

Introduction

Properties and benefits

The RHD sensor is a low-cost, high precision, ultra-robust rain gauge instrument.

It is a very low-power, maintenance-free and totally sealed acoustic instrument with no mobile parts. The sensing part of the instrument is a polished stainless steel hemisphere supported by a strong stainless steel arm.



Pic: RHD sensor



Pic: Installation of RHD at a apple farmer

Impact of raindrops or hailstones induces change in internal acoustic pressure. In addition to the rain and hail intensity data, the distrometer function also provides information about the drop size distribution.

General	
Power supply	9,6V to 30 V DC
Operating temperature	-40 ... 60 °C (-50 °C to 100 °C extended)
Housing	Dimensoins: Ø160mm x 265mm (mounting bracket is 426mm long) Material: Stainless steel Weight: 1,2 kg
Consumption	< 1 mA in stand-by mode and 20 mA max in acquisition mode.
Protection	IP 67
Rain intensity resolution	sdf Sensitivity @voltage range +2.5V: [50 mV/(mm/h)] i.e. +2.5V corresponds to 50 mm/h Sensitivity @voltage range +5V: [100 mV/(mm/h)] i.e. +5V corresponds to 50 mm/h
Accuracy Rain intensity	+/- 5%

Interfaces	
Analogue	2 x Analog (0-2,5VDC or 0-10VDC)
Digital	SDI-12, RS232, Option: Motbus RTU

Packaging	
Carton (mm)	475 x 225 x 255 mm Weight: about 1,6 kg