

# Capacitive Sensors

Telecontrolli, leader in thick film technology, has developed custom solutions within the "capacitive sensors" in hybrid technology; this following the great diffusion, in all the sectors of the electronics, of applications that ask for the use of these devices.

Employing the Thick Film Technology, it's possible to realize sensors of any form and dimension, starting from substrate base of 114,3x101,6 mms (4,5"x4"), completing, on the back of the sensitive surface, electronic control circuit.

Among the employments of greater interest, currently we enumerate:

- "Heated" Rain Sensors
- "Anti-Flood" Sensors
- Touching Switches

The interested applications go from the industrial automation (es. systems of opening and closing, command, survey and process monitoring), to the home&building automation (es. automatism for curtains, windows, blinds, lights, keyboards for intercoms, elevators), etc.

Besides, having been exploiting the know-how for decades acquired by Telecontrolli within the Radio Frequency, it's possible to integrate these control systems with RF modules to realize complete wireless solutions.

Thick Film Technology, as it is known, is based on the employment of ceramic substrates (Alumina) on which the passive electronic components are deposited by "silkscreen" processes followed-up by high temperature "firing"; then, the circuits are completed with surface mounting components (SMT) and glassy coverages: this guarantees high reliability of the element "sensitive", due to the great stability of the support and the inalterability in time of the surfaces, also after cleaning with solvents and heavy external conditions of employment.

In addition, it's possible to overprotect the "contact" surface by insulating materials (wood, plastics, glass, etc.) using panels of thickness up to 8 mms.

<b>Principle of Operation:</b> Capacitive
<b>Technology:</b> Thick Film on Alumina ( $Al_2O_3$ ) substrate
<b>Typical Applications:</b>
<ul style="list-style-type: none"><li>• Rain Sensors</li><li>• Level Sensors</li><li>• Anti-Flood Systems</li><li>• Touching Switches</li><li>• Anti-vandal Keyboards</li></ul>
<b>Typical Sectors:</b>
<ul style="list-style-type: none"><li>• Industrial monitoring &amp; Automation</li><li>• Home &amp; Building Automation</li></ul>

