



Manufactured by Superior with Solids 
SWR

FlowJam A

Material flow monitoring
for hose lines



Use

FlowJam A is a sensor which has been specifically developed for monitoring the flow of solids conveyed by hose lines using the Doppler effect. The system can be applied to hose lines made of non-conducting materials such as plastic or rubber with external diameters of between 2 and 10 mm (larger diameters can be done with a different meter).

The hose line is inserted into the sensor for measuring.



Function

FlowJam A detects streams of solids of all types flowing at a minimum speed of 0.32 ft/s through the detection area.

The detection is independent of the direction of flow through the evaluation system.

The flow of material through non-metallic pipelines is displayed by two switching states on the output relay.

The sensor differentiates between the two switching states:

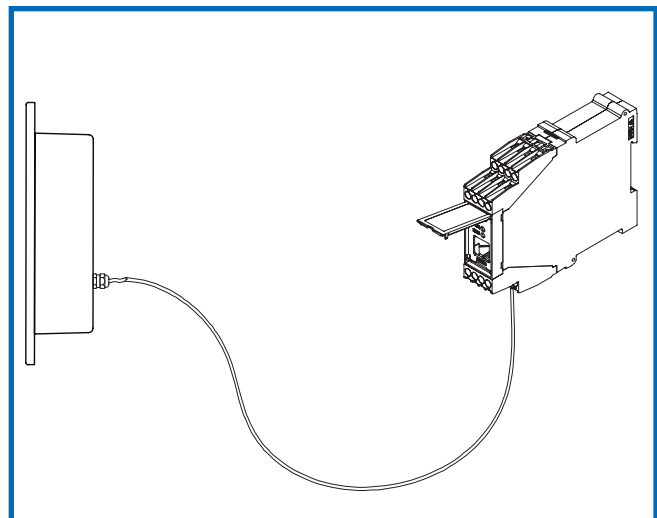
- Material flow
- Material blockage or standstill.



System

A complete measuring device consists of the sensor and a transmitter which powers the sensor and provides a switch output.

The control elements for the start-up procedure are found on the FlowJam A's DIN-rail electronics. Both the switching sensitivity and the response delay can be set.



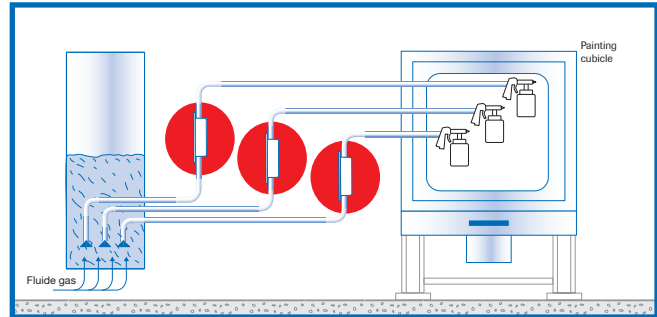
Applications - practical examples

▪ Powder coating

When coating components or devices with powder, it is always difficult to ensure a constant emission from the spray nozzles.

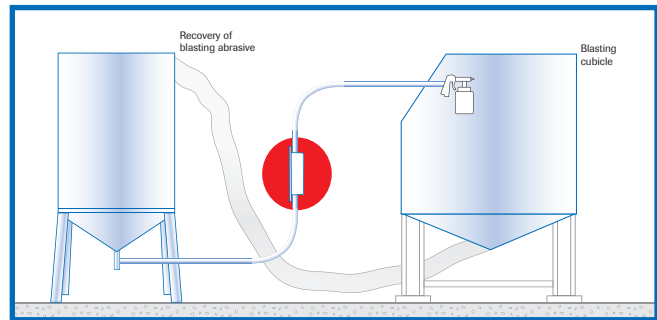
Failures in the conveying system often go undetected and can have a negative impact on the coating finish.

FlowJam A can constantly monitor the stream of powder and immediately indicate any failures.



▪ Blasting plants

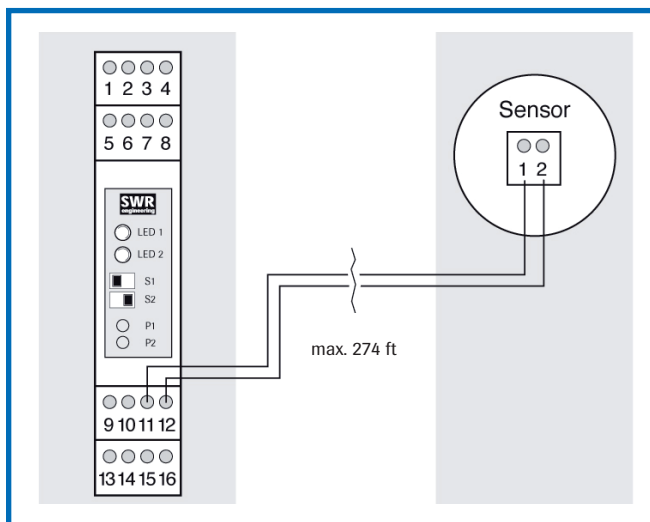
To process surfaces, blasting media such as glass beads, ceramics, shell granulates or corundum are pneumatically blown at high speeds onto the surface. The constancy of the flow rate is important here as well to ensure a good blast quality. FlowJam A can constantly monitor the stream of blasting media. Failures are rapidly detected with short response times.

