senseca

HD2016

400 CM² WEIGHING RAIN GAUGE

INTRODUCTION

Experience unparalleled accuracy with the HD2016 Rain Gauge, meticulously designed to detect the weight of rainfall collected by its expansive 400 cm² inlet. Equipped with a cutting-edge load cell sensor situated at the base of its reservoir, this rain gauge ensures precise measurements every time. Its advanced internal electronic board swiftly processes signals, delivering real-time rainfall information with unmatched reliability

FEATURES

Enhanced stability

Equipped with sophisticated wind-reducing features and an integrated NTC temperature sensor, the HD2016 delivers stable and accurate measurements in adverse weather conditions.

Longevity and durability

Constructed from corrosion-resistant materials and designed without moving parts, the HD2016 Rain Gauge offers reduced maintenance and a long operating life, providing a reliable solution for long-term use. The rainfall collecting parts are treated with a non-adherent product for a better water flow.

Reliable operation

With automatic discharge functionality and a retention valve mechanism, the HD2016 ensures that no rainfall is lost during discharge events, maintaining data integrity and accuracy.

All-weather performance

Engineered to withstand extreme weather conditions, including snow and ice build-up, the HD2016R version features automatic heating for accurate readings even in low-temperature climates.

CONFIGURATION & MEASUREMENT

Comprehensive data collection

The rain gauge is able to provide the total rainfall, the partial rainfall (from the last reset command or from the last reading command), the average rainfall rate in the last minute and in the last hour.
The measured rainfall is regularly saved into a non-volatile memory, which retains the information even in case of power failure.

Precision measurement

Equipped with a load cell sensor, the HD2016 accurately detects the weight of rainfall collected, providing precise and reliable measurements every time.

Versatile connectivity

With multiple output options including RS485 with Modbus-RTU, SDI-12, and voltage-free pulse contact output, the HD2016 seamlessly integrates with various acquisition systems, ensuring flexibility and compatibility

User-friendly design

Factory calibrated and equipped with a self-diagnostic system, the HD2016 is ready for immediate use, offering hassle-free installation and operation.

WATER, SNOW, ICE - WE MEASURE IT ALL
Versions with heating to measure all kind of precipitations.

ACCURATE AND RELIABLE
Individual calibration.
Internal leveling device for perfect horizontal positioning.

WIDE VARIETY OF OUTPUTS
RS485 with MODBUS-RTU or ASCII protocol / SDI-12 / voltage-free pulse contact output

SMART DESIGN - LONG STABILITY PERFORMANCE
Corrosion resistance materials
Rugged design

DATA WHERE YOU NEED THEM
Direct cloud visualization when combined with our loggers.
Or with local database if preferred.

Making the unknown, known

General specifications

Principle	Load cell
Precipitation type	Liquid, mixed*, solid* (*with heating)
Collector area	400 cm^2
Contact output	Isolated NO (Normally Open) contact (RON ≈ 1 kΩ, TON ≈ 60 ms)
Digital outputs	RS485 with Modbus-RTU or ASCII proprietary protocol SDI 12
Power supply	
Basic version	10…15 Vdc
Heating	12 Vdc ± 10%
Consumption	
Basic version	≈ 20 mA (1.5 A while discharging, typically for less than 1 minute with 300 cc and maximum 5 minutes with full reservoir)
Heating	90 W
Resolution	Rainfall: 0.001 mm Weight: 1 mg Rate: 0.001 mm/h or 0.001 mm/min Temperature: 0.1 °C
Accuracy	Rainfall**: ± 0.2 mm (wind speed < 30 m/s) Temperature: ± 1 °C
Maximum rainfall rate	1000 mm/h
Operating temperature	
without heating	0 °C…+70 °C
with heating	-20 °C…+70 °C (heating intervention temperature +4 °C)
Capacity	The automatic discharge of the 3000 cc reservoir allows seamless rainfall measurement.
Protection degree	IP 65
Minimum section of the wires of the connecting cable	
Basic version	0.7 mm^2 (AWG 19)
Heating	2,5 mm^2 (AWG 13)

**Very light rainfalls (less than about 10 g, corresponding to approx. 0.2 mm) are not detected because the water stagnates in the valves and filters, and does not reach the collecting reservoir.

Ordering codes

HD2016

Heating
Blank = No heating (default)
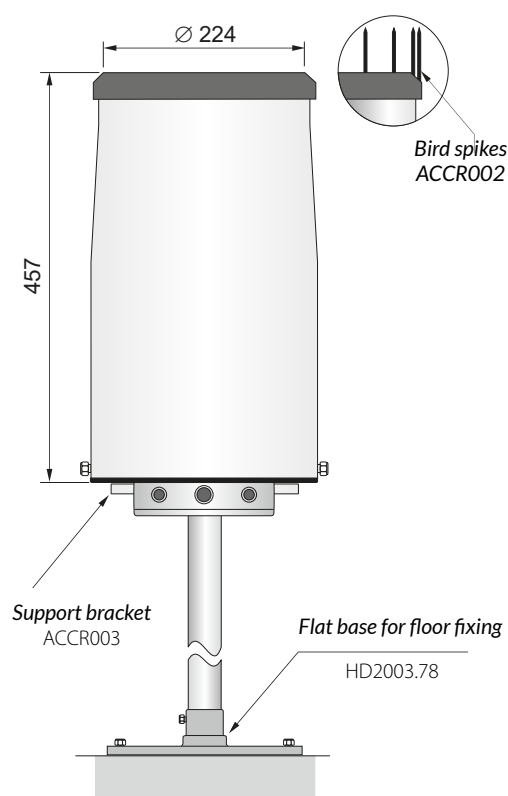R   = with heating option

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Installation modes

The rain gauge can be installed on the ground or raised above the ground.
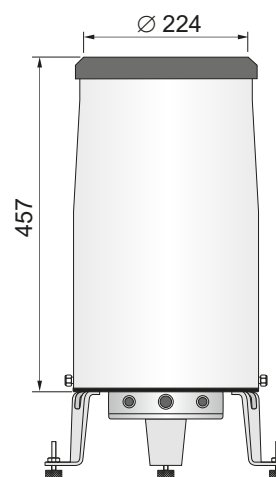For the raised installation, a specific support bracket complete with M37 threaded pin is available.

With the support bracket, the rain gauge can be then mounted on a 50 cm or 1 m mast threaded on one side M37 female.

A flat base can be used for fixing.

Installation raised above ground

∅ 224

457

Bird spikes ACCR002

Support bracket ACCR003

Flat base for floor fixing HD2003.78

Ground installation

∅ 224

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V 2.0