

MODEL VC

SMALL VIBRATION LEVEL SENSOR



Features

- Suitable to detect powder and grain in a small or middle hopper
- Operating temperature up to 150°C as standard
- Not affected by the temperature change
- Accepts a wide range of input voltage

General Description

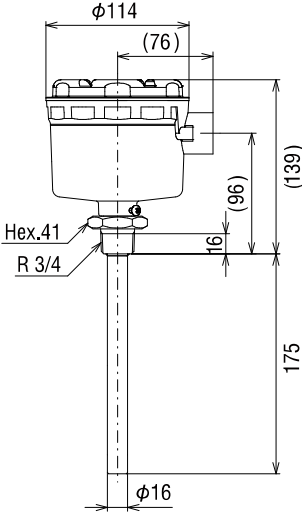
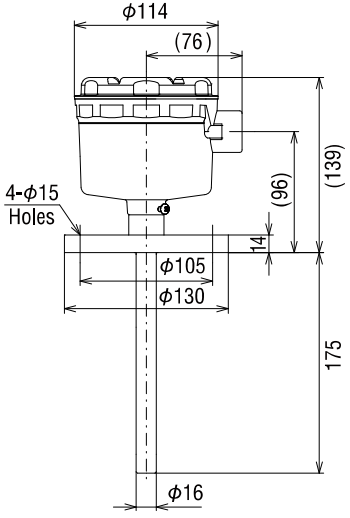
The vibration sensor, Model VC12 is used for level detection of solids, fine powder, granular, pellets and sediments under the liquids such as sludge and sand. The output signal from the sensor is used for the alarm and/or control of electromagnetic switch. When the detection pipe is covered by solids, relay inside of housing is operated.

Operational description (Patent Principle and construction)

The vibration rod of new VC series is constructed by using the electro magnet and the permanent magnet. When the electro magnet is energized, the electro magnet and permanent magnet are attracted and repulsed. This movement makes vibration

The construction of vibration probe is similar to the motor. When the motor is energized by the battery, the back electromotive current is generated by the influence of permanent magnet and coil. When the vibration rod is covered with solids or powdered material, the current flowing to the lead wire is increased by damping of the back electromotive current. The amplifier detects this shifting of current level, and converts to output signal.

Specifications

Model	VC12N	VC12F
Drawing		
Measuring Object	Powder, Granular material	
Mounting	R3/4	JIS5K50A FF
Supply Power	100 to 240V AC 50/60Hz	
Power Consumption	Approx. 5VA (100V AC)	
Relay Output	Non-voltage relay contact (SPDT) 250V 3A AC / 30V 3A DC	
Detection Time Delay	Approx. 3 to 5 seconds for covered Approx. 3 to 5 seconds for free	
Operating Temperature	Housing	-20 to 60°C
	Vibration rod	-20 to 150°C
Maximum Pressure	2 MPa (Except a mounting part)	
Concentrated load	0.55 kN Max. (at the tip of detection pipe)	
Maximum Humidity	95% RH	
Sensitivity	Bulk density of 0.2g/cm ³ Min.	
Vibration Frequency	Approx. 900 to 1100 Hz	
Material	Housing	ADC12
	Vibration rod	304SS
Cable Entry	G3/4	
Protection	Housing	IP65
	Vibration rod	IP68
Fail safe	High or Low by switch	
Indication	Green LED for Power status Red LED for Relay status	

Ordering Information

VC12	Standard
N	Plug mountin, G3/4
F	Flange mounting, JIS5K50A
175	Standard L=175mm
VC12	N 175 = VC12N-175