Scientific Instruments Manufacturer GmbH
D-46149 Oberhausen • phone +49-208-941078-0 • www.simgmbh.de

Agilent Technologies
Channel Partner

SIM

HYDROGEN SENSOR

integrated in
Agilent 6890 GC:

NEW

available as external device for
all customary GCs

Within the scientific community, there is broad agreement that hydrogen is the best carrier gas for capillary GC applications. But in spite of many advantages, the gas has one disadvantage: In case of a leakage, there is the possibility of an explosion in the GC oven!

To eliminate this possibility, SIM GmbH has developed a hydrogen sensor that is fully integrated into the gas chromatograph. By constantly detecting the gas concentration in the GC oven and switching over to inert gas in case of alarm, any risks can be eliminated.

MODE OF OPERATION

The hydrogen sensor consists of a sensor head, a control unit with LEDs, optical and acoustic alarm as well as a gas switching module.

- The gas sensor is installed in the GC oven (see fig. 1) for continuous monitoring of the oven air. The measured gas concentration is shown on the LED indicator band on the GC front panel (see above photo).
- One green LED shows the ready status of the hydrogen sensor with no hydrogen in the GC oven.
- As soon as hydrogen appears, several of the LEDs will light up depending on the gas concentration.
- If hydrogen concentration is above a threshold level of 10 % of the lower explosion limit (LEL), the first red LED will light up and an acoustic signal will be transmitted.
- At a detected hydrogen limit of 25 % LEL (equals 1 % by vol. H_2), an alarm signal will sound and the carrier gas will automatically be switched to an inert gas.

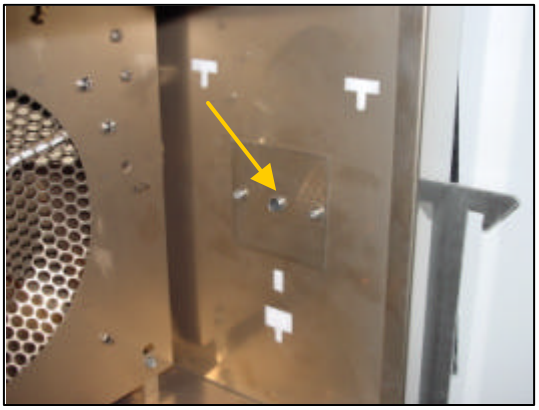

Fig. 1 GC oven with gas sensor head

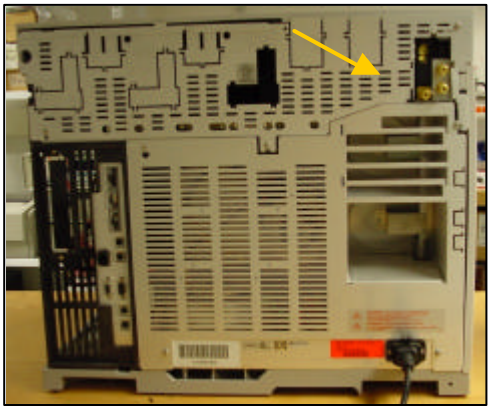

Fig. 2 GC rear panel with module for carrier gas switching (see arrow)

Article	Order no.
Integrated H_2-Sensor for 6890 GC with opitcal/acoustic alarm	HS 1000 68 90
Carrier gas change-over switch for H_2-Sensor	HS 1100 68 90
External H_2-Sensor incl. carrier gas switch	HS 1000 10 00