

**Continuous monitoring** 

Inline measurement

Low-consumption technology

Full data analysis

Annual calibration

Low maintenance

**SPECTRA** 

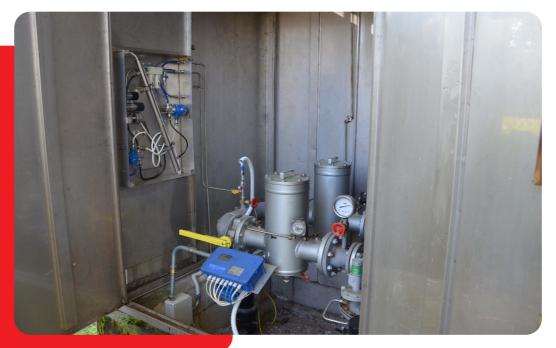
Inline measurement of odorant concentration



#### SPECTRA

## 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 me analized. **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 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.



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 TECNIQUE

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

#### 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.

#### 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.



#### 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.



#### **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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