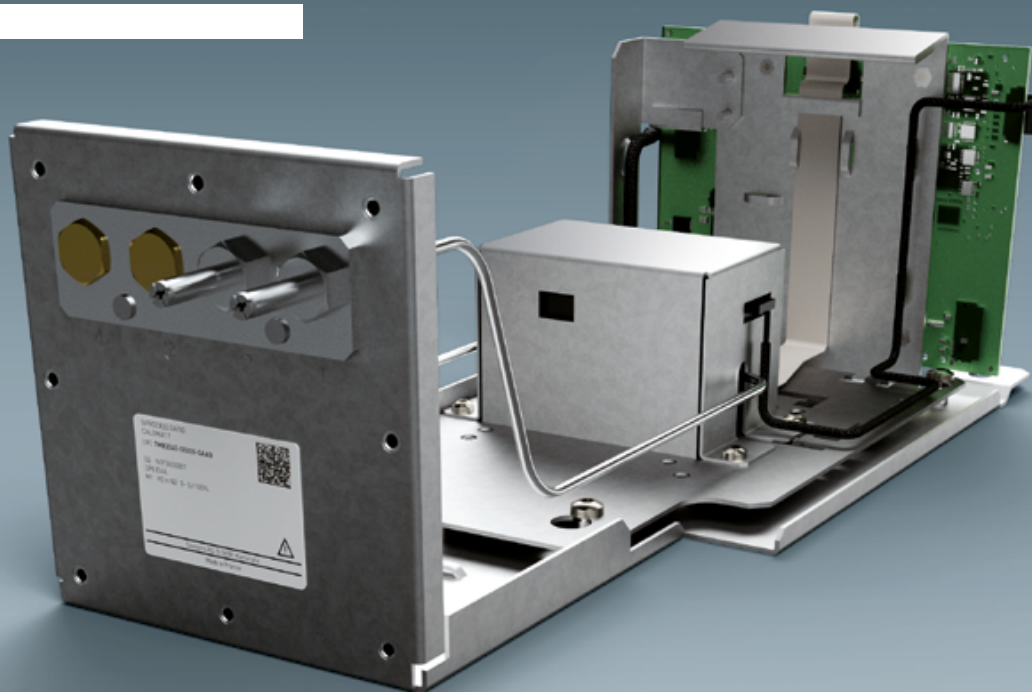
## Always There for You: The Siemens Quality Service.

Targeted consulting, safe installation, reliable maintenance: You can take advantage of our global quality service at any time.

Now you have the option of performing a complete module replacement on-site. Alternatively, individual components can of course also still be replaced. And thanks to the Plug & Measure principle, you won't have to re-enter parameter settings in an identical module.

For the first time, the ULTRAMAT 7 is equipped with a preventive maintenance feature. This feature informs you when the next maintenance is required ahead of time.





## The New Siemens Appliance Generation for Gas Analytics with Heat Conductivity Detector

SIPROCESS GA700 – CALOMAT 7



The CALOMAT 7 analysis module is primarily used for determining the amount of H<sub>2</sub> or He in binary or quasi-binary gas mixtures. Other gases can also be measured, such as Ar, CO<sub>2</sub>, CH<sub>4</sub>.

### Your benefits

- Ideal for binary gases
- Integrated cross-correction, no external calculation necessary
- Application switch
- High measuring range dynamics
- Wide range of possible uses with up to three applications per module
- Low detection limits in the measuring range 0 to 0.5 % with hydrogen
- T<sub>90</sub> time < 2.5 seconds
- Maximum ambient temperature 50 °C

### Typical application areas

- Pure gas monitoring
- Protective gas monitoring
- Hydrogen measurement in argon
- Forming gas monitoring
- Gas production
- Chemical applications
- Wood gasification
- Furnace gas measurement
- Converter gas
- Turbo generators<sup>1</sup>

<sup>1</sup> Planned for future product versions.