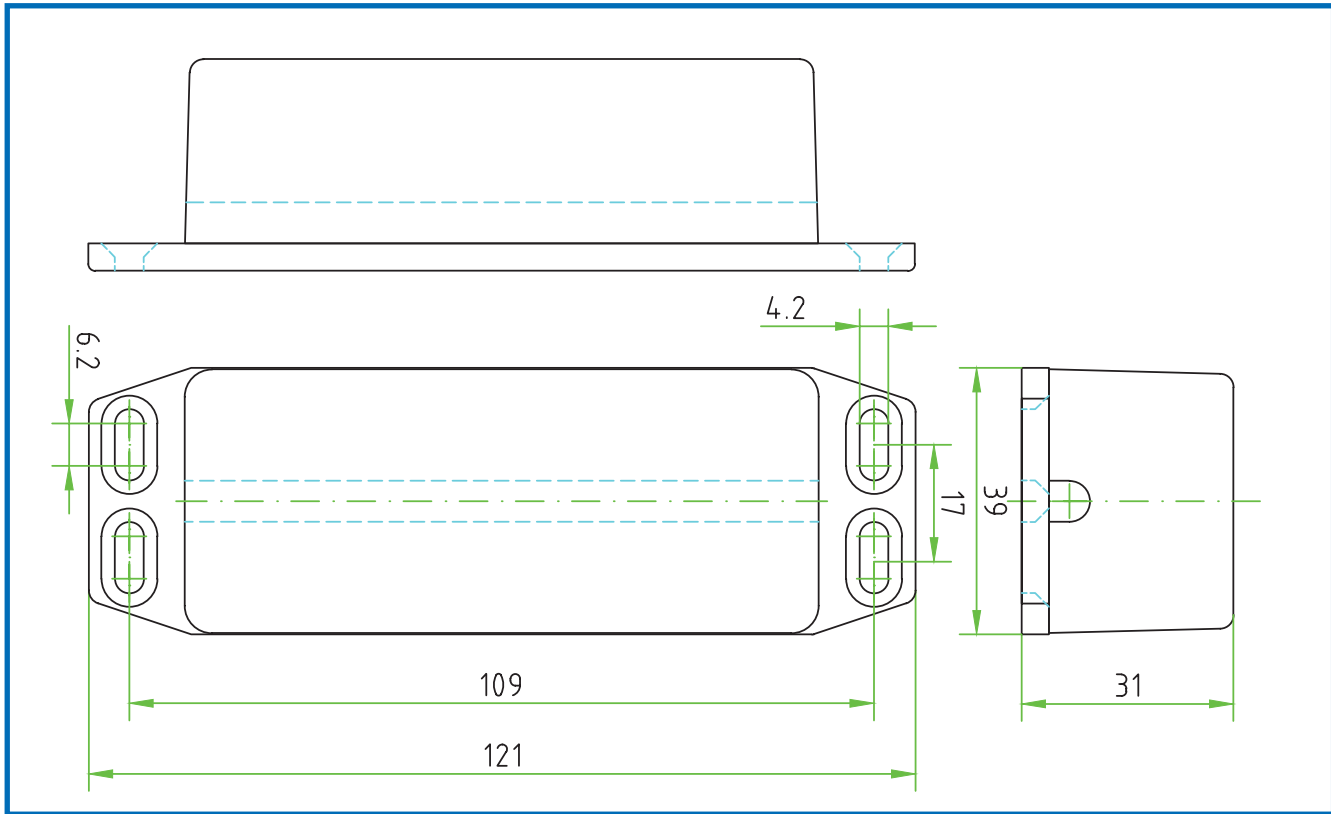


Electrical connection

A 2-core cable is required to connect the sensor to the transmitter. The length must not exceed 984 ft.

The sensor is equipped with an M12 connector (including a mating plug).





Sensor	
Power supply	12 V DC powered by transmitter
Connection	M12 connector
Power consumption	approx. 1.5 W
Housing	Aluminium
Protection system	IP 65 (NEMA 4x)
Process temperature	-4 ... +140 °F
Ambient temperature	-4 ... +140 °F
Required material speed	min. 0.32 ft/s
Working frequency	K-Band 24,125 GHz; ± 100 MHz
Transmitting power	max. 5 mW
Dimensions	Housing: L 4.8 in / W 1.5 in / H 1.7 in
Weight	Approx. 6.7 oz

DIN rail transmitter	
Power supply	24 V DC ± 10 %
Power consumption	approx. 3.5 W
DIN-rail Transmitter P/N 20-0202	
Relay output (quantity 1)	
▪ Voltage	max. 110 V AC
▪ Current	max. 1 A
▪ Capacity	max. 60 W
DIN-rail Transmitter P/N 20-0203	
Relay output (quantity 1)	
▪ Voltage	max. 110 V AC
▪ Current	max. 1 A
▪ Capacity	max. 60 W
Current output (quantity 1)	
▪ output (nonadjustable)	Factory Calibrated Fixed scale 0-100% 4-20 mA (0-20 mA), load < 500 ohms
Fall-delay time	1...15 s (continuously adjustable)
Weight	Approx. 6.1 oz