

# Capacitive Limit Switch Food NCS



## Application/Specified usage

- Limit detection of levels with low or no water content like sugar, fruit concentrates, starches and oils with a dielectric constant  $\epsilon_r > 20$

## Application examples

- Limit detection in vessels/faults in position detection systems
- High alarm in vessels and tanks with fault in position floating (type NCS-1)
- Empty alarm in vessels and tanks with fault in position from bottom (type NCS-1)
- Produce monitoring in pipes
- Pump-off by monitoring product loss

## Hygienic design/Process connection

- Hygienic process connection with CIP/Washjet
- Conformity to 3-A Sanitary Standard
- All contact materials are 316L stainless
- Seals completely made of stainless steel, except lip seals of PEEK
- Complete avoidance of process connections on cable side
- The Anderson-Negele CIP/Washjet system offers a clean optimized, hygienic and easily-maintainable installation solution for sensors.

## Features

- IP 67 / IP 69K allowing up to 100 °C / maximum 20 bar/2000 psi
- Independent of the conductivity
- NCS-1: Immersion in front and reference, reliable at gassy media
- Short response time 0-1 s
- Reversible output (fail-safe action)
- Neutral detection to avoid contamination
- Simulation of sensor status possible

## Options/Accessories

- LED status indicator with long-life silicon led
- Seals with special lip seal (for limited viscosity or pressure process connections up to 1 bar) (available for NCS-01 and NCS-02)
- WIP support (type 1) optional
- WIP plug and mounting cable assembly
- Heating element optional (if for extension of the temperature range)

## Measuring principle

The capacity of a capacitor is affected by 3 factors: Distance and area of the plates as well as the filled or medium between the electrodes. Using the capacitive sensor only the kind of medium is of interest.

The electrode (the sensor and the face of lead) can be seen as capacitor, the medium as dielectric fluid. Consequently the higher the value of the medium (capacitive dielectric constant) the more is covered with the medium. The change of capacity is evaluated by electronics and presents then a corresponding voltage value. This non-contact principle requires that the sensor tip is completely covered with medium. That way the sensor is insensitive to foam and adherences.

## Authorizations



NCS-01



NCS-02



NCS-0-01



NCS-0-02



## Measuring principle

