



## MULTI-POINT AUTOMATIC FID SYSTEM MODEL THC-110 BASED

**For continuous L.E.L. -VOC/THC in process monitoring**

### FID DETECTOR

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

- **Fully rack mounted system**
- **In built H<sub>2</sub> and air supplies**
- **Easy to use, easy to maintain**
- **Customized turn key project**

### DESCRIPTION

The measuring system foresees a rotation automatic sampling valve, that introduces into the analytical circuit about 0.6 ml of sample gas, balanced against atmospheric pressure in order to guarantee repeatable samples. Everything is assembled in a temperature controlled environment. Sample is sucked by an air ejector located at the back of the sampling valve. In the temperature controlled chamber packed chromatographic columns may be installed to perform separation and determination of specific organic compounds.

By a chromatographic column it's possible to determine the methane fraction content, to define, in case of too high set values whether the concentrations are due to pollutants or to methane leaks from the burner.



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## TECHNICAL SPECIFICATIONS:

- Measuring ranges : 0-10/100/1,000 ppm/mgNm<sup>3</sup>  
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(further ranges on request)
- Background noise : 0,01 ppm
- Lower Detectable Limit (LDL) : < 1% full scale
- Zero stability (24 hours) : ± 0.5%
- Span drift (24 hours) : ± 1%
- Measuring cycle : 30 seconds (up to 2000)
- Response time : 30 seconds
- Linearity : better than 1% full scale
- Precision : ± 1%
- Sample flow rate : 600 ml/min (not related to measurement)
- Operating temperature : 5 – 40 °C
- Digital display : 2 x 40 characters LCD
- Analogue outputs for each component : 0-1 Vdc 4-20 mA (selectable)
- Serial output : standard RS 232, 9 pin connector
- Zero drift : self compensated
- Zero/Span control : set from front panel and/or remote control
- Services                      Hydrogen : 30 ml/min  
   Air : 300 ml/min
- Calibration, by traceable gas cylinder : 20 ppm C<sub>3</sub>H<sub>8</sub>, air balance
- Dimensions (HxWxD) : 1600x600x600 mm (64"x24"x24")
- Weight : According to configuration
- Standard power supply : 220/110 Vac, 50/60 Hz, 500 VA  
(to be specified in order)
- Pneumatic connections : 1/4" or 4/6 mm and 1/8" or 1/2 mm

## HOW TO ORDER:

CODE NUMBER	DESCRIPTION
041-5001	Multi point automatic system, 220 Vac 50 Hz
041-5002	Multi point automatic system, 110 Vac 60 Hz HG 200
052-1001	Hydrogen generator
048-0001	Mod. 9588 UPP air generator
041-5011	Calibration gas cylinder
042-1001	Heat traced line (specify length)
042-1002	Heat traced line temperature control
041-1113	Mod. THC 110 expendables kit
041-1114	Mod. THC 110 spare parts kit

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