

## COMMISSIONING CARD OF MOD. 529/NR/TCD ANALYZER

We congratulate with you for choosing our equipment. As soon as you receive Mod. 529/NR/TCD please check that instrument did not suffer from mechanical damages during shipment. Next, open the top cover and check that inner parts are regularly fixed to their support, particularly for electronic boards, ICs and sockets.

In order to work correctly Mod. 529/NR/TCD will need the supply of following gases (regulating gauge access behind the front door):

Gas	Scope	Specs	Source	Pressure from source (< 6 Bar)	Connections on rear panel	Checked Pressure on Mod. 529/NR gauges
<b>Nitrogen, Air, or Helium</b>	Carrier gas	HC <0.01 ppm	Gas cylinder Air generator with hot efficient scrubber	$\geq 2.5$ Bar ( $\geq 36$ Psi)	Carrier Gas	See final check record
<b>Instrument air</b>	Activation of 8 port valve	Dry instrument air	Air compressor (gas cylinder)	$\geq 4.5$ Bar ( $\geq 65$ Psi)	AIR SUP	No indication
<b>Calibration Mixture</b>	Check or calibrate TCD	Mixture must be with suitable balance (suggested, 60-70% of measuring Range)	Certified gas cylinder or from multi point calibrator	Vented (Ambient pressure)	SPAN	Low pressure (0.1 Bar, 1.5 psi) better if vented

### Please note:

- 1) Supply instrument with the correct Power Voltage, see the rear tag.
- 2) Connect gas supplies as indicated above.
- 3) The full control of instrument operativity is guaranteed by a use friendly menu on the colour touch screen.
- 4) After the switching ON, wait till instrument warms up (some 15-20 minutes), then it is in the condition to measure.
- 5) By pressing MONITOR the instrument starts working, on line, performing regular analysis.
- 6) You may perform a Calibration Check or a Full Calibration.
- 6) Whenever you chose a new working mode of the instrument, the same ends the cycle under operation then it enters in the new operating mode.
- 7) To Upload and/or download configuration of the instrument please follow the steps shown in the menu.

## CALIBRATION OF MOD. 529/NR/TCD ANALYSER

TCD (Thermal Conductivity Detector) is a stable detector. Do not fiddle around with calibration procedures unless you feel it necessary, leave the instrument working continuously for a few days then you may check or perform a calibration.

The instrument is configured to be calibrated by a low concentration gas cylinder. If you calibrate with a multi-point calibrator either you enter through the sample line and close the CAL/ZERO pneumatic ports or vice versa, as to avoid mixing of flows.

### Calibration check

You do not modify the Calibration corrector factors (Kcal = ADJ), you just check the calibration of ZERO and SPAN.

Follow the instructions once you selected ZERO and/or SPAN.

Remember that you must enter the instrument with vented sample or very low pressure.

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

- 1) The instrument is on line [MONITOR]; it is working regularly on sample gas.
- 2) Supply the calibration mixture either from gas cylinder or from a diluter (in the latter case the AMPLE or SPAN port must be closed)
- 3) Select SPAN or ZERO and proceed as indicated by the interactive menu.
- 4) Once the instrument is calibrated closed the SPAN/ZERO sources.

### I/O electrical connection

RS 232-485, as from international standards.

Ethernet/LAN, as from 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