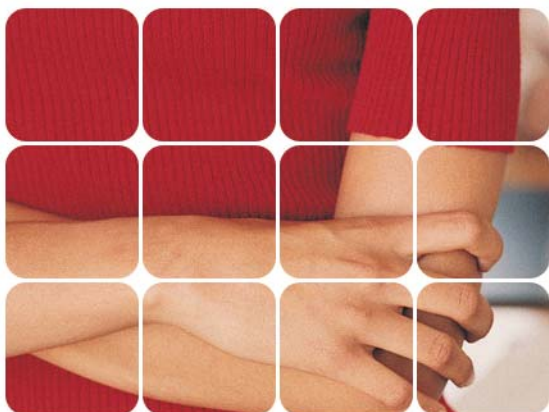


smartcards  
mobility  
industry  
telecommunications



**S.P.E.® Sistemi e Progetti Elettronici**  
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## Gas Analyzer

Our gas analyzer has been engineered to easily remotely monitor and measure the concentration of one or more gas molecules that are developed or used in an industrial process.

Our analyzer is able to obtain the concentration ( with simultaneous measurements ) of gases like CO, CO<sub>2</sub> e CH<sub>4</sub>. More gases like NH<sub>3</sub> and C<sub>3</sub>H<sub>8</sub> are available on special request; depending on concentration and analyte it may be possible to fit 3 or 4 modules for different gases within the same case.

The Gas Analyzer uses an NDIR (Non-dispersive Infrared Absorbance) sensor to monitor CO<sub>2</sub> and other gas. Most molecules can absorb infrared light, causing them to bend, stretch or twist. The amount of IR light absorbed is proportional to the concentration.

The metered gas flow is guaranteed by a membrane pump, inert to the measured substances; it can be manually set and verified with an externally mounted flux meter from a minimum of 0,2 liter/minute up to 3 liters/minute.

The internal temperature of the analyzer is electronically regulated with a Peltier cell system that assures a correct operation even with external temperatures higher than 40oC.

A dedicated advanced communication processor allows the monitoring of the concentration values and the transmission of reports through a standard TCP/IP network connection ( the reporting can be periodical or linked to a previous call on the programmed IP address or via the Modbus/TCP protocol).

The internal circuitry automatically compensates the measured concentrations against external disturbances, obtaining an high level of rejection to variations in temperature and pressure.

The metered gas flow is guaranteed by a membrane pump, inert to the measured substances; it can be manually set and verified with an externally mounted flux meter from a minimum of 0,2 liter/minute up to 3 liters/minute.

# Gas Analyzer



Multiple Gas Analyzer with network communication capability

## Products for industry

The main requisites that our product satisfies are:

- The capability to archive all data in a remote database
- Operate in a potentially corrosive environment
- Operate with high environmental temperatures
- Being non permeable to non corrosive liquids
- Being resistant to vibrations and shocks
- Durable infrared source guarantees a long life of the sensors and reduces the sensitivity to shocks
- Internal temperature of the analyzer is regulated with a Peltier cell system that assure a correct operation even with external temperature higher than 40°C
- Equipped with an external gas filter and an emergency internal one

| General technical features |  |
|----------------------------|--|
| Supply voltage             | 24 Volt A.C.   |
| Supply power               | 150 W (max)  |
| Working temperature        | from 0 to +60°C  |
| Storage temperature        | from -40° to +85°C   |
| Size                       | 230 mm (width) , 330 mm (high), 180 mm (depth)                                 |
| Interfaces                 | Ethernet 10/100 Base-T, with industrial grade Harting Han-Brid IP65 connectors |

| Analyte         | Concentration  |
|-----------------|--|
| CO              | 0-3% 0-10% 0-30% 0-100%  |
| CO <sub>2</sub> | 0-2000ppm 0-3000ppm 0-5000ppm<br>0-1% 0-3% 0-5% 0-10% 0-30% 0-100% |
| CH <sub>4</sub> | 0-5% 0-10% 0-30% 0-100%  |

| Analysis parameters |  |
|---------------------|--|
| Accuracy            | ± 2.0% over measuring range                        |
| Stability           | ± 2.0% of measuring range in 12 months             |
| Repeatability       | ± 3.0% at zero, ± 1.5% at full range               |
| Operating time      | Operative in 1 minute, to full specs in 30 minutes |



The water-tight metallic case is shockproof even for strong shocks.