

PCF MOD. 110 E , BASIC H.T. TCOV ANALYZER

We congratulate you on choosing our instrument. As soon as you receive the Mod. 110 E check that the instrument has not suffered in the shipment, especially mechanical damage. Next, open the top cover and check that all internal parts are firmly in their housings, especially the electronic boards, ICs and connectors.

To work properly, the Mod. 110 E will require the following supply gases (find the adjustment controls in the compartment accessible from the front panel:

Gas	Scope	Specs	Source	Pressure from source (< 6 Bar)	Connections on rear panel	Checked Pressure on Mod. 110 E gauges
H₂	FID supply	Pure (99.999) HC <0.01 ppm	Gas cylinder or H ₂ generator	≥ 2.5 Bar (≥ 36 Psi)	H ₂	See final check record
Pure Air	FID supply and carrier gas	HC <0.01 ppm	Gas cylinder Air generator with hot efficient scrubber	≥ 2.5 Bar (≥ 36 Psi)	AIR FID	See final check record
Instrument Air	Rotation valve activation	Oil free Air	From an oil free compressor	> 5 Bar (> 75 Psi)	Instrument Air	See final check record
Calibration Mixture	Check or calibrate TVOC/THC	Mixture must be with air balance (suggested, 60-80% of sel. range)	Certified gas cylinder or from multi point calibrator	Vented (Ambient pressure)	SPAN	Low pressure (0.1 Bar, 1.5 psi) better if vented

Note:

- 1) Power the instrument with the correct power supply (see the plate on the back).
- 2) Connect the gas supplies as indicated above.
- 3) For instruments with FID, to obtain a high reproducibility, an air for the FID with a low HC content <0.1 ppm must be used).
- 4) If you use low quality FID air, you will have poor results in terms of detection limits, accuracy and reproducibility.
- 5) Complete control of the operation of the instrument is ensured by a 'user friendly' menu on the 'touch screen' color screen.
- 6) After turning on the instrument with the switch, wait for the instrument to warm up (about 15-20 minutes) then, if the instrument is not programmed for automatic ignition, turn on the FID by pressing the 'IGNITE' icon.
- 7) After switching on the FID, the FID alarm will disappear and the instrument will start working.

CALIBRATION OF THE MOD. 110 E, BASIC H.T. TCOV ANALYSER

The FID is an extremely stable detector. Do not play unnecessarily with the calibration procedures, if it is not strictly necessary, let the instrument work for a few days then check or perform a complete calibration.

The instrument is configured to be calibrated with a low concentration cylinder; if you calibrate it using a multi-point dilution calibrator, feed the gas through the 'SAMPLE' line and close the 'CAL / ZERO' inlets, to avoid gas mixing.

Calibration check

Do not change the Calibration Factor (Kcal = ADJ) using the potentiometers on the front panel, first check only the calibration of ZERO and SPAN.

Once you have selected Zero or SPAN, follow the instructions. The sampling of the instrument is discrete (one injection every 30 sec. Approximately).

Remember to supply the calibration mixture at very low pressure, <0.1 Bar, or better by free circulation in the air (vented).

Full Calibration [the Kcal (ADJ) will be updated].

- 1) The instrument is working regularly on the [MONITOR] sampled gas.
- 2) Feed the calibration mixture either from a cylinder with sample gas or from a diluter (in this case the ZERO or SPAN inputs must be closed).
- 3) Select SPAN or ZERO and proceed as from the interactive menu.
- 4) Once the instrument has been calibrated, close the 'SPAN / ZERO' sources.

I/ O electrical connections

RS 232-485, in accordance with international standards.

Ethernet / LAN, as per international standards.

DIGITAL OUTPUTS (clean contacts normally closed/open according to the setting from front panel touch screen.)

From bottom up:

- 1-2 Flame OFF alarm
- 3-4 ZERO status
- 5-6 SPAN status
- 7-8 MONITOR status
- 9-10 Range x1 no contact
- 11-12 Range x10
- 13-14 Range x100
- 15-16 Range x1,000
- 17-18 Not in use

REMOTE COMMANDS

From bottom up of the block

- 1 +24Vdc
- 2 +24Vdc
- 3 CSR in (not in use)
- 4 SPAN calibration
- 5 Zero calibration

ANALOG OUTPUTS

(0-1/10 Vdc or 0/4-20 mA, set from rear panel and front panel, touch screen)

From bottom up:

- 1- Channel 1
- 2- GND
- 3- Channel 2
- 4- GND
- 5- Channel 3
- 6- GND
- 7- Channel 4
- 8- GND
- 9- Channel 5
- 10- GND
- 11- Channel 6
- 12- GND
- 13- Channel 7
- 14- GND
- 15- Channel 8
- 16- GND