

INSTRUCTION MANUAL
VIBRATING ROD POINT LEVEL SWITCH (SOLID)
JAYCEEVIBRO HARMONIK – 2300 SERIES

FUNCTION:

The electronically stimulated rod vibrates at its mechanically resonance frequency of approx.350 Hz. If the solid media/free flowing powder material covers the rod, the damping of the vibration is detected electronically and a corresponding signal output is actuated. The vibration of the rod has self-cleaning properties. The light deposit on the container wall does not affect the operation of the JAYCEEVIBRO

MEASURING SYSTEM:

The complete system, **JAYCEEVIBRO HARMONIK – 2300** consists of the sensing probe of Vibrating Rod and the Electronic switching unit.

PRIMARY AREA OF APPLICATION

All types of Solids
 Plastic industry, powder, granular etc.
 Light free flowing powder etc.

TECHNICAL SPECIFICATIONS:

CONTROL UNIT:

Parameters	Specifications
Housing	Cast Aluminum, weatherproof, powder coated Integral with rod
Cable entry	2 nos.
Ambient temperature	0 ° C to +60° C
Power consumption	1.9 VA
Mains Voltage	(65-265) V AC, 50 Hz. OR (18-40) VDC.
Output	2 sets of potential free c/o contacts rated at 5 amps, 230 V AC for non-inductive load
Signal delay	Rod covered to Rod free about 1 sec. Rod free to rod covered about 1 sec.
Switching delay	Continuously adjustable from 1 to 255 secs.
Safety operation (FSL/FSH)	Field selected switch over for Maximum or Minimum switching points.
Switch status display	GREEN LED ON shows Normal and Red LED ON shows Alarm conditions

SENSING PROBE (ROD):

Parameters	Specifications
Mounting	Screwed – 1.5” BSP (standard) Flanged (as per requirement)
Rod	stainless steel, 316
Operating temperature	100 ° C max. (inside vessel)
Probe Length	250 mm (standard) TO 3000mm

INSTALLATION OF AQUAROD:

The standard unit has screwed mounting, which can be mounted laterally on the container wall at the desired level of the material to be controlled. The rod should be horizontal or pointed slightly downward.

Following precautions should be taken during installations –

- The rod should not be bent or position distorted.
- During filling operation, the material should not fall directly onto the rod. Otherwise protection shield should be provided over the rod.
- During installation of probe with screwed mounting, turn the hexagonal mounting nut of the probe and not the housing.
- The knife-edges of the tines should face the ground plane in horizontal mounting position.
- The rod should extend far enough into the vessel so that it is free to vibrate despite the build-up on the vessel wall.
- The extended probe should be mounted in such a way that it does not extend further than necessary in the vessel.
- Turbulence during pneumatic conveying can cause operational problems and can be avoided by shielding the tines by windscreen.
- For remote mounting of the Electronics Switching unit, the probe connection cable gland of the Cast Aluminum housing of the Switching unit should point towards ground plane.

DIP SWITCH DETAILS:

There are 4 DIP switches. The operation of these switches are as below.

1. NA : This is not applicable.
2. FSS : Fail Safe Switch
3. OND : On time delay settings
4. OFD: Off delay settings.

DELAY SETTINGS

ON DELAY

By using 3rd dip switch we can set ON delay.

For setting the ON delay turn the 3rd dip switch on, then red led will start blinking. Count the no. of blinks for setting the required no. seconds u want to set for ON delay. After setting the required delay turn off the 3rd dip switch.

OFF DELAY

By using 4th dip switch we can set OFF delay.

For setting the OFF delay turn the 4TH dip switch on, then red led will start blinking. Count the no. of blinks for setting the required no. seconds u want to set for OFF delay. After setting the required delay turn off the 4th dip switch.

FAIL SAFE MODE SELECTION:

By using 2nd dip switch we can select fail safe mode.

When switch is in off condition it is fail safe high mode and when it is on, then it is in fail safe low mode.

