Doppler Flow Switch

—CDS310

Working principle

Doppler flow switch is a material flow detector using the Doppler effect. According to the Doppler effects, the frequency of microwave changes when encountering a moving object. The detector is installed outside the pipeline or above the conveyor belt. The detector emits electromagnetic waves. When there is material flowing, the frequency of the reflected wave changes. When there is no material flowing or blocking, the frequency of the reflected wave won't change. The detector judges whether the material flows according to whether the frequency of the reflected wave changes and outputs a signal through a relay.

Benefits

- Microwave has good penetration and is not affected by flying dust, steam, stickiness
- Compact design, small footprint and flexible installation.
- No moving parts and maintenance free.

Specification

Power supply	24V DC
Output	relay
Frequency	24~26GHz
Delay	250ms~15s
Transmitter power	5mW
Process fitting	thread/flange
Housing material	Stainsteel
Ambient temperature	-40~70℃
Process temperature	-40~220℃
	(Up to 1000℃ with adapter)
Process pressure	1bar
	(Up to 20bar with adapter)
Protection	IP67

0800-0810-01MSS#001101

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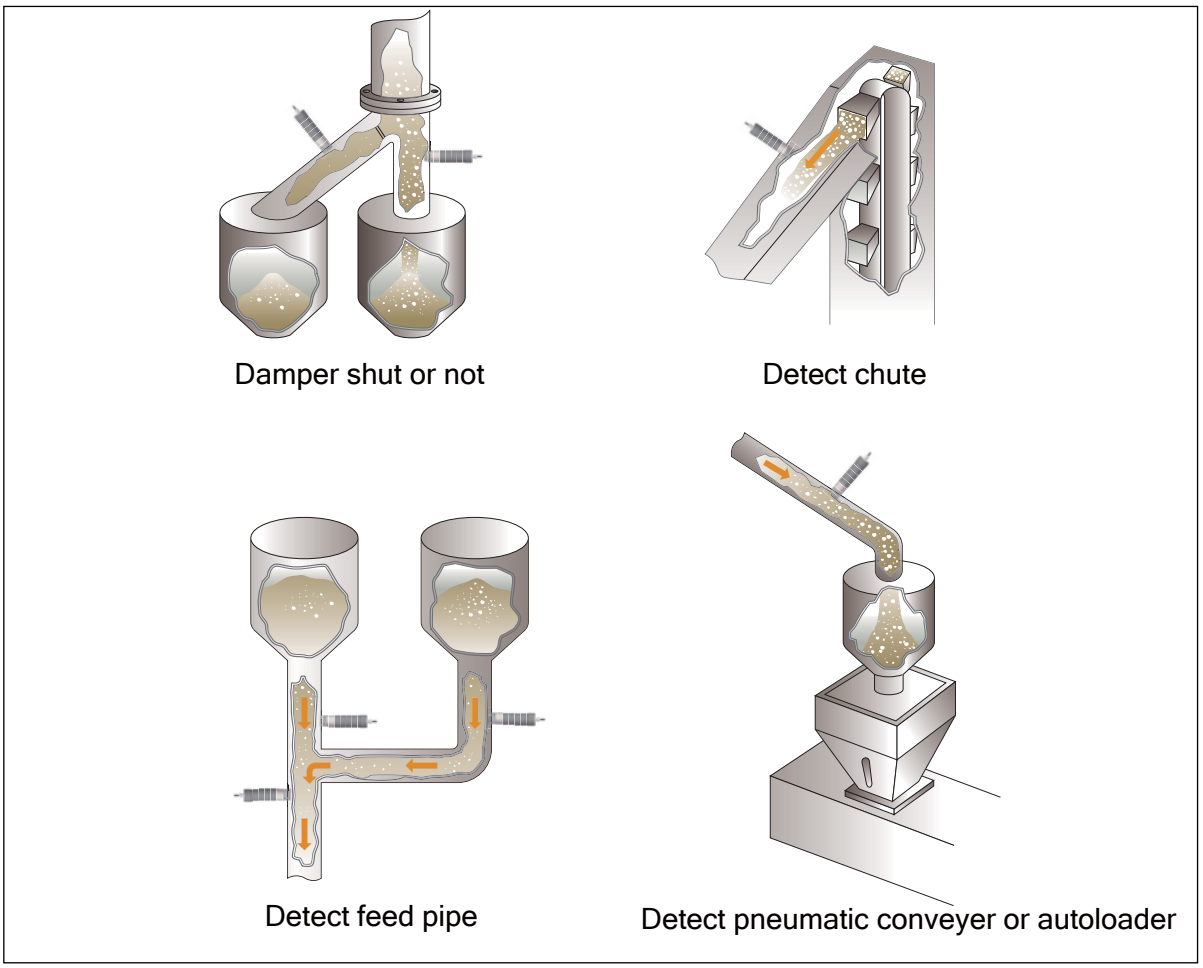
Application

(1) Detect solid flow/non-flow in pipelines
(2) Detect blocked or unblocked states in chute

Industry
- Building material: cement,clinker,woodchips
- Chemial: plastic powder or granuls,fertilizer,silica
- Food: coffee,animal food,oats,tabacoo leaf
  tobacco leaf
- Power: coal,carbon dust,flyash

Installation

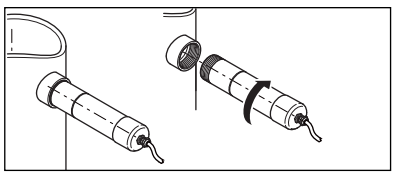


Damper shut or not

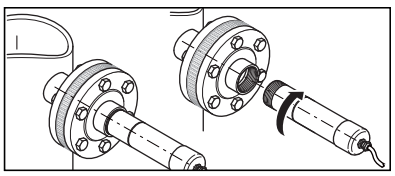
Detect chute

Detect feed pipe

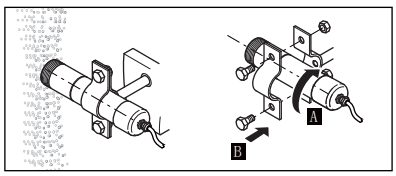
Detect pneumatic conveyer or autoloader



Thread mounting



Flange mounting



Pipe clamp mounting

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