

# MODEL AF10

ACOUSTICAL FLOW SENSOR FOR SOLIDS



## Features

- Acoustic noise sensor for equipment maintenance requirements and solid flow sensing in pipes
- Works in audible sound frequencies of 8 to 16kHz
- Easy to install by strap or screw to pipe or bearing
- Selfcontained with 24 to 264VAC or DC power and 1 SPST relay output
- Offset, gain and time delay adjustments with (4) LED indicators

## General Description

The AF10 is a selfcontained acoustical sensor that detects the audible noise made by powders or grains in a pipe or conveyor. It may also be used to detect audible noise on mechanical equipment for preventive maintenance.

## Operational Description

The solid state sensor detects acoustical vibrations by a piezoelectric pickup. If the audible vibrations exceed a Gain setting limit, a relay output occurs. Because sound is transmitted very effectively by a metal or plastic pipe, this is especially suitable for pneumatic conveying. A lack of sound indicates a plugged pipe.

## Applications

The AF10 works best in granular and powdered materials that are hard. The rattle of conveyed material on the pipe wall would convey audible noise through the pipe wall to the transducer. The AF10 can also be affixed to motor or machine bearings and can be adjusted to provide an alarm when excessive noise from the bearing occurs. Calibration will require an audible noise source comparable to a faulty bearing.

## Specification

Model	AF10
Drawing	
On indication	Turning on a red LED
Sensitivity Adjustment	By OFFSET and GAIN Trimmers
Output function	Detect switch
Detection Time Delay	ON delay, approx. 0.1 to 7 seconds OFF delay, approx. 0.1 to 7 seconds
Power supply	24 to 264V DC, AC (50/60 Hz)
Output	Relay contact
Contact rating	240V 2A AC, 30V 2A DC (Resistive)
Withstand voltage	1500 V AC 1 min. (Between Line terminal and Output terminal)
Insulation resistance	500 V DC more than 100 MΩ (Between Line terminal and Output terminal)
Power consumption	Approx. 2.5 VA (at 100V AC)
Vibration proof	100 m/s <sup>2</sup> (60 to 2000 Hz)
Operating Temperature	-10 to 70°C
Maximum Humidity	85% RH
Protection	IP54
Material	ABS, PC
Installation	Attaching band or metal fixtures (Option)
Cable entry	G1/2

## Wiring

