

Tracer Leak Detector for Gases in the ppb – and ppm Range





Tracer – Leak detection in the ppb range

Application

The Tracer has its strength where other methods of leak detection would fail because of their cross sensitivities to other gases. Such selectivity is requested in plants using or producing extremely toxic substances. These plants always have a "Zero Emission Policy" in force. Here high sensitivity in combination with good selectivity is required.

Sensor technology

Electrochemical sensors can be designed to be very selective and sensitive at the same time by the right material choice for electrodes and electrolyte. These sensors will not respond to less dangerous substances that might be around in the plant such as hydrocarbons, carbon monoxide, hydrogen or even humidity. A detection limit as low as 2 ppb is no problem for this sensor technology!

A disadvantage of electrochemical sensors compared to physical methods has been their comparatively slow response. The working electrode must transform analyte to confer a response – and this takes its time.

Tests in Compur's laboratories have shown that the material transformation process at the working electrode can be speeded up by increased mass transfer of analyte to sensing surface compared to gas access by diffusion. It was a short step from there to develop an instrument with a built-in pump and a special measuring chamber with optimized flow characteristics. In this way the response time of the instrument is almost as short as would be obtained with a physical detection method.

Which gases can be detected with the Tracer?

The Tracer is available for the following gases: COCl₂, HCN, HCl, Cl₂, NO₂, ClO₂ and H₂S.

The Tracer is capable to detect even traces of toxic gases. The detection limit is in the low ppb range depending on the substance to be detected. As a leak detector might be exposed to very high concentrations, it must not be used as a personal monitor. To avoid it being abused as such, the detector displays no concentration, but only a dimensionless figure or a bar graph.

The "HIGH- Range" Tracer

Some applications such as leak detection in containments or analyser cabinets do not require an ultra- low measuring range. For these your Tracer can be converted to the high – range version by just replacing the low by the high range sensor. This can be done in minute – no tools and no adjustment required.

Using the Tracer

To locate a leak, move the sample intake along the surface to be inspected. The measured value will increase when a leak is approached. The display can be selected between bar graph and digital. A control tone and LED will increase in frequency with mounting measured value similar to a Geiger counter.

The Tracer will protect itself from poisoning. If the measured value goes out of range the pump will go off and start again when it drops below 95% of the range.

The graphic display is easy to read. At night or in dark places in the plant a backlight can be switched on.

Consumables such as sensor, filter or sampling probe can easily be replaced without tools.

Compur Monitors GmbH & Co. KG Weissenseestraße 101 D-81539 München

Tel.: ++49 89 62038-0 Fax: ++49 89 62038-184 Email: compur@compur.de Internet: www.compur.com

Technical Data

Product name Type Measuring principle Response time Operating temperature

Storage temperature

Humidity

Flow Battery Operating time Power

Dimensions (LxWxD)

Weight Housing material EMV: EN 61326:1997 (+A1/A2) **COMPUR** Tracer 5910 100 electrochemical <u><</u> 2 s -20°C to +40°C -4°F to 104°F short term to +60°C/140°F -25°C to +40°C -13°F to 104°F short term to +60°C/140°F 0 - 99% r.H., non condensing 200 ml/min 4 x AA Alkaline battery 48 hours 20 mA - with backlight on: 140 mA 450 x 60 x 50mm 17,7 x 2,4 x 1,9 in 0,55 kg / 19,4 oz conductive PP Emission threshold B and general impact protection



Specifications are subject to change without notice, and are provided only for comparison of products. The conditions, under which our products are used, are beyond our control. Therefore, the user must fully test our products and/or information to determine suitability for any intended use, application, condition or situation. All information is given without warranty or guarantee. Comput Monitors disclaims any liability, negligence or otherwise, incurred in connection with the use of the products and information. Any statement or recommendation not contained herein is unauthorized and shall not bind Compur Monitors. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or device or its use. No licence is implied or in fact granted under the claims of any patent. Instruments are manufactured by Compur Monitors GmbH & Co. KG, Munich. The General Conditions of Supply and Service of Compur Monitors GmbH & Co. KG are applicable. TRA_E 07.2017