# GP-SA-2




Geopal GP-SA-2 is also available as gas alarm monitor for connection of one detector (option).




## Geopal GP-SA-2
## Stand-alone detector

The Geopal GP-SA-2 stand-alone detector is designed for industry and marine.

The GP-SA-2 detector uses an integrated microprocessor for continuously monitoring the gas concentration, whether it is in the 0-100% LEL range (lower explosion level) or the 0-40,000 ppm range, for e.g. refrigerants.

The signals of the Geopal GP-SA-2 detector are converted to a linear output signal of 4-20 mA or 0-5/10V. The detector is equipped with alarm relays for low alarm, high alarm and system fault.

Service function
The “service button” is used to prevent alarms to be transmitted to the external system to stop the system e.g. by calibration, service and refill of coolant. Using the service button the alarm relays are deactivated, the fault relay is activated and the analog output switches to 2 mA.

## Features

Easy to calibrate
The servicing of Geopal GP-SA-2 requires no special tools or equipment, only a test gas with the given gas concentration. The actual calibration can be carried out by one person in less than 10 minutes, using a simple push-button system with associated light indicators.

Simple installation
For the external wiring of the detector a three-conductor cable is normally all you need. Depending on how many relay functions are required, the number of conductors would be increased accordingly.

Linear output
Based on a mathematic analysis of the characteristic formed by the semiconductor sensor, the detector generates a model, which results in an analogue output that will be linear in the entire detection range.

geopal®
Bygmarken 19 • DK-3520 Farum
+45 4567 0600 • info@geopal.dk • www.geopal.dk

PENDING ITS-I 23ATEXQ36745 DBI reg. no 233.301 DIC444QMS

# GP-SA-2

## Geopal GP-SA-2
## Stand-alone detector

## With external detector

The GP-SA-2 with an external detector is used in areas with high ceilings where access from a ladder is impossible or impractical.

During the annual service of gas detectors at our customers' premises, it is crucial that our technicians can easily access the equipment for calibration with calibration gas. To avoid costs for scaffolding, lifts, etc., at every service, the detector is mounted high up under the ceiling, and the control unit is placed somewhere with more convenient access.

We have developed three standard variants of this solution specifically for NH3:

Variant 1

- GP-SA-2 with external detector including an electrochemical sensor
- Measurement range 4-20 mA = 0-3000 ppm NH3
- Alarm threshold 1: 200 ppm, Alarm threshold 2: 3000 ppm

Variant 2

- GP-SA-2 with external EX detector including an electrochemical sensor
- Measurement range 4-20 mA = 0-3000 ppm NH3
- Alarm threshold 1: 200 ppm, Alarm threshold 2: 3000 ppm

Variant 3

- GP-SA-2 with external EX detector including an electrochemical sensor
- Measurement range 4-20 mA = 0-30.000 ppm NH3
- Alarm threshold 1: 30.000 ppm, Alarm threshold 2: 30.000 ppm

With EX detector




With external standard detector




geopal®
Bygmarken 19 • DK-3520 Farum
+45 4567 0600 • info@geopal.dk • www.geopal.dk

PENDING ITS-I 23ATEXQ36745 DBI reg. no 233.301 DIC444QMS

# GP-SA-2

| | |
|---|---|
| Supply voltage | 85 to 264 VAC, 24VDC |
| Power consumption | 100 W max. (depended on connected flash/sounder) |
| Available gases | Methane (CH4), Propane (C3H8), Butane (C4H10), Hydrogen (H2), Hexane (C6H14), Benzene (C6H6), Ethane (C2H6), Carbon Monoxide (CO), Pentane (C5H12), Ethylene (C2H4), Ammonia (NH3), R404A, R407C, R417A, R245fa, R134a, etc. |
| Detection range | 0-40,000 ppm, 0-100 % LEL |
| Response time T90 | < 5 seconds depending on gas type |
| Repeatability | +/- 5 % of FS range |
| Long-term stability | < 5 % FS / 12 months |
| Self-diagnostics | Continuous |
| Electrical output | 4–20 mA / ( 2 mA fault) or 1–5 V / (0,5 V fault) or 2–10 V / (1 V fault), 0-5 V, 0-10 V |
| Relay outputs | 2 relay outputs for alarm 1 and alarm 2<br>1 relay output for fault<br>Signal contact 230 V / 6 A |
| Material housing | Polycarbonate, black |
| IP rating | IP 65 DIN 60529 |
| Weight | 0,75 kg |
| Mechanical dimensions | 180x170x60 mm |
| Max operating conditions | Temperature -25 °C to +55 °C<br>Humidity 15 %RH to 90 %RH not condensing<br>Pressure 1013 mbar ±10% |
| Storage | Temperature -25 °C to +55 °C<br>Humidity 0 %RH to 95 %RH |
| Approvals (Directives and Standards) | Electromagnetic Compatibility Directive (EMC) 2014/30/EU<br>Low Voltage Directive 2014/35/EC<br>EN 61 000-6-2 (2019); EN 61 000-6-4 (2019);<br>EN 50 270 (2015) |
| Quality | ISO 9001:2015 |





geopal®
Bygmarken 19 • DK-3520 Farum
+45 4567 0600 • info@geopal.dk • www.geopal.dk

PENDING ITS-I 23ATEXQ36745 DBI reg. no 233.301 DIC444QMS