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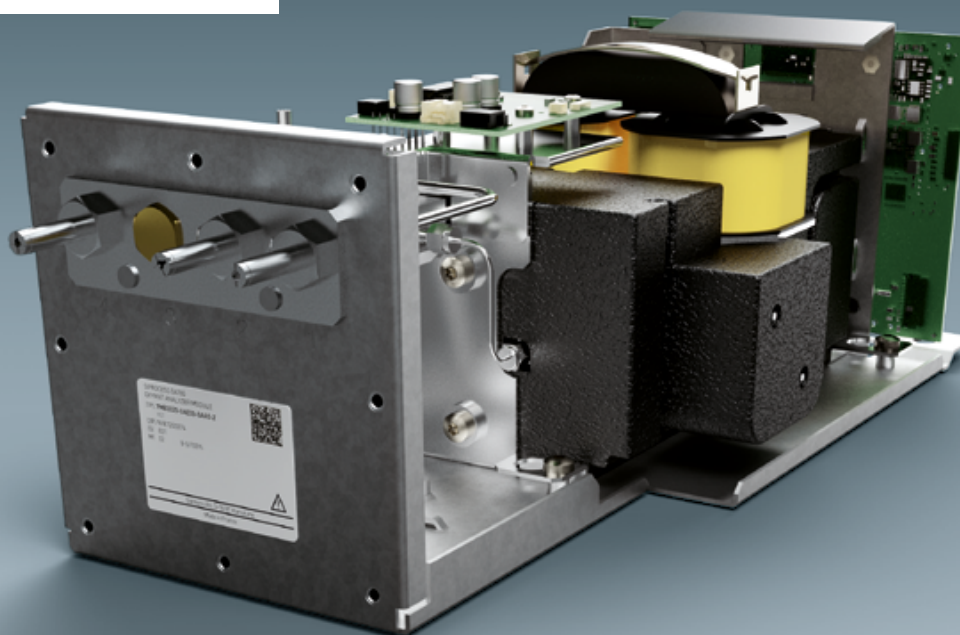
# Technical Data

Features	CALOMAT 7
Fitted in housing	19" rack housing IP20 (three height units; Ex nA); wall housing IP65
Modularity	Up to two modules (C7, U7, O7) <sup>1</sup>
Measuring principle	Heat conductivity measurement
Largest measuring range	0 ... 100 %
Smallest measuring range	0 ... 0.5 %
Measuring range with physical zero point suppression	95 ... 100 %
Ambient pressure compensation	Standard
Delayed display (T <sub>90</sub> time)	< 2.5 s
Ambient temperature	0 ... + 50 °C
Sample gas pressure / correction range	700 ... 1200 hPa (abs.)
Module exchange on site	Possible
Repeatability	≤ ± 1 % of the current measuring range
Measured value drift	≤ ± 1 %/week from the smallest measuring range according to type label

<sup>1</sup>Currently there are still limitations on certain combinations.



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## The New Siemens Appliance Generation for Measuring Oxygen

SIPROCESS GA700 – OXYMAT 7



The function of the OXYMAT 7 analysis module is based on the paramagnetic alternating pressure method and is used to measure oxygen in gases.

### Your benefits

- Resistant to corrosion thanks to an external microflow sensor
- Long service life
- Low susceptibility to failure
- Vibration compensation
- $T_{90}$  time 1.9 seconds
- Maximum ambient temperature 50 °C
- Small measuring ranges (0 to 0.5 % or 99.5 to 100 % O<sub>2</sub>)
- Physically suppressed zero point, e.g. 98 or 99.5 to 100 % O<sub>2</sub>

### Typical application areas

- Boiler control in incineration plants
- Quality and process control in chemical plants
- Quality control in high-purity gases
- Environmental protection
- Purity monitoring
- Quality control in air separation plants

