FUNCTIONAL SCHEME

rain[e]
Precipitation Sensors

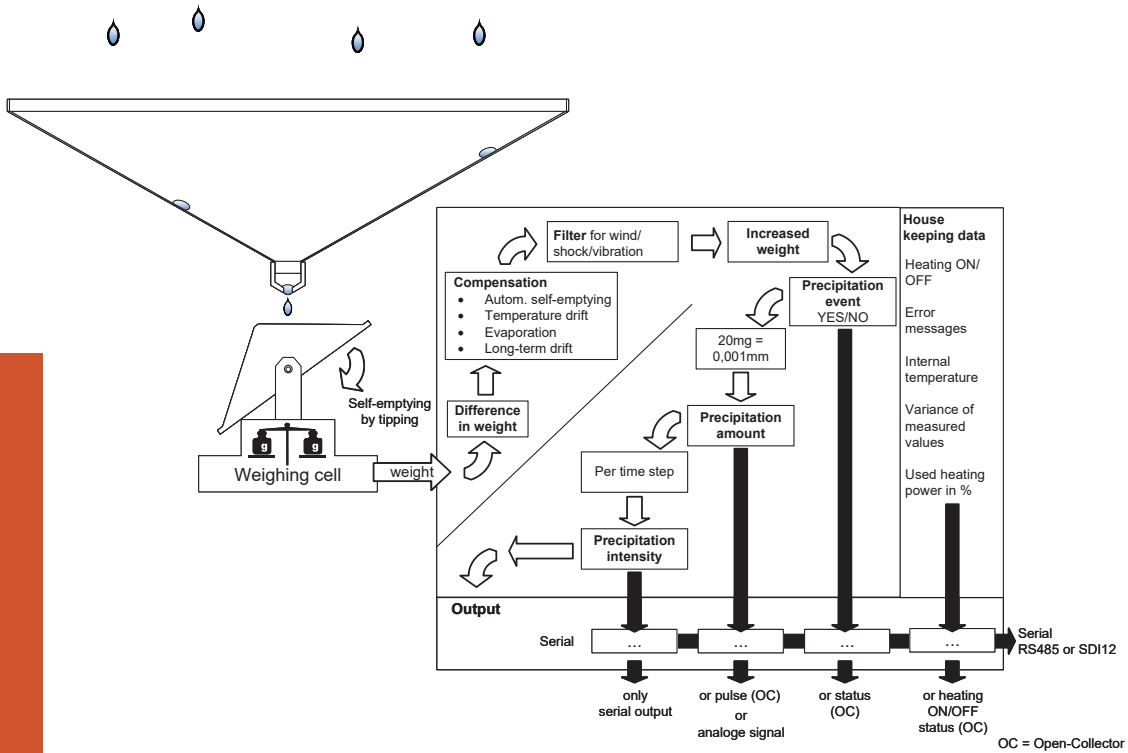
Functionality of the rain[e]

The measuring principle of the rain[e] series is based on innovative weighing technology and an intelligent, self-emptying collection system. Precipitation is collected via a funnel and a standardized collecting area; solid precipitation such as snow is automatically melted. The resulting water then flows through a drop former into the collection vessel, where it is immediately weighed.

The key factor is not the absolute weight, but the increase in weight compared to the previous measurement. Thanks to the high sampling rate, long-term drift of the load cell and evaporation losses are almost automatically compensated. Once one chamber of the collection vessel is full, the vessel tips, empties itself, and measurement continues in the second chamber. During this process, compensation calculations are performed, and the internal temperature is monitored to correct for temperature drift of the load cell.

Multi-stage filters ensure that influences from wind, shock, and vibration are filtered out. Due to this technology and the special funnel shape, the rain[e] is particularly insensitive to wind. The measured increase in weight is then evaluated and output as a rainfall event.

Based on the relationship that a precipitation amount of 20 mg on a collecting area of 200 cm³ corresponds to a height of 0.001 mm, the precipitation amount is calculated with a **high resolution of 0.001 mm** and output either as the total since the last data retrieval or as the overall amount since system startup.



YOUR BENEFIT

With rain[e], you gain access to precise and reliable precipitation data at all times – the ideal foundation for efficient environmental management, early risk detection, and rapid response to extreme weather conditions.

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