

EC9820

CARBON DIOXIDE ANALYSER

The EC9820 Carbon Dioxide Analyser combines microprocessor control with NDIR gas filter correlation photometry detection to measure CO₂ with minimal interference from CO and H₂O

The CO₂ concentration is automatically corrected for gas temperature/pressure changes and can be displayed in units of ppm or mg/m³. The EC9820 allows for a manual, timed or remote initiated zero/span calibrations.

FEATURES

- Accurate and specific measurements of CO₂ with minimal interference from CO or H₂O using proven gas filter wheel correlation technology.
- The EC9820 uses a long life infrared (IR) source and advanced materials in the gas filter wheel to deliver trouble free operation and minimum maintenance.
- Variable sample flow rate allows for faster purging during zero and span cycles. The variable flow rate enables the analyser to obtain more data points at 'steady state' zero and span conditions.
- Optional permeation dryer for removal of H₂O from sample air.
- On-board software controls all internal adjustments including diagnostics, instrument status, zero and span calibrations and calculation of CO₂ concentration.
- Internal data logger uses Flash ROM. Up to 175 days of 5 minute averaged data can be remotely downloaded for further analysis, report generation or archiving.
- Battery or solar power operation is possible using the optional 12 VDC power supply.
- Stored data can be retrieved via RS232, USB interface or the optional Ethernet connection and uploaded to a TCP/IP network.
- Ethernet option facilitates data download from an analyser connected to the internet via a standard web interface. This feature also supports remote access to instrument parameters and the status screen.



SPECIFICATIONS

Ranges:

Auto ranging 0-3000ppm, Units & decimal places selectable. Other ranges available: 0-750 and 1500 ppm.

Data display:

Large Graphic LCD display, with unit selection mg/m³, µg/m³, ppm, ppb, ppt.

Analogue out:

0-full scale from 0-100ppm to 0-3000ppm with 0%, 5% and 10% offset.
Auto ranging between 2 user-specified full scale values.

Noise:

1 ppm or 0.1% of concentration reading with adaptive filter active.

Lower detect. limit:

2ppm. with Kalman filter active

Linearity: < 1% of full scale

Lag time: Less than 20 sec.

Rise/Fall time Less than 60 sec 95% of final reading (1slpm) with Kalman filter active.

Precision: 10ppm or 1% of reading whichever is greater with Kalman filter.

Zero drift: 24 Hours: Less than 10ppm;
30 Days: Less than 10ppm.
Temperature dependence, 0.2% per °C change

Span drift: 24 hours < 0.5% of reading;
30 days < 0.5% of reading.
Temperature dependence, 0.2% per °C change

Temp. pressure compensation:

Temperature/Pressure compensation with selectable reference temperature of 0, 20, 25°C at 101.3 kPa.

Sample flow rate:

1 slpm—zero air supply to zero port must exceed 2 slpm.

Support gas:

Zero air (CO₂ free air) must be delivered to the analyser at 10-15 psi 0.5 slpm.

Sample pressure dependence:

5% change in pressure produces less than 1% change in reading.

Temperature range: 5°C to 40°C

(U.S. EPA approval 15-35°C).

Relative humidity: 10% to 80% non-condensing

Rejection ratio: Negligible interference from H₂O vapour and CO.

Communication

Analogue outputs:

Jumper selectable voltage output of 100mV, 1V, 5V, 10V menu selectable current output 0-20 mA, 2-20 mA, 4-20 mA.

Digital outputs:

Multidrop RS232 port shared between analysers for data, status and control. DB50 with discrete status, user controls and analogue output and USB output.

Communication port:

Rear panel multi-drop RS232 port shared between analysers for data, status and control. Plus USB interface and optional Ethernet connection to a TCP/IP network via an RJ45 connector.

Data logging

Supports internal data logging capability with storage up to 175 days of 5 minute data stored in flash ROM.

Data storage selection:

Instantaneous data selectable period from: 1,3,5,10,30, or 60 minute intervals. Average data selectable period from: 1,3,5,10,15,30 minutes, 1,4,8,12, or 24 hours.

Power:

99-132 vAC, 198-264 vAC 47-63 HZ, 110 Watts
Optional 12 VDC power supply.

Dimensions/weight:

43.2 x 17.8 x 64.8 cm (w x h x d), weight 20.9 kg.

For your local certified distributor visit:

www.ecotech.com/distributors

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