

GAS SAMPLING SYSTEM OGS 3.1

Suitable for use in Zone 1 & 2 hazardous areas
Product Datasheet

Features

- Simultaneous gas detection
- Infrared hydrocarbon sensor
- Electrochemical O₂ / Tox sensor
- Paramagnetic O₂ sensor
- Automatic and sequential sampling & purging of each sampling tube
- Extensive hardware and software monitoring
- Low and high gas alarms, flow alarm, purge pressure alarm
- Adjustable time sequence (purge/sampling) per individual sampling point
- 48 pcs. Aux. relay outputs, freely configurable
- Redundant Internal Serial line communication between sampling and alarm monitoring panels
- Serial line communication on RS422/RS485 MODBUS RTU to ICSS (Integrated control system)
- Flame arrestor and shut-off valve for each sampling tube
- Non-return valves in ballast tanks
- Cabinet cooling/heating

Product overview

The OGS 3.1 gas sampling system consists of a monitoring / alarm cabinet and one or more detector cabinets. The monitoring cabinet incorporates the operator panels and power control components for the individual detector cabinets and is located in a safe area. The detector cabinet contains all sampling related electronics, gas sensors, mechanical and pneumatic components and can be operated in Zone 1 & 2 hazardous areas, ensuring optimal sample times and large system coverage.

The sampling principle is based on a dual pump scanning cycle. The main pump continuously draws air from all detection points while the sample pump at the same time checks the individual sample points for gas in a cyclic sequence, minimizing the time



required and guaranteeing fast response times. The operator panel indicates the sampling and alarm status on the LCD display and via dedicated LED lamps for each point individually.

The system continuously monitors all pneumatics and electronics for possible malfunction. All types of failures including leakage will be detected and alarmed.

OGS 3.1 comes completely assembled ready for use and fulfils the latest requirements from IACS, EC, IMO and all major class societies' rules and regulations.

Technical Specification	
Monitoring / alarm cabinet	Rittal TS8 800 x 2000 x 800 mm
Power supply	230V AC Nom. 50HZ
Sampling / detector cabinet	SS316 800 x 1800 x 600 mm
Number of sampling points	≤ 30 per cabinet
Sample/purge time range	25 s-9999 s
Purge air supply	6-8 bar
Main vacuum pump	Membrane pump (2000 l/h)
Sample vacuum pump	Membrane pump (400 l/h)
Solenoid valves	Bürkert, type 780
Serial line Communications	RS422/RS485 (MODBUS RTU)
Flow meter for Hydrocarbons	Variable area flow meter 10-100 l/h
Flow meter for O ₂	Variable area flow meter 1,6-16 l/h
Bypass for sample flow	Check valve 1 psi
Ex ia Barrier for flow meter	4-channel Inn
Cable glands	CMP, T3CDS, nickel plated
Fittings	Swagelok, SS316(L)
HC Sensor (IR)	AutroPoint HC200
O ₂ / Tox sensor (elch)	AutroTox GT3000
O ₂ sensor (paramagnetic)	Servotough Oxy 1900
Cooler (electrical)	Stoleway STFACAC2-1FP (1400W)
Cooler (pneumatic)	Vortex 787SSBSP (500W)
Heater (electrical)	Bartec Technor HCL600 (600W)

Pneumatic function schematics

