

Rain Sensor

SENSOR-RAIN-0TO10V

Features

- Safe, reliable electrolytic measurement principle
- Can be used to detect rain or snow.
- Operating voltage 24 V DC/AC
- Large, heated sensor allows for fast drying, and safe operation cold weather conditions.
- Potential dry contact output (Relay) 30 V/4 A
- Sensitivity and switching behaviour is adjustable
- Universal wall/mast mounting bracket as accessories

Functional description

The sensor reacts to both rain and snow. The switch polarity and sensitivity are adjustable. The optional heater prevents freezing and condensation formation and accelerates drying. At the highest sensitivity setting, the device is also suitable for recognizing fog.

Application

The rain sensor is equipped with a dry relay contact which outputs a low voltages signal which can be used to operate any switching device e.g. a marking control device. Sensitivity can be adjusted within a wide range. The sensor is provided with a heater for faster drying and to enable snow detection.

Mounting

The rain sensor unit should only be installed by only qualified personnel, following all applicable safety regulations. The Rain Sensor can be mounted using optional wall, or mast mounting brackets. If optional mounting brackets are not used, care should be taken that the mounting angle is approximately 30 ° from horizontal. The points of sensor area must be on the down side. The rain sensor should be placed in a location which is freely accessible for rain. Dripping water can adversely delay switching back or can lead to a permanent ON/OFF of the contacts.

Settings

Signal generator output (optional)

At the connection terminals (Pin BUZ and GND) a passive Piezo signal generator can be connected. The condition of signal (acoustic signal for dry or wet) can be selected with the plug links S1-S2 or S2-S3. In the default-position S2-S3, the signal generator is inactive for rain.

Switching mode

The switching mode of the relay (pickup or dropout with rain) can be selected with the plug links T1-T2 or T2-T3. In the factory settings, link T1-T2 is connected and the relay closes if the sensor surface gets wet.

Heating

The sensor surface is heated, if the link of HZ1-HZ2 is connected. To ensure faster drying and for operation below freezing point, the heater should be switched on. For sensing fog, the heater can be switched off.

Sensitivity setting

The sensitivity to moisture signal can be adjusted through the potentiometer. Rotating the potentiometer knob in the anti clockwise direction gives higher sensitivity (left = high sensitivity, right = low sensitivity). For normal rain signal, the middle position is most suitable. Please note that no function takes place in the end position!

Indicators

There is a green LED on the device to indicate the operation status and a red LED to indicate the switch position (means relay contact closed).

Maintenance

The Rain Sensor required very little maintenance. The sensor surface may be occasionally cleaned with a moist cloth (e.g. once annually, depending on the place of installation).

Specification	Description
Measurement Method	Electrolytic AC measurements
Input Current 24V Model	50mA, Heater 40—180mA (PTC)
CE-Conformance	2014/30/EU
EMV-noise emission	EN 61000-6-3:2011
EMV-noise withstanding	EN 61000-6-1:2007
Cable gland	M16 x 1.5
Operating voltage	24 V AC/DC \pm 10%
Output	Output (relay) 30 V / 4 A, NO / NC selectable
Housing	ABS, ingress protection IP54
Dimensions (w x h x d)	80 x 82 x 58 mm

Connection Layout

REL NC	Opening switch contact
REL NO	Closing switch contact
REL CO	Common switch contact
AC/DC	Operating voltage AC or 24 V DC +10%
AC/GND	Operating voltage AC or 0 V

Plug Links Configuration

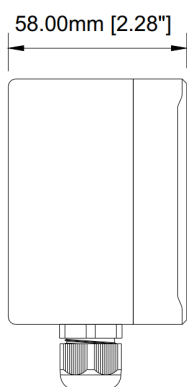
1	S3	Switch mode signal generator (dry)
2	S2	Common contact to S3 and S1
3	S1	Switch mode signal generator (wet)
4	GND	Signal generator ground
5	BUZ	Signal generator output
6	T3	Switch mode relay (dry)
7	T2	Common contact to T3 and T1
8	T1	Switch mode relay (wet)
9	HZ1	Heating
10	HZ2	Heating

factory setting: S3 - S2, T1 - T2, HZ1 - HZ2

Ordering Information

Sensor Part # SENSOR-RAIN-0TO10V

Mounting Bracket Part # SENSOR-RAIN-0TO10V-MOUNT



Cable Gland
M16 x 1.5
Ø4.5-10mm

