



110H®/ 110E® THC/VOC- CEMS Online Analyser

Description - The FID detector is a carbon atom counter. A sample is introduced into a micro flame lit by hydrogen and air (1:10 ratio), where the electrical charges generated by the oxidation of Cx to CO are proportional carbon content in the sample. The electrical charges are collected by two polarised electrodes and converted by an electrical circuit into an electronic signal.

The 110H®/ 110E® THC (Total Hydrocarbons) FID analyser is intended for continuous monitoring of Total Hydrocarbons (THC) fraction in **stack emissions** and **process gas**.

The separation of methane fraction is based on the chromatographic method. Once specified the CH4 is measured separately and then subtracted from Total Hydrocarbons concentrations. The measuring sequences are managed by the built-in 10 port rotation valves enabling sequential measurement of **Total Hydrocarbons (THC)** , **Volatile Organic Compounds (VOC)**. A zero calibration cycle triggered automatically before each measuring cycle guarantees a **high signal stability** and efficient drift compensation.

110H®/ 110E® FID - CEMS

High Performance
Emissions Monitoring



THC

PCF 529/H® FID CEMS - Key Features

Proprietary micro FID detector	Keyboard / LCD display interface for configuration & calibration
Online monitoring of THC	19 inch rack mount enclosure
Built-in automatic ignition, wide dynamic measuring range	Stainless steel connectors for gas inlet/outlet and zero air inlet
Fully automatic standalone system for fast, accurate and reliable analysis of Total Hydrocarbons and Volatile Organic Compounds	Modular and universal high performance associated gas sampling system
Keyboard / LCD display interface for configuration & calibration	PFA and PTFE gas path

Continuous Emissions Monitoring System

When sampling gas from large combustion plants or blast furnace (...) the use of a **dedicated sampling system** is necessary to ensure application specific and reliable sample preparation.

AquaGas sampling equipment and solutions cover a large range of applications within the power generation industry. Our gas coolers, heated sampling probes, heavy duty pumps (...) enable efficient flue gas online measurement with **automated sampling sequences**, multipoint monitoring, high performance gas conditioning and deep filtration features.



PCF 529/H® FID CEMS - Specifications

INTEGRATION

Dimensions	19inch rack mount unit
Weight	480x190x560 mm 15kg
Flow	500 ml/min.
Response time	TD+T90 < 180 seconds
Warm- up time	5 min
inlet pressure	2kPa - 50kPa
Interface	LCD display + keyboard
Output	RS232 / 4-20mA / dry contact alarm
Power supply	240 VAC 50 +/-1Hz
Analogue outputs	THC : 0-1 Vdc/4-20 mA
Utilities	Hydrogen : 30 ml/min Pure air : 300 ml/min Service air : 4.5 Bar (63 psi)
Operating conditions	Temp 0-40C Pressure 86-108kPa Humidity 5-85% non-condensing

ANALYTICAL

Measured gases	Total Hydrocarbons THC,
Measuring ranges	(six ranges) 0-10/20/50/100/200/500 ppm
Units	Ppm or mg/Nm3
Background noise	0.01 ppm
Lower Detection Limit	< 0.02 ppm
Zero drift	< 0.01 ppm
Span drift	< 0.02 ppm
Linearity	1 % of the selected measuring range
Calibration standard	3 ppm CH4 + 1 ppm Propane, air balance
Accuracy	1 % of the selected measuring range

