



Continuous monitoring ●

Inline measurement ●

Low-consumption technology ●

Full data analysis ●

Annual calibration ●

Low maintenance ●

SPECTRA

**Inline measurement
of odorant concentration**



For the inline measurement of odorant concentration in natural gas

SPECTRA is the solution designed and patented by AUTOMA to measure the concentration of odorant in natural gas in pipelines using UV spectroscopy (optical technique). The system performs a spectral analysis of the odorised gas introduced into a measuring cell and provides the concentration of either TBM (Tert Butyl Mercaptan) or THT (Tetra Hydro Thiophene), as well as a compound of both. Also other gas components, such as benzene, toluene, etc. can be analyzed. SPECTRA system is designed for on-site installation and fully automatic operation without human supervision, allowing **continuous and timely monitoring**, thus enabling to promptly report abnormal events and possible failures occurring in the distribution network. Finally, it requires **minimal and very little maintenance**, with no need of calibrated gas sample cylinders to be installed permanently.



An integrated solution for greater efficiency

- COMPACT DESIGN**
 SPECTRA system needs very little space for installation. It is equipped with a G2P RTU, that allows to expand the system also with pressure and temperature monitor, and it handles all communication to WebPressure software or any other existing SCADA system through the most common communication protocols.

- MAINTENANCE & DIAGNOSTICS**
 To optimize maintenance work in the field, the device also transmits diagnostic parameters (communication state, power supply level, faults, etc.). The firmware update can be carried out both locally and remotely.

- WEBPRESSURE**
 Platform for managing data collected from pressure monitoring devices: alarms management, synoptics, analysis, real time monitor, time trends, graphical representation, cartography, regulatory compliance, reporting, device configuration, users' management, advanced export capabilities, integration with third-party applications (SCADA, SAP, CARTOGRAPHY, etc.).

- FIDO UNIVERSAL**
 The activities carried out by the operator in the field, both in terms of first device installation/configuration and of maintenance, are managed in the field with the Fido client software for Windows OS via local wireless communication in MiWi.

An effective solution for the safety of your network

- INLINE MEASUREMENT**
 Continuous monitoring of odorant concentration in any point of your network ensures minimum required level of odorant concentration in compliance with standards and laws requirements.

- LOW MAINTENANCE**
 SPECTRA system has no need for frequent maintenance: optical technique requires no consumables nor chemical, but only static parts. This turns out in a single annual inspection and calibration.

- SPECTRA-FIT FOR FULL GAS ANALYSIS**
 Spectra-FIT software allows to detect and measure not only the odorant concentration, but also other several gas components, such as carcinogenic hydrocarbons always present in the transport or distribution lines, e.g. Benzene or Toluene and other molecules.

- SPECTROSCOPIC TECHNIQUE**
 UV spectroscopic analysis allows for higher accuracy and repeatability than any electrochemical measurement technique, with no need for continuous recalibration of the system.

- LOW ENERGY CONSUMPTION**
 SPECTRA requires very low power for its installation, even on sites without a main power supply. In fact, the system can work with a 40W solar panel without any reduction in performance.

- ANNUAL CALIBRATION**
 A single annual calibration is enough to ensure high-performance measurements. Furthermore, no permanently installed calibrated gas sample cylinder is needed, as with electrochemical sensors or gas chromatographs.



COMMUNICATION PORTS

- Local: MiWi
- Remote: 2G/3G/4G with WebPressure or other SCADA platforms

I/O INTERFACES

- Full UV Spectrum analysis with Spectra-Fit
 - Measurable odorant type THT/TBM/compound
 - Other measurable elements: DMS, H₂S, BENZENE, TOLUENE, XYLENE
- 8 analog inputs for AUTOMA pressure transducers
- 2 analog inputs for temperature transducer (PT100/PT1000 3 wires)
- 8 digital inputs for DRY CONTACT or counter
- Expansion board (optional) adding:
 - 8 analog inputs for 4-20mA transmitters
 - 2 dry contact digital inputs
 - 2 dry contact digital outputs

POWER SUPPLY

- Internal: rechargeable battery pack
- External: DC 24V, solar panel, universal power supply 85-265V

MECHANICAL DATA

- Dimensions
 - Power box: 650x430x210 mm
 - Control box: 650x430x210 mm
 - Measurement box: 780x540x100 mm
- Control box IP65
- Operating temperature: - 20 °C ÷ + 60 °C
- Relative humidity: from 10 to 95%

COMPLIANCE WITH STANDARDS

- G2P: II 2G Ex ib IIB T3 Gb
- System classification: zone 2



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Contact us



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