

## Ground Check Device RI41



Vaisala Ground Check Device RI41 – reliability with RS41 radiosonde.

### Benefits

- Interface for wireless short range communication between Vaisala Radiosonde RS41 family and MW41 sounding software
- Interface is active – no short range transmitter in radiosonde
- Detects automatically the RS41 radiosonde and powers it up
- Fully compliant with ETSI EN 302 291-1 and -2

### Ground Check Device RI41

The Vaisala Ground Check Device RI41 is an essential part of the Vaisala Radiosonde RS41. The Vaisala Ground Check Device RI41 provides wireless short range data communication link between Vaisala RS41 radiosonde and Vaisala DigiCORA® Sounding System MW41.

The wireless short range communication link is based on the RF technique with the range of 4 cm. There is no transmitter on the radiosonde, but the interface RI41 is active.

When RS41 radiosonde is placed onto the RI41, the radiosonde is detected by MW41 sounding software and automatically powered on.

During radiosonde prior-flight preparation phase several steps are carried out. These consist of ground check procedures for sensors as well as optional features for setting radiosonde in-flight operation parameters like timer for turning the radiosonde power off after desired time, pressure or altitude.

Operator can also set the transmitter frequency of the radiosonde as required or apply station default frequency. RI41 is conveniently installed and operated with the MW41 sounding software.

### RS41 Ground check at RI41

The Vaisala Radiosonde RS41 temperature sensor is very stable utilizing linear resistive platinum technology.

The Vaisala Radiosonde RS41 humidity sensor integrates humidity and temperature sensing elements to provide unique features.

The Vaisala Radiosonde RS41 temperature and humidity sensors are calibrated with the calibration equipment which is traceable to SI standards.

In addition to several smart electrical checks the temperature sensor of the humidity sensor is used to accomplish check for RS41 temperature sensor giving additional confidence and redundancy for ground check during in-built functional temperature check. Due to the lack of environmental control the acceptance limits for the comparison are set accordingly.

The Vaisala Radiosonde RS41 humidity sensor design incorporates automatic reconditioning. Prior to flight recondition of the humidity sensor effectively removes chemical contaminants caused by any sources that could affect humidity measurements.

With unique combination of tailored, Vaisala made temperature and humidity sensors, including integrated functionalities, we are able to generate physical dry reference even more accurately than with desiccants, and can measure how much the humidity measurement deviates at 0 %RH and fine tune the humidity measurement accordingly.

### Operating frequency of RI41

The Vaisala Ground Check Device RI41 operates at 13.56 MHz and is tested to be fully compliant with the standard ETSI EN 302 291-1 and -2.

# Technical Data

## Operational Data

Short range wireless communication	RF technique
Frequency (carrier)	13.56 MHz
Transmitting power	200 mW max.
Communication link range	0.04 m
Electrical interface	USB 1.1/2.0
Cable with connector	USB
Cable length	1.8 m
Operating temperature range	+10 ... +35°C
Operating humidity range	10 ... +95 %RH

## Power Supply

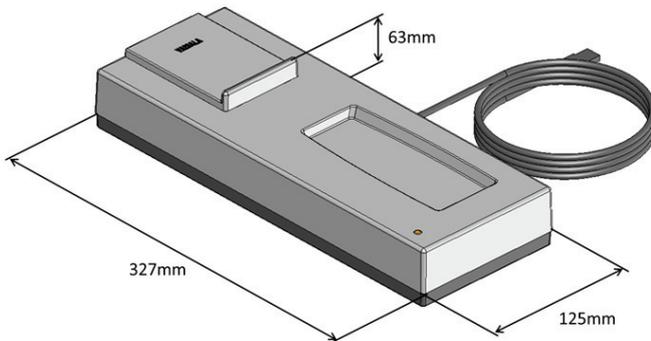
Input via USB interface	
Voltage	5 VDC
Minimum current	300 mA

## Storage

Storage temperature range	-40 ... +65°C
Storage humidity	5 ... +95 %RH

## General

Material	Polyurethane
Weight	1.1 kg
Dimensions (W x L x H)	125 x 327 x 63 mm



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For more information, visit  
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