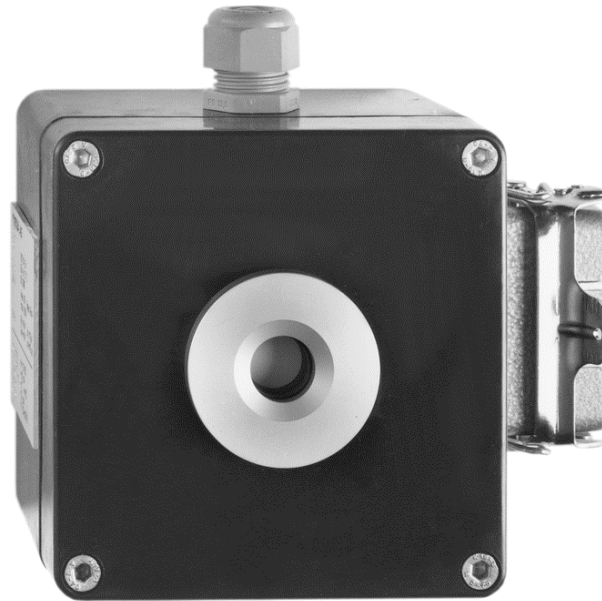




Gas sensor GSE 657 Ex for detection of Chlorine Cl₂



Introduction

Chlorine gas diffuses into the sensor and reacts at the sensing electrode on the surface of the electrode. The counter electrode acts to balance out the reaction at the sensing electrode by reducing oxygen in air to water. The oxygen from the ambient air diffuses at the back side into the sensor. A high reserve of electrochemical activity ensures that each sensor has a long life time (see performance characteristics) and excellent temperature stability.

The measured gas concentration is linear to the electrical output signal of the gas measurement probe. The potentiometers and the 3.5 mm jack connection for the calibration are accessible from the outside, and permits a "one-man" calibration.

When the sensor is mounted in a sampling system, the life time can be shorter because the flow absorbs the electrolyte. Please do not hesitate to contact your agency or KIMESSA Ltd. for further information.

The **calibration gas** should be 75% of the measurement range, and must contain synthetic air as the carrier gas

Sensitivity:	1 ppm
Maximum overload:	max. 100 ppm / linear
Standard calibration:	0...10 / 0...50 ppm
Response time t 90:	max. 30 sec
Operating temperature:	-10 °C ... +40 °C
Startup time after reconditioning:	max. 1 h
Pressure range:	atmospheric ± 10%
Relative humidity range:	15...90% non condensing
Position sensitivity:	none
Long term output drift:	2%/ month
Life time at 20 °C:	at least 1 Jahr depends on the application

Cross sensitivity to other gases

Test gas	concentration of the test gas	display on the CL ₂ -Sensor
Chlorine Cl ₂	10 ppm	10 ppm
Carbon Dioxide CO ₂	5'000 ppm	0 ppm
Carbon Monoxide CO	220 ppm	0 ppm
Propane C ₃ H ₈	1 Vol. %	0 ppm
Sulphur Dioxide SO ₂	10 ppm	0 ppm
Nitrogen Dioxide NO ₂	10 ppm	10 ppm
Nitric Oxide NO	0 ppm	0 ppm
Hydrogen H ₂	1 Vol. %	0 ppm

Sensor electronic specification

Cable:	2-core cable, shielded
Power supply:	13.5...30 VDC
Sensor current:	max. 60 mA
Output signal:	4...20 mA/max. 60 mA
Operating temperature:	-40 °C ... +85 °C

Explosion-proof construction

( II 2G Ex ia IIC T4)

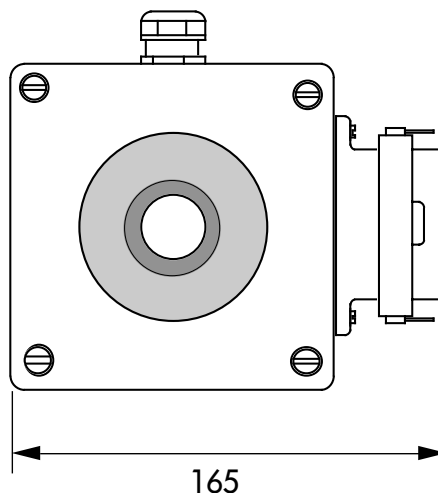
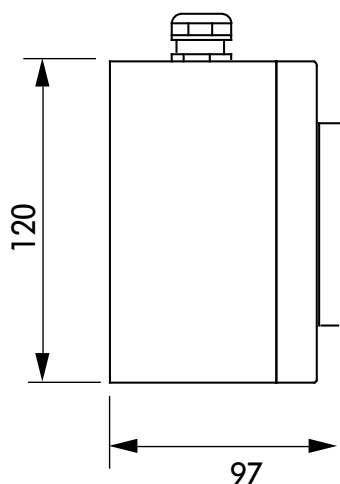
Certificate of conformity BVS 09 ATEX E 101 X

The gas measurement probe of the series GSE ... Ex must be operated with a Zener barrier. The supply must be designed to be "intrinsically safe" and the colour must be blue.

Inspection (Maintenance)

The sensor and the electronic require an inspection. Routine calibration is recommended once or twice a year.

Dimensions



cover cap for:
 - calibration potentiometer
 - output signal connection (3,5 mm jack)