

Ozone Sounding with the Vaisala Radiosonde RS92-SGP



Features/Benefits

- Reliable and accurate ozone measurement for synoptic sounding/atmospheric research
- Sharp vertical resolution and a fast sampling rate
- An ozone interface kit is available for a combination of digital RS92-SGP radiosonde and ozone sensor

The ozone sounding set-up comprises an ozone sensor connected via an ozone interface to a digital Vaisala Radiosonde RS92-SGP. The combination measures pressure, temperature, humidity and geopotential height as well as the vertical distribution of atmospheric ozone up to 3 hPa. Winds are measured using GPS navigation signals.

Ozone sensors

Three ozone sensors, the Science Pump Corporation model ECC-6AB, the EN-SCI Corporation model Z and the MAST Corporation model 730-1 can be connected to the digital Vaisala Radiosonde RS92-SGP. The Science Pump Corporation model ECC-6AB ozone sensor is the one available via Vaisala.

The Science Pump Corporation ECC-6AB ozone sensor measure ozone using the principle of iodide redox reaction to release electrons. It is the most commonly used in the world today.

Available ozone interface kits

The RSA92I and RSA922 ozone interface kits are used with RS92-SGP radiosondes. These kits are built around the Vaisala Digital Interface OIF92, which has two channels dedicated to the ozone sensor current and temperature, and two additional voltage measurement channels for other purposes.

Ground equipment

RS92-based ozone sounding is done with the Vaisala DigiCORA® Sounding System MW31 and the METGRAPH® sounding software module. These sounding systems offer many useful ozone sounding preparation, ozone data processing and ozone data messaging features. System maintenance can be performed by Vaisala under the terms of a Vaisala Service Contract.

Technical data

Ozone interface	Interface kit	For use with...
OIF92 digital interface	RSA921	Digital RS92-SGP radiosondes and Science Pump Corporation model ECC-6AB or EN-SCI Corporation model Z ozone sensors (ECC type sensors)
OIF92 digital interface	RSA922	Digital RS92-SGP radiosondes and MAST Corporation model 730-10 (Brewer-Mast type sensor)

Technical information on ozone sensors

The technical specifications for the ozone sensors available through Vaisala are given by the respective manufactures. They have been used up to an altitude of 40 km or 3 hPa. The measurement time is limited to 2-3 hours due to evaporation of the sensor liquids. The temperature inside the styrofoam ozone sounding box must be above 0 °C. For more information on the accuracy of a particular ozone sensor, please contact Vaisala or the ozone sensor manufacturer directly.

Science pump corporation model onn-6zB ozone sensor

Dimensions	191 x 191 x 254 mm including weather-proof styrofoam flight box
Weight	600 g incl. battery
Operating temperature range	0 ° to 40 °C (inside styrofoam ozone sounding box)
Operating pressure range	Sea-level to 3 hPa
Storage, shelf life, warranty	Two-year warranty from day of delivery

Ozone interfaces

Manufactured by Vaisala, ozone interfaces fit into the casing of the ozone sensor. For more detailed information, please refer to the ozone interface kit brochures.

Accessories and consumable items

Vaisala offers all the accessories and spare parts needed for ozone sounding. A start-up kit is available which contains everything you need to introduce ozone sounding to your upper-air sounding program. Please refer to the ozone sounding accessories brochure for more information.

Digital eS92 models for ozone sounding

Digital RS92 models are provided with an interface connector for ozone sounding as standard.

Ozone sounding training

Vaisala offers comprehensive training in ozone sounding. Please contact your Vaisala representative for more information.

По вопросам продаж и поддержки обращайтесь:

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