

FlowSwitch FS 510

Contactless flow monitor
for bulk materials



NEW: ATEX option



Application

The FlowSwitch FS 510 monitors the flow of solids.

It is a robust microwave-based flow monitor that detects faults in the transport of powders, dusts, pellets or granulates at an early stage. This helps to avoid difficulties that can arise due to clogged pipes, material loss or other problems with the conveying system. The compact device can be used wherever monitoring of bulk material movement is required.

Industries

Animal feed industry
Building materials
Coating processes
Chemical industry
Energy production
Foundries Glass
production Rubber
industry
Wood & pellets Lime
works Ceramics
production Plastics
production

Food industry Metal
production Minerals
Pharmaceuticals
Pigment production
Recycling
Synthetic materials Textiles
Detergent industry Cement
industry
etc.

HUMY 300/3000
Continuous inline
moisture
measurement

MF 3000
Microwave
flow
measureme

FS 510
Microwave
flow
monitoring

FS 600
Electrostatic
flow monitoring

FS 700/710/750
Triboelectric flow
monitoring

LC 510
Microwave
point level
monitoring

Advantages

- Reliable, non-contact microwave measurement
- Works within a distance of several meters
- No impairment of the bulk material
- Very sensitive and responsive
- Flexible thanks to adjustable gain, filter, hysteresis, delay and min/max
- Easy to install and retrofit
- Wear and maintenance-free
- Robust stainless steel construction
- 100 % safe operation thanks to active self-monitoring
- Best ATEX protection (optional up to zone 20/21)

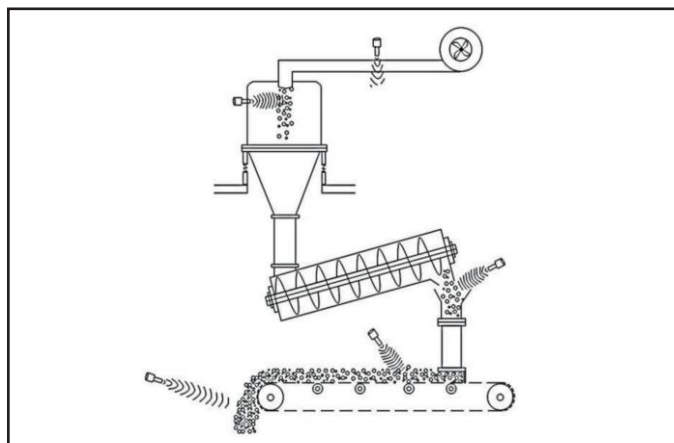
Function

The FlowSwitch FS 510 is based on the latest microwave technology. When a material passes the sensor, the emitted microwaves are reflected. This is converted into a switching process.

The sensor can be installed in pipelines, on conveyor belts, on drop plates, on chutes, behind screws or in similar conveyor systems. It enables reliable detection of the material flow and detects insufficient or missing material, blockages or standstills - from a distance of several meters. It does not come into contact with the bulk material and is wear- and maintenance-free.

Numerous parameters such as sensitivity, attenuation, filter time and hysteresis are adjustable, and the sensor can be easily adapted to any application.

The FS 510 is known as the most robust flow monitor in its class. It is made of high-quality stainless steel and is optimized for a long service life. The optionally available AD 512-C adapter for abrasive materials and high process temperatures enables use in the most difficult environments.



Technical data

Material of the housing	Stainless steel (1.4307)
Surface of the sensor	Teflon (optionally 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	Pluggable screw terminals
Adjustable parameters	Gain, filter, hysteresis, Delay, min/max switch
Parameterization	Directly on the device via buttons
Indicators	LED green (in operation) LED yellow (switch) Bar chart

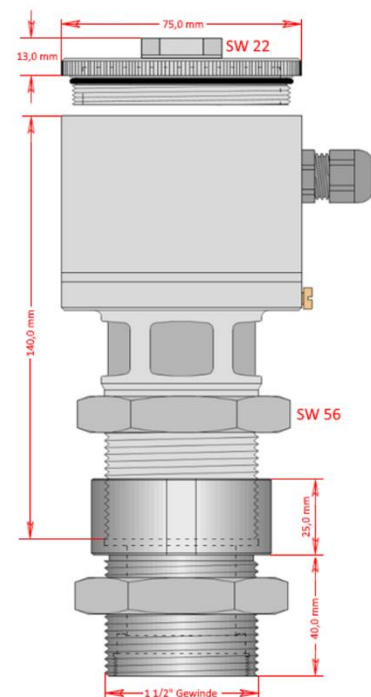


Illustration with AD 510/AD 512-C adapter