

Double-Driven Shield Capacitive Type Proximity Sensor

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DESCRIPTION

This proximity sensor comprises a capacitance type sensor, a capacitance type reference, and two shields respectively adjacent to the sensor and reference. The shields are coupled in an electrical bridge circuit configuration and driven by a single frequency crystal controlled oscillator. The bridge circuit includes a pair of fixed electrical impedance elements which form adjacent arms of the bridge and comprise either a pair of precision resistances or capacitors. Detection of bridge unbalance provides an indication of the mutual proximity between an object and the sensor. Drift compensation is also provided to improve performance and increase sensor range and sensitivity.

FEATURES AND BENEFITS

- The technology allows Sensing proximity at sufficient ranges to avoid collision such as during docking and berthing operations in outer space.
- The technology can determine location of pins, holes and edges in equipment to permit alignment prior to docking and berthing.
- The technology can permit machines and/or astronauts to guide payloads precisely into latching devices and to anticipate touch-down.

APPLICATIONS

- Aviation
- Aerospace

FOR MORE INFORMATION

If you are interested in more information or want to pursue transfer of this technology, GSC-13541-1, please contact:

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