



... the level & gas people

ISO-9001 : 2008 CERTIFIED COMPANY

RF Level Sensors for Bulk Solids & Liquids

General Application

V. Automat Level Sensors designed to provide fine level information of Solids (Powder & Lumps). Liquids and Slurry applications for Point level detection in storage Bins, Silos, Hoppers, Tanks, Chutes and any other vessels / tanks where material is stored, processed and discharged even at high temperature / Pressure / corrosive applications.

Description

V. Automat Point level sensor includes an electronic unit and sensing probe, connected by a co-axial cable. The electronic unit consist of an oscillators, a detector and output relay which is controlled by the detector. The probe do not contain electronics or any other sensing element only terminals are provided to connect the signal cable. The probe contains an active section and shield section insulated from each other and from the vessel ground as shown in fig-1.

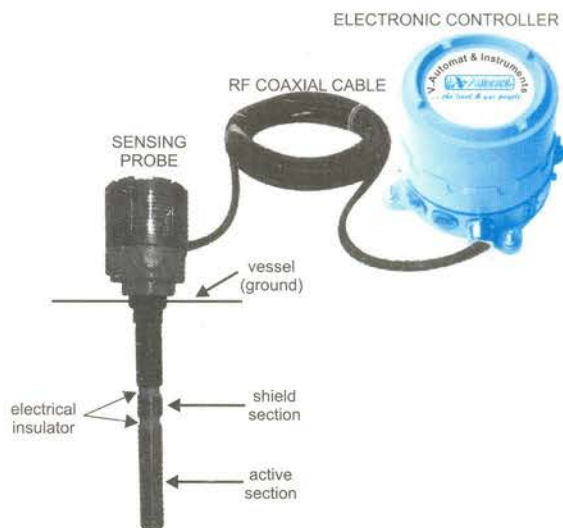


fig-1

Function

The oscillator generates low-power RF signal which is used to provide signals equal in frequency, phase and amplitude to both, active section and shield section of the probe. The signal applied to the shield is held constant by use of a compensating amplifier. The detector is then used to compare the fixed signal with active signal which varies with the change of media between the probe and Vessel/ Hopper wall. Difference in the signals compared by the detector cause the output relay to activate. The contacts of the output relay to when activated are used to indicate the presence or absence of material in the vessel / Hopper at the probe level.

Coating

A buildup is not uncommon with a coating on objects protruding into the vessel / tank. A conventional level controls would sense the build -up and record false signals. V-Automat Level Sensors are designed to ignore any build-up of coating on the probe or vessel / tank walls.

Ambient / Condition

V-Automat standard Level Sensor probes are rated to 250°C ambient temperature of material and special high temperature probes are rated to 600°C.

Pressure

V-Automat standard sensing probes are rated with a pressure rating of 100 psi. Higher pressure rated probes are also supplied on special demand.

Technical Specifications



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Electronic Unit

Housing	: Aluminium, Remote Type
Circuitry	: Solid State
Fail safe	: To higher or low level
Cable Connection	: ½ ET Cable gland
Line Voltage	: 240/220/110/24VAC or DC
Frequency	: 50/60±10% for AC Supply
Power Consumption	: 3VA Appx.
Ambient Temperature limit	: (-10) to +60°C or as specified
Output relay	: 2 sets of change over Potential free contacts (SPDT) or as Specified
Contact rating	: 5AMPS 220VAC non- inductive or as Specified
Local LED Indications	: Green : Normal level Red : Alarm level Yellow : Probe Healthy
Cable length between electronic unit & probe	: 5 metr. or as Specified
Cable	: Special Co-axial Cable

Table-1
Process Connections

Code	Connection
01	1" Thread
02	1½" Thread
03	1"x150# Flange
04	2"x150# Flange
05	3"x150# Flange
06	Others

Sensing Probe

Housing	: Aluminium
Probe	: SS304 / SS316
Insulation	: PTFE / Ceramic
Insertion Length	: 100 to 10,000mm
Probe Type	: Rigid or Flexible
Mounting	: 40/20NB BSP threaded or flanged

2200

(R)

Medium

For Liquid	L
For Solid	S
Others	O

Probe Material

SS with Teflon coating.....	ST
Others.....	O

Probe Length

Mounting

Top.....	T
Side.....	S

Temp/Pressure.....

Process Connection

Plz. refer the table *1.....

Set Point

Single.....	S
Double.....	D
Triple.....	T

Supply Voltage

230V AC.....	A
24V DC.....	D

Protection

Weather Proof.....	W
Explosion Proof.....	E

