



OMC-271 Precipitation Sensor with wall/mast mounting bracket

Datasheet

OMC-271 Precipitation Sensor

An unit for the economical regulation of precipitation intensities basing on the proven maintenance-free optical technology.

Range of application

- Facility protection
- Artificial irrigation / Irrigation control
- Control of intensity and quantity of precipitation events
- Flood control measuring / Flood protection
- Aquaplaning protection

Features

- Rain detector
- IR light principle
- Equipped with 'event filter'
- Heating available
- 4..20 mA proportional to intensity
- Easy installation

General

The precipitation sensor serves as measuring instrument for the determination of the instantaneous precipitation intensities (mm precipitation / min.).

By integration of the precipitation intensities, the precipitation quantity can be calculated, as well. Control- and warning signals can be derived from the precipitation intensity. The measuring signal output is an intensity-dependent analogue current value.

The whole measurement range is divided into 4 linear characteristic segments, which shows a tenth of the slope of the more sensitive segment. Thus, it is possible to represent an intensity range from approx. 0,001mm/min. (light drizzle) up to 10 mm/min. (extremely heavy rain) with reasonable resolution (quasi-logarithmic output).

Mode of Operation

Precipitation in the form of drizzle, rain, snow, or hail falls through a light band, induced by light diodes, and lead to shadowing effects on the receiving side. The sent light is pulse-modulated so that outside light effects cannot falsify the measurement results.

The instrument is equipped with a heating system for extreme weather condition. This avoids ice and snow forming on the housing surface. In addition, the surface retains a temperature of $>0^{\circ}$ by means of a regulated heating.

The unit comes complete with a calibration certificate at no extra cost. Although the unit is maintenance free and does not need re-calibration, it is possible to return the sensor to Observator for a re-calibration if required.

Data summary

Measuring value

Precipitation intensity

Measuring range

- 0 - 0,01 mm / min \gg 4,0 - 8,0mA
- 0,01 - 0,1 mm / min \gg 8,0 - 12,0 mA
- 0,1 - 1,0 mm / min \gg 12,0 - 16,0 mA
- 1,0 - 10 mm / min \gg 16,0 - 20,0 mA

Output constant current

- depending on measuring value, between 4,0mA and 20,0mA (precipitation intensity)

Active sensor surface

- 25 cm²
- drop size $>0,2$ mm

Operating voltage

- 24 V AC/DC ± 15 %
- Operating current approx. 90 mA

Heating current

- max. 1 A
- $-30 \dots +60^{\circ}\text{C}$

Protection

- IP 65 acc. to DIN 40050

EMV

- EN 61321-1 with EN 61000-4-3

Weight

- 0,4 kg

Dimension

- 130x140x40mm

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