



Lotus Consulting



DVLS³

Simply Smart Hydrogen Sensor

The DVLS3 Simply, Smart Sensor provides a safe technique to detect a hydrogen leak in Scion Instruments. By constantly monitoring the hydrogen concentrations and automatically switching to an inert gas when the LEL is reached, the Simply, Smart Sensor ensures laboratory safety.

The DVLS³ Simply, Smart Sensor is installed in the GC column oven for continuous monitoring of the hydrogen concentrations in the oven air. The LCD screen of the external controller displays the measured gas concentration. If the sensor detects a user defined hydrogen concentration, typically between 25% and 50% LEL (equal to 1%-2% by Vol. hydrogen), it will ensure the safety of the laboratory staff by several means:

- The sensor software alerts the lab staff by showing a **red** status on its dashboard, triggering an audio alarm and sending an alarm message by mail, text (SMS), Growl or Prowl.**
- The sensor controller automatically switches the carrier gas to an inert gas.**
- The LCD screen on the sensor controller starts flashing.**

Actions performed when Sensor is triggered with a Leak

- Fault will be reported in the GC error-log in **red**.
- The **red** error led on the Scion 8300/8500 will turn on.
- The GC "ready" led will turn off (if on).
- The "not ready" led will turn on.
- The "ready" relay of the GC will switch off.
- Switching off all heaters and oven fan motor.
- Automatic switches carrier gas to inert gas.
- The Main-display will display "**Error**"
- The module/control causing the problem will be deactivated.
- All external events/power are set to default state identical to when the GC is not powered.
- All detector electronics will be turned off.
- All injector/detector EFC units controlling Hydrogen gas will be turned off (flow setting zero).
- Open the column oven vent door.
- If a run has already started, it will immediately be aborted.
- Instrument control will be "frozen"

Dedicated Software Control

The optional DVLS3 Sensor software allows you to set up the system configuration, define alarm settings, manage users and create an audit trail. The software can be used either stand-alone or in a network configuration. Configure the hardware by manually entering the sensor specifications or use the Device Scanning option to automatically scan for new sensor devices and add the specifications.

Manage the user access level and their contact details to define the alarm messaging by email, text (SMS), prowl or growl.

In case the sensor detects a concentration that exceeds the user defined level the DVLS3 Sensor software will automatically transmit the alarm message(s) to the operator. The dashboard displays the detected values, the minimum & maximum levels and the transmitted alerts.

Specifications

Maximum altitude: 2000 m
 Operating humidity range: 20 to 90%
 Controller operating temperature range:
 10 to 40 °C Calibrated range H2 sensor: 0
 to 50% LEL (0 to 2% Hydrogen in Air)
 Sensor signal cable length: ≤ 3 m
 Controller dimensions: L x W x H: 12.0 cm
 x 14.2 cm x 6.3 cm
 IP Class: IP 40

Hardware Description

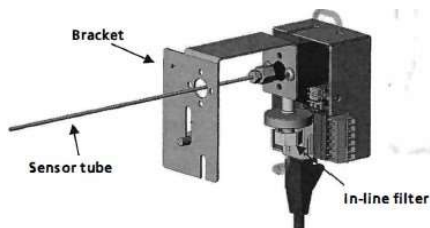
Controller



Carrier Switching Valve



Sensor Module



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