

SeeDector material flow measurement

Product Overview



Measurement of the amount and speed of a material flow in pipes or tubes

SeeDector deploys a novel technique for measurement of amount and speed of a flow of particulate material (e.g. seeds, mineral fertilizer, granules) or liquids moving in pipes. For many applications - e.g. seed drills, fertilizer applicators, slurry injectors - the amount and speed of a material flow becomes measurable first time, real-time in the process. SeeDector is the seed blockage sensor in the SeedMon system.

SeeDector is a material flow sensor based on high-frequency electromagnetic waves (Microwaves, Doppler Radar). **SeeDector** is directly clamped onto a tube or pipe without alterations. Measurement data are transferred via CAN-Bus.



The **SeeDector** technique has been applied for German and European patent. USA Patent (US 8,915,144 B2) has been granted.

At the Agritechnica 2011 fair **SeeDector** has been awarded with a silver medal from the DLG novelties commission.

Benefits



- Throughput measurement of a free falling or pneumatically conveyed flow of particulate material or liquid
- Covers the range from smallest (e.g. oilseed rape, grass) to the biggest kernels (e.g. Beans, Peas)

- Enabling and optimising monitoring, control and closed-loop control
- Easy and simple installation, clamped with a sheet steel bracket on a plastic pipe (possibly with metal spiral inlay) or placed in a cut-out window of a metal pipe
- No cutting or alteration of a plastic pipe
- Nothing built into the pipe constricting the material flow
- No alteration of the machine's design
- By virtue of the functional principle (Doppler Radar) unsusceptible against dirt, dust or incrustation inside of the pipe - contrary to all other functional principles of the competition
- Smart Sensor with integrated processing and communication (Mikrocontroller)
- CAN Interface for output of amount and speed of the material flow
- Enabling blockage monitoring systems detecting **partial** blockage with decreased throughput
- Enabling monitoring and detection of flow switching on and off when tramlining
- For installation on pipes or tubes with different diameters a wide range of sheet steel brackets with according dimensions is available

Technical Data

Sensor components:	planar microwave frontend, filter amplifier, mikro-controller, CAN transceiver
Power supply:	5 V DC / 70 mA max
Temperature range:	-20°C to +70°C operation
Output signal:	CAN 2.0 B
Update rate:	2 Hz
Dimensions of the sensor:	90 mm x 47 mm x 40 (72)mm (LxWxH), less cable, less bracket
Installation:	clamped on with steel sheet bracket
Warranty:	2 years

Data sheet

Download [SeeDector Data sheet](#) here

and further details on [request](#).