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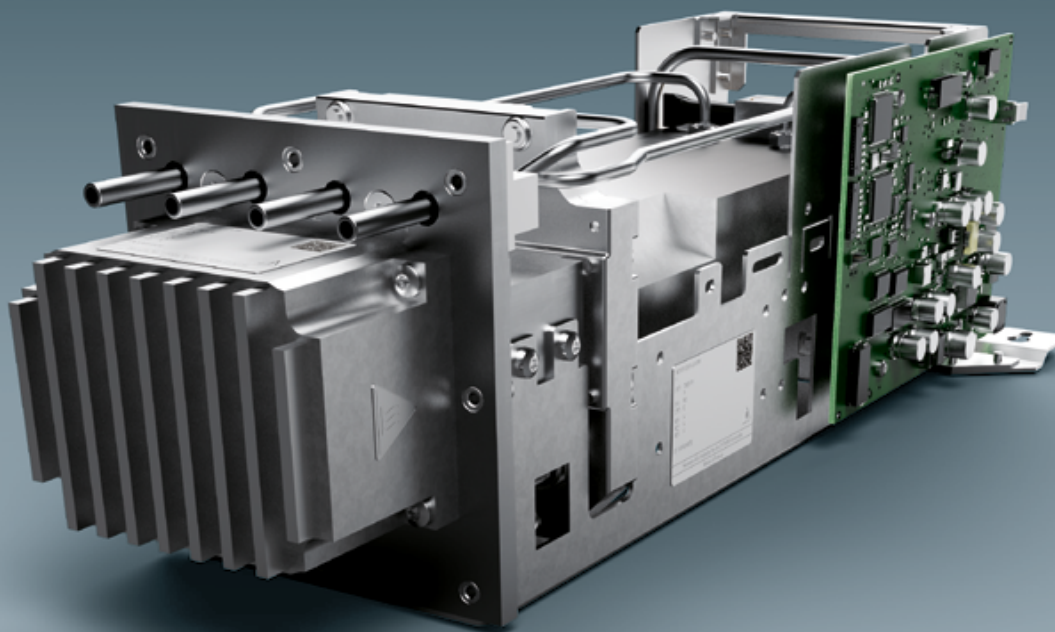
# Technical Data

Features	OXYMAT 7
Fitted in housing	19" rack housing IP20 (three height units; Ex nA); wall housing IP65 (Ex p, Ex nR)
Modularity	Up to two modules (O7, U7, C7) <sup>1</sup>
Measuring principle	Paramagnetic alternating pressure principle
Largest measuring range	0 ... 100 %
Smallest measuring range	0 ... 0.5 %
Measuring range with physical zero point suppression	99.5 ... 100 %
Ambient pressure compensation	Standard
Delayed display (T <sub>90</sub> time)	1.9 ... 2.4 s depending on version
Ambient temperature	0 ... + 50 °C
Sample gas pressure / correction range	500 ... 3000 hPa absolute (piped)
Vibration compensation	Optional
Module exchange on site	Possible
Repeatability	≤ ± 0.5 % from the smallest measuring range or ≤ ± 50 vpm O <sub>2</sub> ; the higher value signifies validity
Measured value drift	≤ ± 0.5 %/month from the smallest measuring range or ≤ ± 50 vpm O <sub>2</sub> /month; the higher value signifies validity

<sup>1</sup>Currently there are still limitations on certain combinations.



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## The New Siemens Appliance Generation for Gas Analytics with NDIR Measurement

SIPROCESS GA700 – ULTRAMAT 7



The ULTRAMAT 7 analysis module uses the NDIR dual-beam method. It selectively measures gases with an absorption band in the infrared wavelength range, such as CO and CO<sub>2</sub>.

### Your benefits

- High measuring precision in complex gas mixtures
- Low detection limits
- Low maintenance costs due to on-site cleaning of the analysis chambers
- Simplified cross-gas measurement
- Preventive maintenance function
- High selectivity due to two-layer detector

### Typical application areas

- Boiler control in incineration plants
- Emission monitoring in incineration plants<sup>1</sup>
- Process control in chemical plants
- Trace measurements in high-purity gas processes
- MAK value monitoring at workplaces
- Quality control

<sup>1</sup>Planned for future product versions.

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# Technical Data

Features	ULTRAMAT 7
Fitted in housing	19" rack housing IP20 (three height units; Ex nA); wall housing IP65
Modularity	Up to two modules (O7, U7, C7) <sup>1</sup>
Measuring principle	NDIR dual-beam alternating light principle with optical decoupler
Largest measuring range	0 ... 100 %
Smallest measuring range, e.g. CO <sub>2</sub>	0 ... 5 vpm
Measuring range with physical zero point suppression	99.5 ... 100 %
Ambient pressure compensation	Standard
Predictive maintenance (emitter service life)	Yes
Ambient temperature	+ 5 ... + 45 °C
Sample gas pressure / correction range	500 ... 1500 hPa (abs.)
Module exchange on site	Possible (inside rack/wall housing)
Repeatability	≤ 1 %/week of the current measuring range
Measured value drift	≤ 2 %/week of the smallest measuring range according to the type label

<sup>1</sup>Currently there are still limitations on certain combinations.



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With your investment in continuous gas analyzers, you will benefit from our experience of more than 40 years:

- An ideal combination of innovative products and proven technology
- Highest quality and reliability
- Optimum solutions for your measurement tasks

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