

MICROGC P SERIES TECHNICAL SPECIFICATIONS

General specifications

Dimensions (mm): H 1 000; D 270; W 430 (without stream selector)
Weight: 60 to 70 kg

Environmental conditions

Operating temperature: 0°C à 40°C
Relative humidity: 5 à 95% non-condensing

Altitude: up to 2000mt max
Usage: indoor or outdoor (require sun shades)

Classification: Conforms to ATEX Directive 94/9/EC and EMC norms EN 55011, EN 61000 and EN 61326-1

Safety area: Zone EEx d IIC T6

Utilities:

Power supply input: 100-240VAC, 50 to 60Hz
Power consumption: 2.5A max
Carrier gas: 1 or 2 carrier gas at 5.6 bar
Carrier gas type: Helium, Argon, Nitrogen, Hydrogen
Carrier gas consumption: << 1L/h/channel
Carrier gas purity: 99,9995% minimum

Sampling:

Sample: gas or vapor samples only (no liquid injection)
Sample pressure: from ambient to 30psi max
Sampling pump: 1 or 2 independent sampling pumps
Stream selector (option): up to six EEx electrovalves in the same chassis. Driving of optional external pump.
Other configurations on demand.

Chromatographic specifications

Analytical channels: up to three modules (two in case of on-board computer)
Option: Temperature compensation

Injector type: heated Micro-machined device, Variable volume, Fixed volume, Backflush, Large loop
Injection volume: 1 to 10µL for variable volume/timed; 1 to 30µL for variable volume/large loop; 1µL for fixed and backflush

Column: capillary fused silica column from 100µm to 320µm, stationary phase depending on the application
Column temperature: Isothermal operation, ambient +15°C to 180°C. *Option: programmable operation with fan cooling*

Detector: thermal conductivity detector (µTCD) using Wheatstone bridge design (volume 240nL)

Linear dynamic range: 10⁶
Repeatability: variable volume <0,5%RSD; Backlash <0,5%RSD; fixed volume <0,2%RSD

Communication:

Serial ports: Up to n.3 modbus RS 232 / RS485 with external PC; n.1 modbus RS 232/RS 485 with OBC

Alarms: Up to 16 configurable contact closure alarms (only with external computer)

I/O:

Optional analog signals: Up to 16 analog input/output as 4-20mA
Digital input: External Start or sampling default (optional)

Data system:

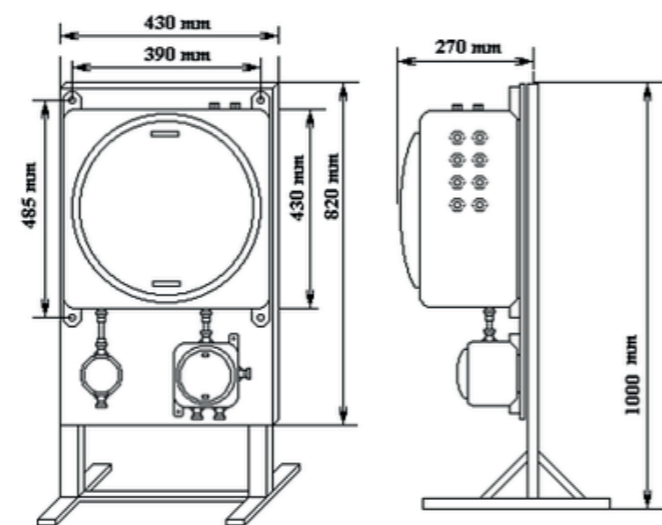
Software: Soprane, french, english or chinese
Operating system: Windows 7 - 32/64bits / XP
Option: Modbus (Ethernet / RS)
Other transmission optional: Profibus, Profinet, OPC

Application:

Compounds: permanents gases (He, H₂, O₂, N₂); hydrocarbons C₁ to C₁₀, H₂S, CO₂, CO, COS, N₂O, mercaptans, VOC, BTEX, etc
Application fields: natural gas, refinery gas, fuel cell, gas prospecting, biomethane, process gas, etc.

