

SIEMENS

Process Analytics

Extractive oxygen measurement

SIPROCESS GA700 with OXYMAT 7

New device generation - tried and true measurement precision

OXYMAT has been a permanent leader in the area of extractive oxygen measurement for the last 40 years. OXYMAT measurement devices are characterized by their user-friendly operation, maximum reliability and extremely high precision. They are in use around the world in various applications; from standard applications such as emissions monitoring or combustion optimization up to the measurement of trace oxygen in ultra-pure gases.

The SIPROCESS GA700 with OXYMAT 7 module is the first member of a new product family of extractive gas analyzer devices. The SIPROCESS GA700 series is based on a platform concept that is independent of the measurement task. The base unit forms the basis for the integration of various analytic modules and provides a foundation for more flexibility and economic efficiency.



SIPROCESS GA700 as rack unit (left), wall-mounted device (right) and OXYMAT 7 module (middle)

| OXYMAT 7 module technical specifications | |
|--|---|
| Gas | O ₂ |
| Smallest span | 0 ... 0.5 %, 99.5 ... 100 % |
| Largest span | 0 ... 100 % |
| Detection limit | < 1% of the current span |
| Linearity error | < 0.1 % of the current span |
| Sample gas temperature | 0 ... 50 °C |
| Measuring chamber | Stainless steel 1.4571 and Hastelloy C22 |
| Base unit | |
| Enclosure | 19" rack unit and wall-mounted housing |
| Degree of protection | IP20 or IP65 |
| Permissible ambient temperature | 0 ... 50 °C |
| Ports | Ethernet RJ 45, 8 digital inputs and outputs |
| Option module 2.1 | 6 analog inputs and 6 digital outputs |

Benefits

- Parameter assignment of very small measurement ranges
- Absolute linearity
- Measurement of corrosive gas mixes, because the detector unit does not come into contact with the measurement gas.
- Independence from the ambient temperature with the thermostatic modules in 70 °C and 130 °C variants; safety-related operation at temperatures up to 50 °C.
- Open interface architecture (analog, digital and Modbus)
- Installation wizard for safe and simple commissioning
- User-friendly for operators around the world due to multilingual software.
- Automatic notification of service intervals, residual lifetimes of wear parts or calibration requirements.
- User-friendly module replacement: without removal of the base unit, automatic transmission of the measurement parameters to the replacement module.

Service-friendly basis

The base unit is available as a rack or wall-mounted device and contains the local user interface, communications interfaces, the power supply, basic electronics as well as the software which is the basis for the integration of up to two different analyzer modules. Each of these modules consists of the actual analyzer and the sensor electronics, including the evaluation software and required interfaces.

Highly accurate measurement

The OXYMAT 7 measures oxygen according to the paramagnetic alternating pressure principle. The detector unit does not come into contact with the sample gas, and is therefore suitable for use with corrosive measurement gases while simultaneously ensuring a long service life. It is suited for demanding applications where reliability and measurement quality is crucial.

The parameter assignment of the smallest measurement ranges is possible here, for example:

- 0 to 0.5 % and
- 99.5 to 100 %

each with a detection limit of 50 ppm.

Applications

SIPROCESS GA700 OXYMAT 7 is the first choice for all applications in which the oxygen concentration has to be measured continuously and reliably. The possibilities for use are numerous and varied: from quality or process monitoring in test stands in the automobile industry, in air separation plants or generally in the chemical industry, to combustion optimization in steel furnaces or rotary kilns in the steel and cement industries, up to safety measurement or leak monitoring in the oil and gas industries.