

FlowSwitch 510M

Continuous flow monitoring
for bulk materials



Application

The FlowSwitch 510M is monitoring the conveying stream of solids.

Failures and problems during the transport or feeding of **powders, dust, pellets or granules** can be detected early with this device. This helps prevent serious difficulties that can occur due to clogged piping, material loss, or other technical problems with the system.

Scope of use

| | |
|-----------------------------|-----------------------------|
| Animal feed industry | Pharmaceuticals |
| Building materials industry | Pigment production |
| Production of ceramics | Power plants |
| Chemical industry | Production of rubber goods |
| Detergent industry | Recycling industry |
| Food industry | Synthetic materials |
| Glass production | Production of textiles etc. |
| Metal production | |

HUMY 3000
Moisture
measurement

MF 3000
Mass flow
measurement

FS 510M
Microwave
mass flow
monitoring

FS 600E
Electrostatic
mass flow
monitoring

FS 700E
Triboelectric
dust monitoring

LC 510M
Limit level
monitoring

Main Benefits

- ◆ Reliable, contactless microwave measurement
- ◆ For all bulk materials
- ◆ Monitors the mass flow in solid handling
- ◆ Adjustable sensitivity, damping, hysteresis and filter time
- ◆ Easy installation by compact form
- ◆ Process connection with welding nozzle

Function

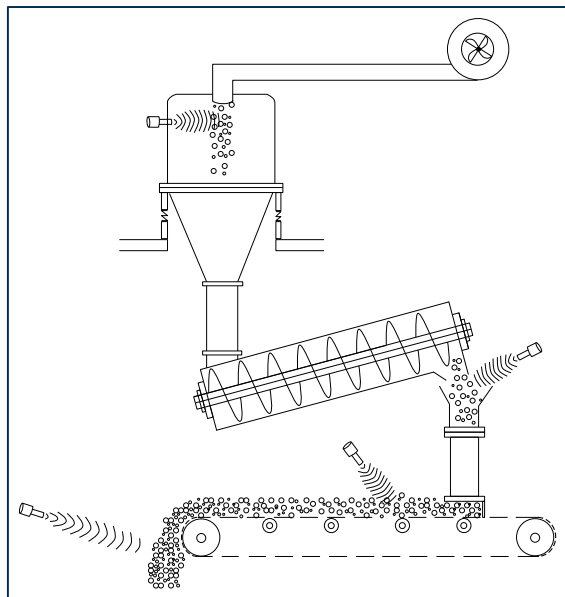
The measurement procedure of the FlowSwitch 510M is based on the physical principle of the Doppler-Effect.

Therefore the sensor sends out a microwave field. If solids move through this field, the microwaves are reflected and received by the sensor again. This is converted into a switching process.

All parameters, like sensitivity, damping, filter time and hysteresis are freely adjustable and, can be configured, due to the bargraph, with an exact value. This enables a variable determination of the switching point resp. a switching process for different mass flows.

The installation can be carried out within pipes, on conveying belts, on fall plates, chutes or at similar transport facilities.

The assembly is simply, economical and easy also afterwards possible.



Technical Data

| | |
|----------------------|---|
| Housing material | Stainless steel |
| Sensor surface | Teflon (optional ceramic) |
| Protection class | IP65 |
| Ambient temperature | -20°C to +60°C |
| Process temperature | -20°C to +80°C |
| Process pressure | 2 bar (optional 25 bar) |
| Power supply | 24 VDC (18 - 30 VDC) |
| Current consumption | Ca. 80 mA at 24 VDC |
| Transmitting power | 10 dBm |
| Output (switching) | Relay contact (change-over contact, potential free) |
| Switching voltage | 35 VAC or 45 VDC |
| Switching current | min. 10 µA & max. 1 A |
| Switching power | 35 VA or 30 W |
| Electr. connection | Plug-in screw terminals |
| Adjustable parameter | Sensitivity, damping, filter, hysteresis, min / max switch |
| Parameterization | Direct at device via buttons |
| Indicators | LED green (working) LED yellow (switch) Bargraph (i.a. field intensity) |

