

H2

Ar

He

O2

N2

N2O

CH4

Chroma DID

Discharge Ionization Detector

Continuous monitoring of permanent gases
Automatic measuring system in the range of PPM / PPB



Integrated computer version (5U high) : C81022

Process / Pure gas:

- Quality control of pure gases
- Gas inlet
- Permanent gases in a helium matrix
- H2 / O2 / N2
- N2O in ambient air

SCAN or CLICK ME



*Chromatotec® is specialized in VOC, Sulfur and permanent gases analysis at trace and ultra trace levels (ppm, ppb, ppt).
Please visit our website for more details.*

Updated: June 2023

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Discharge Ionization Detector

Continuous monitoring of permanent gases
Automatic measuring system in the range of PPM / PPB



Principle:

The Chroma DID is an automatic, industrial or laboratory trace gas analyzer. The temperature setting is isothermal. The sample comes through the sampling loop. Then the sample is injected into an analytical column (with an automatic valve) for separation. Different columns can be used (e.g. packed column).

After separation, the amount of each compound is measured using a discharge ionization detector.

An oven is installed in order to allow the regeneration (to avoid contamination) of the column at 250°C (in option).

The Discharge of Ionization Detector:

Placed behind the chromatographic column, the Discharge Ionization Detector is able to detect different kinds of compounds. A high voltage is applied to ionize the compounds. During this step, the different compounds will deliver electrons. The number of electrons delivered will be proportional to the compounds concentration. Then, a potential difference will be observed. This value is transferred to an electrometer and the generated signal is proportional to the compounds concentration in the sample. The signal is then transferred to the CPU board and the micro-processor processes the data (integration, mass or concentration calculation, peaks identification...).

The different parameters (data, chromatogram, integration report...) are transferred via a RS-232 port and they are visualized and reprocessed with our VISTACHROM software.

VISTACHROM software:

Chromatotec™ developed software system enables:

- Remote control
- Full traceability with on board archiving of results
- Programming and control of threshold alarms
- Punctual (laboratory) or continuous measurement
- Data export by MODBUS / JBUS / MGS1 / 4-20mA / 0-10V

The Vistachrom software enables the user to visualize and store data on a computer. Furthermore it provides comfortable utilities to recalculate, calibrate and export data and to set-up measurement. The airmo TREND software allows the calculation of retention time, area, mass or concentration profiles.

CALCULATION AVERAGE can be made for better precision

Options:

On-line results are transmitted via :

- Gas cleaner
- Modul 4 x analog output 4-20 mA or 0-10 V.
- Alarms module XXX005
- Automatic results validation.
- 24 V power supply.
- Hydrogen and Nitrogen generator
- Multiple stream selector (2 to 48 streams with one analyzer)
- Carrier gas purifier
- Sampling pump in 24V DC or airmoPUMP (XXX901 or XXX915)
- Pressure and temperature measure of sample
- Mass Flow Controller (MFC), in order to improve dilution precision and so calibration quality)

Product technical specifications:

Permanent Gas Analysis:

- H₂, O₂, N₂, CO, CH₄, CO₂, N₂O and Ar optional

Detection limit:

- 50 to 100 ppb depending on application and number of products
- < 50 ppb with special application

Detection range:

ppm or ppb

Relative Standard Deviation at middle range :

- RSD < 3% on concentrations for 48H
- RSD < 0.6% on retention times for 48H.

Results:

- Full result storage (data and graphics)
- Communication protocol MODBUS/ JBUS or MGS1 (option)
- Output 4-20mA (option)

Cycle time:

- 10 to 15 minutes depending on the application

Gas supply:

- He as carrier gas (inlet 3 bar; 1/8" swagelock or 50mL/min maximum)
- Input calibration at 1 bar: 1/8" swagelock for 50mL/min maximum
- Sample inlet at 1 bar: 1/8" swagelock for 20 to 50mL/min maximum

Sampling Volume:

- Sampling flow rate (20-50mL/min)
- Injecting sampling loop 250µL to 1ml

Power supply:

- Main: (230V / 115V 50 Hz/60Hz)
- Battery: 24V (option)

Electrical consumption:

- Min 100VA, Peak 200VA

Dimensions and weight:

- Rack: 19" (5U)
- Height: 222 mm
- Width: 482 mm
- Depth: 600 mm
- Net weight of analyser: 22 kg

To order:

chroma DID (5U)

Model:

C81022

Chromatotec® is continuously improving its products, therefore these specifications are subject to change without notice



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