### Telecontroli S.p.A.

*Custom Hybrid Circuits, Thick Film Technology*

**Standard Products:** RF Systems, DC/DC Converters, Transformers

---

**Rain Sensor**

*Telecontroli*, between the leaders in the thick film technology, has recently released a sensor able to find the presence of rain to the ground. Such sensors, mostly used till now in meteorology and agriculture, are finding more and more employment in home and building automation (rolling windows, skylights, etc.)

Built on a ceramic substrate (Alumina), the sensor shows reliable mechanical and thermo/electrical characteristics.

The principle of operation has been based on the capacitive principle, by which rain drops accumulating on the sensor’s surface change the electrical capacity of the sensor. Using the built-in heater and temperature sensor, the user can avoid unwanted alarms due to the dew. The employed technology guarantees high reliability due to the great stability of the support and to the surface’s resistance to dissolvents and onerous operating conditions.

---

**Principle of operation:** Capacitive  
**Technology:** Thick Film on Allumina (Al₂O₃)

**Heater and NTC for temperature loop control**

**Typical Application:** Weather stations, Home & Building Automation, Monitoring and automation systems in agriculture

---

**Capacity (nom.):** 100 pF 10%  
**Heater resistance:** 42 ohm 10% (Pₗₐₜ = 3.5 Watt at Vₐᵢₗₐₜ = 12V , I = 292mA , Tᵢ = 106°C)

**NTC:** 1 Kohm / 25°C

Physical dimensions can be changed according to custom specific mechanical constrain.
Rain sensor: Front side Capacitor

Rain sensor: Rear side Heater and temp.sensor