

# Fixed oxygen gas analyzer ГТМ-5101М-А



Designed for continuous automatic measurement of oxygen volume fraction in nitrogen in process gas mixtures.

## Application

Process monitoring at nuclear power plants.



Gas analyzer type - fixed.

Principle of operation - thermomagnetic.

Sampling - forced (by means of exterior flow rate pump).

## Basic technical characteristics

| Characteristics   | Values  | Remarks   |
|---|---|---|
| O <sub>2</sub> measuring ranges, vol. %   | 0-1; 0-2; 0-3; 0-5; 0-10;<br>0-21; 0-30         | intrinsic fiducial error, %:<br>± 4   |
| 4 alarm thresholds within measuring range, %  | 5-90  | set as agreed with the customer<br>(default settings are 20, 40, 60, 80%<br>of measuring range) |
| Output parameters:<br>- unified signal, mA<br>- digital signal<br>- "dry" relay contacts  | 0-5 or 4-20<br>RS 232<br>one group              | switchable<br><br>for each threshold<br>(0,1 – 1)A depending on<br>voltage and load type        |
| Parameters of measured medium:<br>- temperature, °C<br>- pressure, kPa<br>- moisture, g/m <sup>3</sup> , at most<br>- dust, g/m <sup>3</sup> , at most<br>- volume flow rate, l/min | +5 / +40<br>84 ± 106,7<br>6<br>0,001<br>0,7±0,2 |   |
| Ambient temperature, °C   | +5 / +50  |   |
| Supply voltage, V   | ~ 220   |   |
| Overall dimensions, mm  | 306x370x140                                     | weight 10,0 kg  |
| Protection degree according to ГОСТ 14254-96:<br>- measuring transducer (MT)<br>- remote primary measuring transducer (PMT)   | IP 54<br>IP 65                                  |   |



License for production of gas analysis equipment and auxiliary equipment for nuclear power stations ЦО-12-101-8079 of 16.07.2014.  
License for design of gas analysis equipment and auxiliary equipment for nuclear power stations ЦО-11-101-8758 of 04.06.2015.  
Gas analyzers belong to elements of normal operation controlling systems of (NOCS), class 3H according to ПН АЭ Г-01-011-97.  
All gas analyzers ГТМ-5101М-А and auxiliary equipment for them pass acceptance of the Federal Service for Ecological, Technological and Nuclear Supervision (Rostekhnadzor).

In case parameters of gas mixture at gas analyzer inlet do not coincide with the ones given above, sample preparation unit БП-1-А or separate auxiliary devices (on customer's request) can be used:

- > Cooler ХК-3А (ИБЯЛ.065142.005);
- > Frigistor -А (ИБЯЛ.418316.016);
- > Safety valve ИБЯЛ.301122.044;
- > Fine adjustment valve ВТР (ИБЯЛ.306577.002-04).



## Standard equipment

- > Gas analyzer;
- > SPTA set;
- > Documentation.



If required, under separate contract cabinet-А (ИБЯЛ.301442.006) can be supplied, it is designed for installation of gas analysis equipment and auxiliary equipment therein, its pneumatic connection, AC power line wiring with automatic protection, air cooling of installed equipment with integrated fans.



## Optional items can be ordered

- 4-liter cylinders with measured component.