

LevelCheck LC 510

Microwave barrier and contactless level monitoring of bulk materials



NEW: ATEX Option



Application

The microwave barrier LevelCheck LC 510 is designed for level monitoring of solids in silos, container, bunkers, crushers, shafts etc. It can monitor min/max levels, ensure continuous supply and prevent overfilling.

The LevelCheck LC 510 can also be used to detect jamming on conveyor belts, count goods, position items or hedge dangerous areas. The device is robust, easy to install and is not affected by dirt, dust or steam.

Scope of use

Animal feed industry
Building materials
Cement industry
Ceramics
Chemical industry
Detergent industry
Food industry
Glass production
Metal production
Minerals and mining
Pharmaceuticals

Pigment production
Power plants
Pulp and paper
Recycling industry
Synthetic materials
Textiles
Waste incineration
etc.

HUMY 300/3000
Continuous inline moisture measurement

MF 3000
Microwave mass flow measurement

FS 510
Microwave material flow monitoring

FS 600
Electrostatic material flow monitoring

FS 700/710/750
Trielectronic dust monitoring

LC 510
Microwave barrier and limit level monitoring

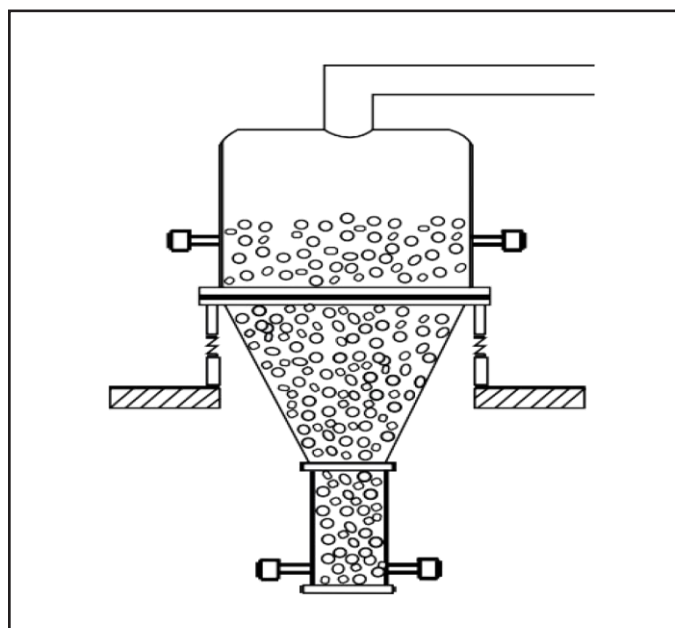
Main Benefits

- Reliable, contactless microwave technology
- Up to 25 meters distance between emitter and receiver
- Is not affected by dirt, dust or steam
- Does not interfere with the material
- Very flexible with adjustable amplification, filter, hysteresis and delay
- Compact and easy to install
- Robust stainless steel design
- Wear- and maintenance-free
- 100% safe operation with active self-monitoring
- ATEX protection (optional up to zone 20/21)

Function

The LevelCheck LC 510 is based on the newest microwave technology. An emitter sends out a low-power microwave beam which is received by an opposite device. The two devices can be placed up to 25 meters apart. Any material between them is detected and a switching process started. This allows e.g. to monitor minimum / maximum fill levels in silos or detect objects entering or leaving the microwave barrier.

The measurement is contact-free and does not impact the bulk material. All settings like amplification, filter, hysteresis, delay can be adjusted, making the system very flexible. The optionally available AD 512-C adapter for abrasive materials and high process temperatures enables use in the most difficult environments.



Technical Data

| | |
|-----------------------------|---|
| Housing Material | Stainless steel (1.4307) |
| Sensor Surface | Teflon (optional ceramic) |
| Ambient temperature | -20°C to +60°C |
| Process temperature | -20°C to +85°C |
| With adapter AD 512-C | up to 140°C |
| Process pressure | 6 bar (optional 30-60 bar) |
| Protection class | IP65 |
| Explosion protection / ATEX | Optional zone 21 |
| With adapter AD 510 | Optional zone 20 |
| Power supply | 24 VDC (18 - 30 VDC) |
| Power consumption | Approx. 80 mA at 24 VDC |
| Transmission power | 10 dBm |
| Output (switching) | 1x relay contact (changeover contact, potential-free) 1x ready for operation contact |
| Switching voltage | 30 VAC or 30 VDC |
| Switching current | min. 10 µA & max. 2 A |
| Switching capacity | 30 VA or 30 W |
| Electrical connection | Plug-in screw terminals |
| Adjustable parameters | Gain, filter, hysteresis, Delay, min/max switch |
| Parameterization | Direct at the device via buttons |
| Indicators | LED green (in operation) LED yellow (switch) Bar graph (Receiver) |

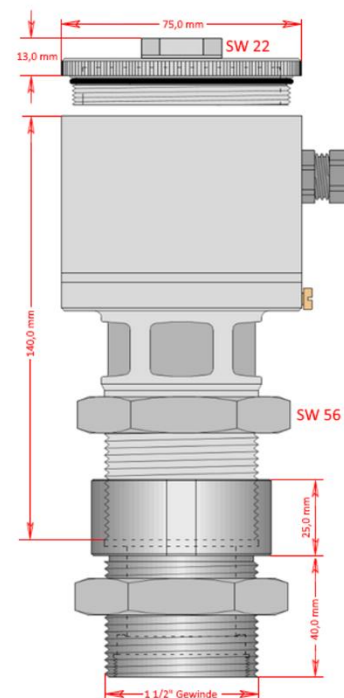


Illustration with AD 510/AD 512-C adapter