

HOT FID VOC/THC RACK MOUNTED MONITOR Mod. 110H

**For continuous source monitoring, showing a very fast response time.
According to EN 12619 and EN 13526 European directives.**



- **Fast response analyser**
- **Separation of methane fraction**
- **In built Zero air supply**
- **In built wide screen data logger**

FID DETECTOR

The detector is an heated carbon atom counter. Sample is introduced into a micro flame lighted by hydrogen and air (1:10 ratio), where the electrical charges generated by the oxidation of C_x to CO are proportional to the hydrocarbon content in the sample. Actual carbon concentration is computed out of calibration employing a traceable reference gas mixture. The electrical charges are collected by two polarised electrodes and converted by an electrical circuit into an electronic signal.

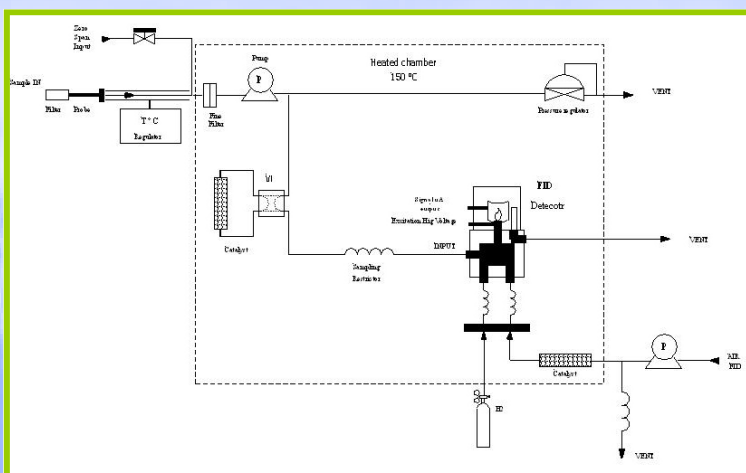
DESCRIPTION

PCF's Mod. 110H monitor has been designed, developed and built according to new EN 113526 - EN 12619 European directives for continuous detection of VOC, THC and CH_4 fractions at emissions. The sample is extracted through a variable length probe carrying a ceramic filter (3 μm porosity) on the top, a heat traced PTFE tube at $150 \div 200^\circ C$ and a heated head-sucking pump. A farther SS sintered heated filter is placed in front of the sample capillary.

The sample is continuously fed into the FID detector, therefore the response is very fast, 1 second to 98% of full range deflection. The measurement of CH_4 fraction is carried out continuously by selecting via a manual 4-way valve a special catalytic converter that converts all organic compounds, but CH_4 , into CO_2 , species that does not show any response in a flame ionisation detector. The monitor shows a built in PC based data logger with a high definition TFT-LCD display touch screen that can display diagrams, working temperatures, working status, alarms, flow rate curves for H_2 , Air and Sample as well as store all measured values.

Via RS 232 and USB (optional), data may be down loaded into a remote PC. Interconnections with remote process control and supervision units and printers can be easily performed.

A safe fail solenoid valve will intercept hydrogen flow in case of Flame OUT conditions.



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TECHNICAL SPECIFICATIONS

- Detector : Hot F.I.D. (Flame Ionisation Detector)
- Measuring ranges : 0-100/1,000/10,000 ppm and-or mg/Nm³
(other ranges optional)
- Methane fraction separation (optional) : by manual insertion of deviation valve
- Linearity : ± 1% of full scale
- Accuracy : ± 1% of full scale
- Background noise : 0.2 mg/Nm³
- Lower Detectable Limit (LDL) : 0.4 mg/Nm³
- Zero drift (24 hours) : ± 0.5 % of full scale
- Span drift (24 hours) : ± 1% of full scale
- Response time : 1 second to 98% full scale deflection
- Sample flow rate : 1000 – 2000 ml/min
- Sample circuit temperature : 180 – 200 °C
- Operating temperature range : 5 – 40 °C
- FID detector temperature : 200 °C
- Display : 5.5" colour TFT – LCD touch screen
- Alarms : high concentration value (full scale %)
Flame OUT Temperature non Ok
- Automatic hydrogen interception : in case of FLAME OUT condition
- Analogue outputs : 0-10 Vdc and 4-20 mA
- Serial and digital outputs : RS 232 (USB optional)
- Services : Hydrogen : IP 30 ml/min from generator or gas cylinder
Air : 300 ml/min, from UPP generator or gas cylinder
- Suggested calibration gas cylinder : 30 ppm CH₄ + 10 ppm C₃H₈, air balance
- Mounting : standard 19" rack, 4U
- Dimensions : 483x185x450 mm (19"x7"x18", WxHxD)
- Weight : 13.5 Kg
- Standard power supply : 220/110 Vac 50/60 Hz (to be specified in order)
- Power consumption : 500 VA
- Pneumatic connections : 1/4" or 4/6 mm and 1/8" or 1/2 mm

For its fast response the above monitor is particularly suitable in L.E.L. applications, in industrial processes for solvents and organic compounds controlling, in stack monitoring of incinerators and post combustors.

HOW TO ORDER:

CODE NUMBER	DESCRIPTION
085 - 0001	Mod. 110H, VOC/THC/CH ₄ Hot FID monitor, 220 Vac 50 Hz
085 - 0002	Mod. 110H, VOC/THC/CH ₄ Hot FID monitor, 110 Vac 60 Hz
052 - 1001	Hydrogen generator
048 - 0001	Mod. 9588 UPP air generator
041 - 5011	Calibration gas cylinder, 10 l with pressure reducer
042 - 1001	Heat traced line (specify length)
042 - 1002	Heat traced line temperature controller
085 - 0101	Mod.110H expendables kit
085 - 0102	Mod.110H spare parts kit

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