



SkyRanger R70 HUGIN Sulfur emission sniffer





HUGIN Sulfur Emission sniffer system is here to meet IMO 2020 regulated emission testing of maritime vessels. The kit is modular and portable, intended for simultaneous detection, measuring, logging and automatic reporting of multiple airborne gas types in a maritime environment.

The sensor utilize a special maritime AES 256/128 encrypted datalink to communicate its location and measured values in real time to the operations center running our NAS Kolibri software to analyze, visualize, and store the test results. The test results is then uploaded to the respected maritime authorities for further actions and future reference.



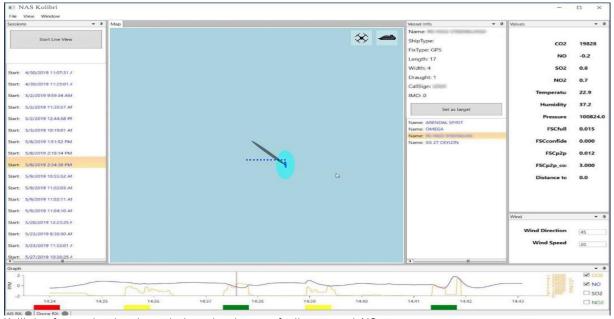
The MUNIN sensor is a lightweight gas detector designed to be mounted on the SkyRanger R70 UAS or alternatively a UGV/Robot for a wide range of applications where toxic gas detection, measurement, and gas identification is needed.

This includes IMO 2020 ship fuel inspection but also environmental surveys, military reconnaissance, and more...

The Kolibri software is programmed to gather, analyze and visualize vessel traffic on a map, GEO referenced using ship mounted AIS transponder information.

From that information the software will also visualize the targeted ship and its smoke plum as well as its heading and speed.

By utilizing this method you are able to visually see where to place the UAS with the sensor equipped relative to the target to achieve the best possible test result.



Kolibri software showing theoretical smoke plume, safe distance and AIS stream



Operating conditions: -20 °C - +45 °C (IP65 except PM sensor module)

Rechargeable batteries: (1-4pcs) 3,6 V/3400 - 13600 mAh, 2 - 8 h o of operation (depending on operating conditions, sensor configuration and number of battery cells)

External power supply: Micro-USB 5 V/2.5 A

Location services: GPS, Glonass, Galileo (dependent on UAS configuration)

Mechanical suspension: Arca-Swiss compatible quick release plate (damping required for vibrating environments)

Compliances: CE, FCC, ISED, URSEC

Other available configurations

Ammonia NH3 0 –100 ppm
Carbon dioxide CO2 0 –15 000 ppm
Carbon monoxide CO 0 –500 ppm
Dimethyl sulfide (CH3)2S 0 –10 ppm
Hydrogen sulfide H2S 0 –50 ppm
Methane CH4 0 –50 000 ppm
Methyl mercaptan CH4S 0 –14ppm
Nitrogen dioxide NO 20 –20 ppm
Nitric oxide NO 0 –250 ppm
Ozone O3 0 –5 ppm
Particulate matter PM1, PM2.5 &PM10
Volatile organic compounds VOC 0 –30 ppm Isobutylene C4H8 equivalent

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