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DATASHEET

RG13

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VAISALA

Rain Gauge RG13, RG13H



Features

- Designed to measure rainfall / liquid precipitation
- Tipping bucket principle
- Suitable for remote and unattended locations
- Provides accurate measurements
- Economical and proven in operation
- Robust system component

Vaisala Rain Gauge RG13 and Vaisala Rain Gauge RG13H with heating option are designed for measuring liquid precipitation.

RG13(H) uses a pulse-based tipping-bucket mechanism to produce a contact closure every time it receives a predetermined quantity of rainfall: 0.1 mm (0.004 in), 0.2 mm (0.008 in), or 0.5 mm (0.019 in).

The body and funnel of the gauge are aluminum alloy. The septum ring at the top gives an aperture of exactly 400 cm^2 (62 in^2).

The tipping-bucket mechanism is mounted inside the body on a cast aluminum-alloy base that has fixing slots, 3 leveling screws, and a spirit level. The mechanism consists of a divided bucket pivoted at its center. Rain collects in the upper half. When this is full, the mechanism tilts and discharges the collected water, so that the other half of the bucket can start filling.

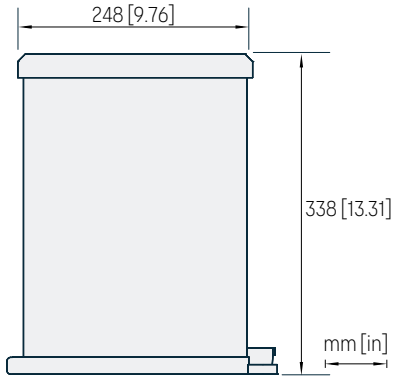
A siphon device is fitted to the base of the funnel to control the rate of flow into the buckets. By ensuring a constant flow rate into the tipping bucket, calibration is made easier and accuracy improved.

The gauge is available with or without the heating function. The heating turns on when the temperature drops below +4 °C (+39 °F).

Technical data

Measurement performance

Precipitation	Liquid
Accuracy	2 % at 1 l/h (0.26 gal/h)
Diameter of aperture	225 mm (8.86 in)
Area of aperture	400 cm^2 (62 in^2) With expander unit: 1000 cm^2 (155 in^2)
Rainfall capacity	Unlimited
Resolution	0.2 mm (0.008 in) (standard) 0.1 mm (0.004 in) (optional) 0.5 mm (0.02 in) (optional)
Closure time	< 100 ms (for 0.2 mm / 0.008 in of rain)



Dimensions without stand

Operating environment

Operating temperature	RG13: +1 ... +85 °C (+33.8 ... +185 °F) RG13H: −20 ... +85 °C (−4 ... +185 °F)
Storage temperature	−40 ... +85 °C (−40 ... +185 °F)
Heating (RG13H)	
Heating connection/disconnection at	+4 °C (+39 °F)
Heating power	RG13H: 33 W / 48 V DC RG13J: 33 W / 24 V DC

Mechanical specifications

EU directives and regulations	RoHS Directive (2011/65/EU) as amended by 2015/863
Dimensions (H × Ø)	338 × 248 mm (13.31 × 9.76 in)
Weight	2.6 kg (5.73 lb)
Material	
Base, septum ring	Aluminum alloy LM25
Outer ring, funnel	Aluminum alloy sheet
Inlet/Outlet ports, pins	Stainless steel
Tipping mechanism	Injection-moulded plastic
Transducer	Reed switch
Output	
Circuit	Contact closure
Connection	Screw terminal
Life (operations)	10^8 closures

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