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## Leak detector by Compur: the Compur Tracer

### 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 of Phosgene 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.

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, it displays no concentration, but only a dimensionless figure or a bar graph.

#### 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.

#### Field test results – the high range version

The first tests in plants have proven that an ultra-low measuring range does not always do the job. Therefore Compur Monitors has completed the Tracer product range by a new HIGH range version. It uses an orifice in front of the sensor increasing the measuring range by a factor of 20. The user can do that without changing the amplifier adjustment. All it takes is just replacing the LOW range sensor by a HIGH range sensor and so cover a measuring range from the low ppb range up to the two digit ppm level!

Measuring principle	elektrochemical
Response time	< 2 s
Operating temperature	elektrochemische Zellen
Storage temperature	-20°C - +40°C short term +60°C
Lagertemperatur	-20°C - +40°C short term +60°C
Humidity	0 - 99 % r. H. non condensing
Flow	200 ml / min
Ex approval	ATEX EEx ia IIC T4
Scope of application	II 2 G
Certificate	BASEEFA 03 ATEX 0742



#### Manual Tracer

The Tracer features ultra sensitive leak detection for the following gases:  
 COCl<sub>2</sub>, HCN, Cl<sub>2</sub>, NO<sub>2</sub>, ClO<sub>2</sub> and H<sub>2</sub>S.

#### Suchbegriffe

gaz alarm cihaz hydrazine sulfat  
 personal ozone Suche  
 538-908 mars Suche ... history  
 explosimeter model 2A  
 phosgene disposable pa-ir  
 538908 fid indicator  
 VQ641TS statox.com  
 Phosgene gambar

#### Call-Back

Name:

Telefon:

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Battery	NiMH
Charger	In: 100 - 240 VAC, out 9 VDC
Power	20mA, with backlight on: 140mA
Dimensions (HxWxD)	450x60x50mm
Weight	0,55 kg
Housing material	conductive PP
EMV: EN 61326: 1997 (+A1/A2)	Emission threshold B and general impact protection