Calculation:

Option: NGA/RGA ISO-6976, LPG ISO 8973/7941/6578, personalized



More information on www.sra-instruments.com

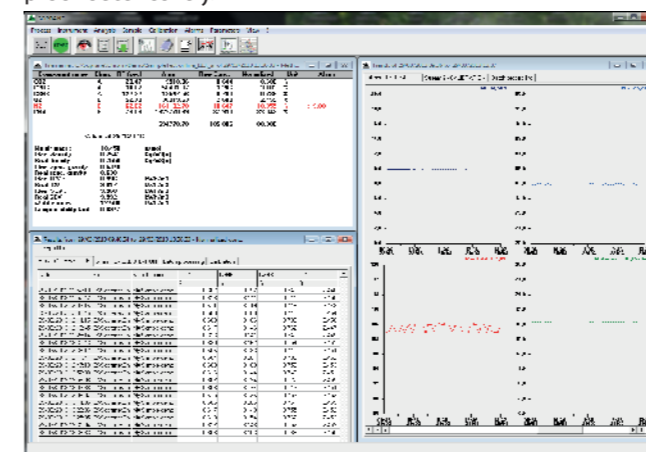
MICROGC PROCESS - P SERIES PROCESS GAS CHROMATOGRAPH

Industrial analyzer for process applications

CE 0081 Ex II 2 G - Ex d IIC T6
-20 °C < ambient temperature < + 40 °C

The Process chromatograph µPGC3000, **ATEX explosion proof analyzer**, uses the most advanced technologies to realize on line analysis of gas effluent and vapour in most Industrial environment : Refining, Petrochemical, Nuclear power stations, Natural Gas, etc... It can also be used as a sensor of regulation. Its modular design allows to treat various applications and to integrate them in every control systems.

A field analyzer : its robust and compact construction fits for the installation in industrial field : outside, in danger zone (explosion proof outer cover).



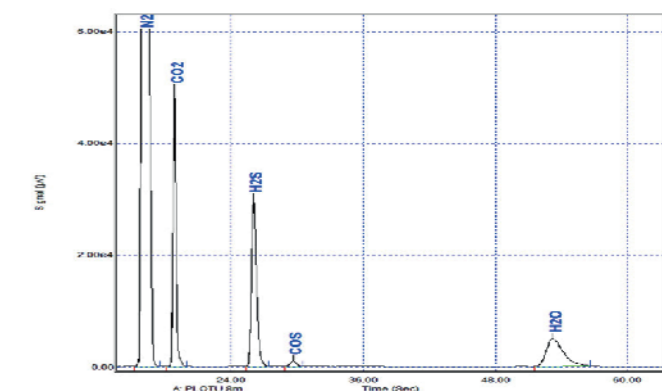
Main page of Soprane software

Soprane Software

Adapted for process MicroGC applications, SOPRANE, developed by SRA Instruments, has a powerful graphic environment providing effectiveness and easy use. Soprane allows to define method and sequence analysis, drive valves, manage several streams,... Most communications possibilities are supported like Modbus, Profibus, analog transmission, alarms...



MicroGC SRA Instruments Process ATEX



Example of analysis of H₂S, CO₂

Low possession costs

The modular construction allows to obtain for each application an optimal design and so to minimize the study and installation costs. Less needs of maintenance and a consumption of slight use make the user save money, compared to the conventional solutions.

Application fields :

- Natural and refinery gas
- Syngas
- Biomethane injection plant
- Petrochemical environment
- Hydrocarbons
- Oil and gas prospecting, ...



