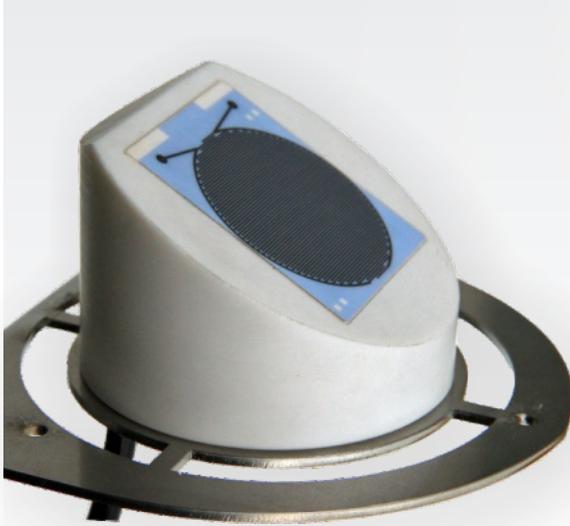


RDH11

Rain detector with binary and digital output



- Durable capacitive corundum sensor for the detection of rain and snow
- Binary output for technology control or rainfall duration recording
- Digital RS485 output with informative intensity of precipitation activity from 0 .. 100%
- Automatic sensor heating only in rain according to ambient temperature
- Adjustable delay of switching on and off of the binary output
- Stainless steel design of the detector holder
- Compatible with FIEDLER telemetry stations

Basic description

The RDH11 rain detector is used to detect rain or snowfall. During the rain, the binary output of the detector is activated, which can control the connected technology or roof windows, awnings, etc. The binary output can also be used to record the duration of the collision in the connected recording unit (M4016, H1, H7, H40, ...) using the binary input of the unit. In addition, it is possible to store in the recording unit orientation information about the rain intensity in the range of 0 to 100%, which can be obtained from the RDH11 detector via the RS485 bus (Modbus RTU or FINET protocols). The surface temperature of the detector and the ambient temperature measured in the base of the detector at the stainless steel holder can also be read from the detector via the same bus.

For the duration of the rain, the durable corundum sensor is heated by the supply voltage so that its temperature exceeds the ambient temperature by a few degrees (set by 20 °C).

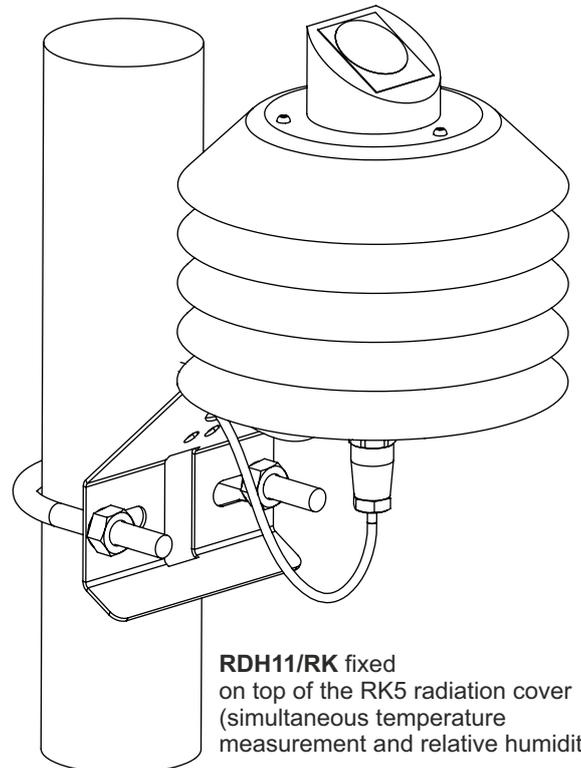
The required temperature difference when heating the surface of the ceramic sensor, delayed switching on and off of the binary output and its hysteresis and some other parameters are user-adjustable via the RS485 interface under Modbus RTU or FINET protocols.

Examples of use

- Basic monitoring of precipitation activity
- Additional detector to weighing rain gauges
- Control of awnings and skylights
- Sensor for warning system

Mechanical design

The RDH11 detector is supplied either as a separate unit, including a stainless steel holder, which is used to mount the detector on a vertical wall or mast, or as part of the RK5 radiation cover, which can be used for accurate temperature and humidity measurement using TEP01 / K or RVT11 to RVT13 sensors.



RDH11/RK fixed
on top of the RK5 radiation cover
(simultaneous temperature
measurement and relative humidity)

Technical parameters

Sensor type: capacitive ceramic sensor

Binary output: open collector closed during rain or snow, max 30 V / 2 A,

Digital output: RS485, Communication protocols: Modbus RTU, FINET (def. FINET)

User available information via Rs485:

K1: approximate value of the instantaneous intensity of precipitation in the range 0 to 100%, not calibrated

K2: ambient temperature

K3: temperature of the heated sensor

K4: binary information Heating ON / OFF

K5: binary information Rain (OK) ON / OFF

K6: approximate value of the intensity of rainfall expressed by the frequency of the controlled oscillator

User settings:

- time delay ON / OFF of binary output from the beginning / end of rain (def. 10 sec)

- required temperature difference of the sensor compared to the ambient temperature (def. 20 ° C)

Supply voltage: 10 to 24 V DC

Current consumption: no rain: <2 mA

in the rain with heating on: type. 280 mA (applies to 12 V supply voltage)

Input and output overvoltage protection: 600W semiconductor overvoltage element

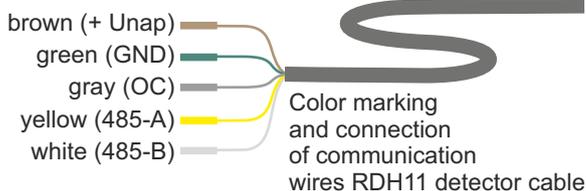
Diameter of the detection area of the ceramic sensor: 30 mm

RDH11 detector dimensions: diameter 50 mm, height 35 mm

Detector material: ABS

Power and communication cable: 5-core PUR cable, standard length 3 m.

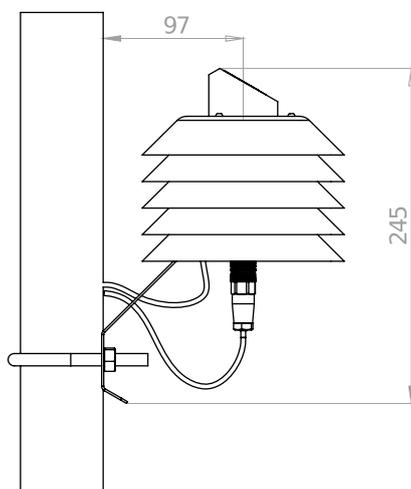
Output cable connection



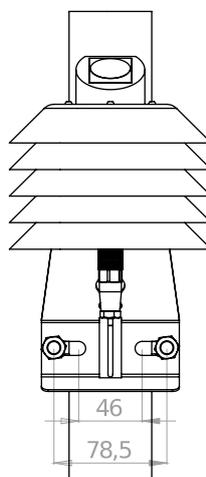
Electrical connection

The RDH11 detector requires the permanent presence of a supply voltage of 10 to 24 V DC on the supply wires of the communication cable. The positive pole of the supply voltage can advantageously also be used to supply the actuated actuator (power relay), the second terminal of the actuator being connected to the OK terminal (open collector) of the output cable (gray signal wire).

Mechanical design



RDH11/RK supplied including radiation cover RK5



Standard version RDH11 with supplied stainless steel holder

