

# 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

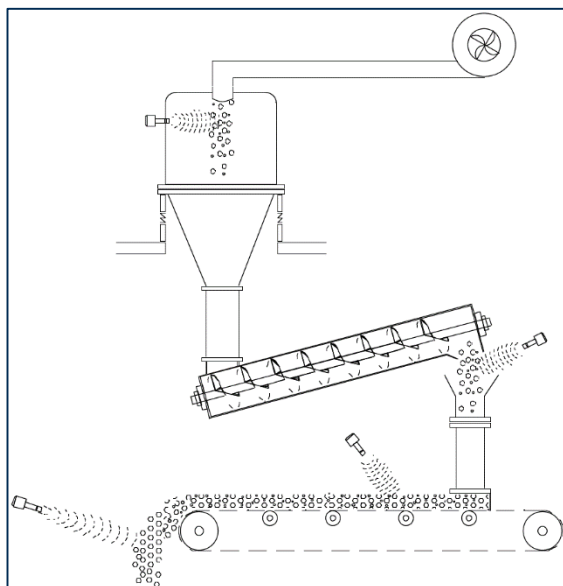
The measurement procedure of the FlowSwitch 510M is based on the physical principle of the Doppler-Effect.

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 +90°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)