Modular



Automatisation



Open communication



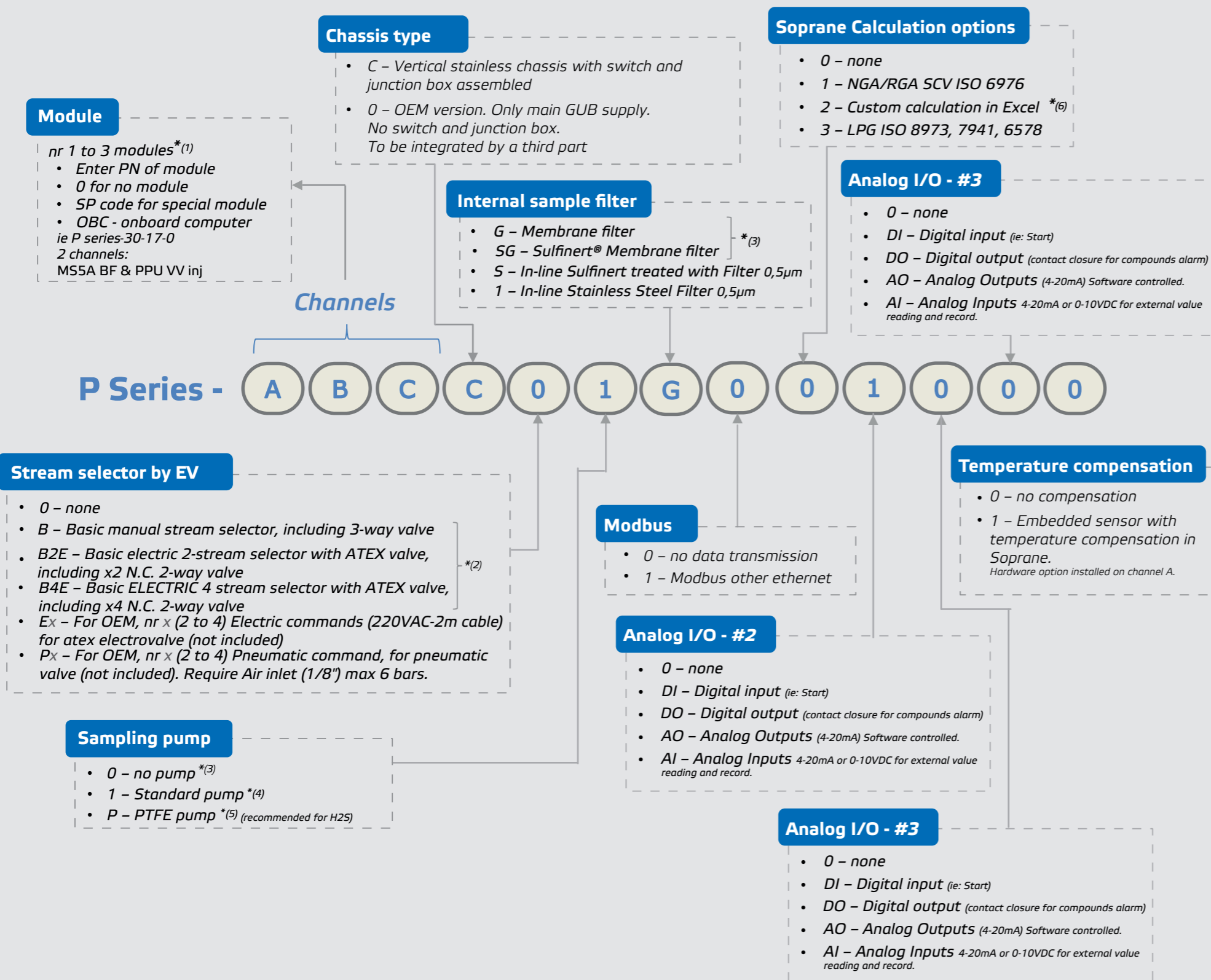
Integration in cabinet



Fast



Robustness and stability



LIST of COMMON MODULES			
PN	Injector	Column	Application type
30	Backflush	Molesieve 10m	H2, He, O2, N2, H4, CO in presence of water/CO2/C2 and +
33	Variable	Molesieve 14m	H2, He, binary mixture Xe, Kr, SF6
83	Variable	Molesieve 30m	Ar/O2 separation without cooling, N2
23	Variable	Poraplot Q 8m	CO2, N2O, C2-C3 (éthylène acétylène coelution)
17	Variable	Poraplot U 8m	CO2, C2-C3 H2S, COS, NH3 (propane propylène coélution)
GA	Variable	Stabilwax 10m	Benzene, toluene, xylene and chlorinated
22	Variable	Alumina 10m	C4 and C5 (saturated, isomers)
16	Variable	OV1 - 2µm 8m	C4-C7
18	Variable	OV1 - 1.2µm 4m	C5-C10
SP4	Large vol.	Special column THT	Traces of THT in natural gas
39	Variable	Innowax 15m	Solvents and alcohols
SP	Variable	Special column CO/CO2/N2O	H2, CO, CH4, CO2, N2O (O2/N2 coelution)
05	Fixed	Poraplot U 8m	Light HC in Natural gas + N2

(1) Equipped with 2 carrier inlet from 2-channels configuration/only two modules when OBC is in third position
 (2) Inlet 1/8" with needle valve and rotameter on by-pass, relief valve max 30PSI.
 (3) Requires sample over pressure: Min 30mbar - Max 2bar / For the membrane filter flow recommended up to 40L/h
 (4) EPDM / Neoprene membrane
 (5) PTFE membrane / Kalrez® (Dupont)
 (6) Including Microsoft Excel license

Above are presented only part of the available modules among the entire list of possible configurations.
 For more information or an application on special module, contact SRA Instruments : info@sra-instruments.com
 Examples of application notes are available on the website www.sra-instruments.com
 SRA Instruments also installs the column of your choice for any special request.