SENSITIVITY ADJUSTMENT:

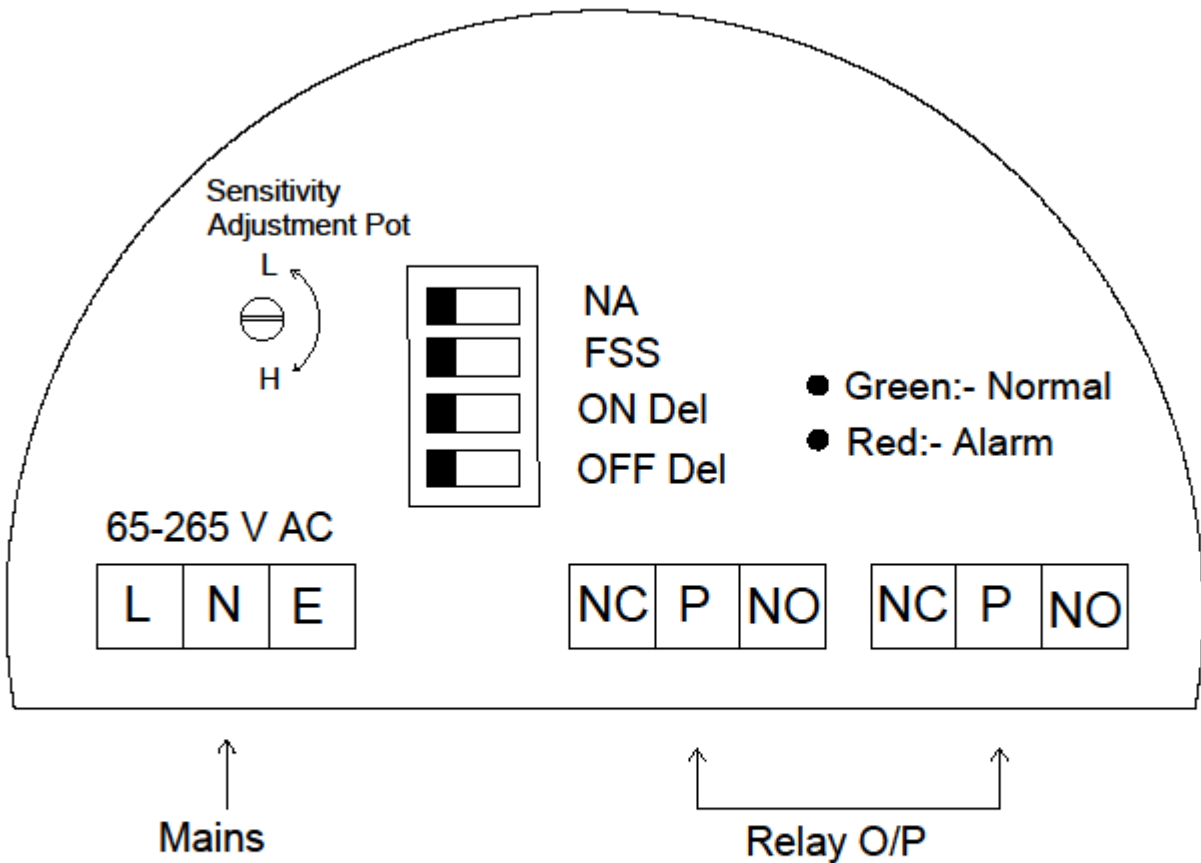
Sensitivity required as per medium can be adjusted by rotating the pot (As shown in connection diag.).

By rotating the pot in clockwise direction, sensitivity can be increased and by roating it in counter-clockwise Direction sensitivity can be decreased.

ELECTRICAL CONNECTION TO JAYCEEVIBRO

Please refer the connection diagram for the electrical connection. Appropriate mains voltage should be connected to the terminals of the instruments as specified. The connectors are suitable for 1.5 sq.mm cable cross section.

CONNECTION DIAGRAM:



NOTE :- Contacts shown are of power ON condition

MAINTENANCE

The JAYCEEVIBRO need no maintenance.

However, if the material has built up tendency, over a period of time, rod should be cleaned whenever need occurs.

Ensure that the cable glands and the housing lid are sealed to prevent ingress of moisture.

FAULT FINDING PROCEDURE

If the instrument fails, Please observe following points:

Check the mains supply connection - is it connected as per specifications?

Check the FSH and FSL mode – is the mode selected as per the required logic?

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