ECOTECH
WORLD CLASS environmental MONITORING

EC9820

Carbon Dioxide Analyser

The EC9820 Carbon Dioxide Analyser combines microprocessor control with NDIR gas filter correlation photometry detection to measure CO_2 with minimal interference from CO and H_2O.

The CO_2 concentration is automatically corrected for gas temperature/pressure changes and can be displayed in units of ppm or mg/m^3. The EC9820 allows for a manual, timed or remote initiated zero/span calibrations.

Features

- Accurate and specific measurements of CO_2 with minimal interference from CO or H_2O 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.
- On-board software controls all internal adjustments including diagnostics, instrument status, zero and span calibrations and calculation of CO_2 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.

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Specifications

Ranges Display:	Auto ranging 0-3000ppm, Units & decimal places selectable. (1)
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 Detectable Limit:	2ppm.
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.
Temperature/Pressure Compensation:	Temperature/Pressure compensation with selectable reference temperature of 0ºC, 20ºC, 25ºC at 101.3 kPa.
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.
Sample Flow Rate:	1 slpm—zero air supply to zero port must exceed 2 slpm.
Support Gas:	Zero air (CO_2 free air) must be delivered to the analyser at 10-15 psi 0.5 slpm.
Sample Pressure Dependence:	A 5% change in pressure produces less than 1% change in reading.
Temperature Range:	5°C to 40°C.
Relative Humidity:	10% to 80% non-condensing.
Rejection Ratio	Negligible interference from H2O vapour and CO.
Analogue Outputs:	Jumper selectable voltage output of 100mV, 1V, 5V, 10V with menu selectable zero offset of 0.5% or 10% or 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. Service RS232 port gives front panel access USB port provided as standard.
DB50 Interface (STD)	DB50 with discrete status, user controls and analogue output provides status outputs, control inputs and 20mA current loop output.
Power:	99-132 VAC, 198-264 VAC 47-63 Hz, 110 Watts consumed at 115 VAC, 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 (46 lbs).

(1) Other analyser ranges are available including 0-750 ppm and 0-1500 ppm (specify at time of ordering)

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NATA WORLD RECOGNISED ACCREDITATION ISO/IEC 17025

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