

Rain detector



Description

The sensor is a rain detector based on the capacity principle. The capacity value of the sensitive element, on an alumina rest, changes according to the surface dampened by raindrops.

An integrated heater keeps it dry, evaporates water and prevents false signals caused by fog or dew. The heater also activates at low temperatures, melting the snow and allowing to detect snow precipitations.

The instrument external circular dome acts as a wind-shield for the sensor, preventing false indications.

The instrument is equipped with three different outputs: a "Rain ON/OFF" output, which detects whether it is raining/snowing (ON) or not (OFF), also used to control a relay coil or similar devices; a 0...1V voltage analogue output (calibrated) and a 1,5...6KHz frequency output (not calibrated), which provide an indication of current precipitation intensity.

The ON/OFF output comes with a delay circuit that indicates the "rain over" condition with a 2 minute delay, so that the "rain over" condition is distinguished from the "light rain" one. The heater can be disabled when power consumption is critical. To do it, set the Heater OFF input on 0V.



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Technical specifications may be varied without prior notice

Technical specifications

PRECIPITATION SENSOR	
Type	Capacitative with heater integrated
Sensor area	6.6cm ²
Angle	30°
Sensitive area	0.05cm ² min.
TEMPERATURE SENSOR	
Off delay	NTC 10KΩ @ 25°C
MEASURING RANGE	
Precipitation detection	ON / OFF (precipitation in progress / No precipitation) Percentage of sensitive surface of dry sensor
Temperature	-40...+60°C
RESOLUTION	
Precipitation detection	Configurable 1% (default) o 0,1% of sensitive dry sensor surface
Temperature	0.1 °C
GENERALE	
OUTPUT	RS485 non-isolated, with protocol MODBUS-RTU or proprietary protocol 0/4...20mA (RLmax = 500Ω) or on request 0...10V (RLmin = 10kΩ) Voltage-free normally open contact with free potential max. 200mA @ 30Vdc resistive load
Power supply	12...30Vdc
Power consumption	With heater OFF: 18mA @24Vdc With heater ON: 230mA max @24Vdc The indicated consumption does not include analog output consumption
Connection	Round connector with 8 poles
Operating conditions	-40...+60°C / 0...100%RH
Temperatura di magazzino	-40...+60°C
Dimensions	Ø 70 x 70mm (only the tool without mounting bracket)
Weight	450g
Protection index	IP 68
Container material	Tecnopolymer ASA

Ordering codes

Rain detector	PCTPL011
Bird bollard option	PCTPL009

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