

I N S T R U C T I O N - M A N U A L

CONDUCTIVITY POINT/S LEVEL SWITCH

FUNCTION

The Conductivity Point Level Switch comprises of a specially designed electronics and sensing probe/s.

MEASURING SYSTEM

The sensing probe/s (Rod or flexible wire rope, depending upon application) and The Electronic Switching unit.

PRIMARY AREA OF APPLICATION

Any electrically conductive liquid

TECHNICAL SPECIFICATIONS

SWITCHING UNIT:

Housing	DIN RAIL, suitable for back panel mounting.
Ambient temperature	0° C to +60° C
Power consumption	2.8 VA
Mains Voltage	230 V AC (+/-15%), 50 Hz or, 24 V DC
Output	1 sets of potential free c/o contacts rated at 5 amps, 230 V AC for non-inductive loads.
Safety operation (FSL/FSH)	Field selected switch over for minimum or maximum switching points.
Switch status display	<u>Yellow</u> LED supply and <u>Red</u> LED shows Alarm

SENSING PROBE

Mounting	Screwed – 1/2” BSP (standard) Flanged (as per requirement)
Sense rod	Stainless steel
Insulation	PVC (standard) /PTFE (optional) Other insulation on request and as per application.
Operating temperature	70° C max. (Inside vessel)

INSTALLATION OF CONDUCTIVITY POINT LEVEL SWITCH

Mounting of the probe would depend upon its construction and may differ from application to application. Depending upon the application, the rigid Probe can be mounted vertically, either from the top or horizontally, from the tank side.

The standard unit has screwed, 1/2" BSP mounting, which can be mounted laterally on the container wall at the desired level of the material to be controlled. The probe rod should be horizontally or pointed slightly downward.

For installing the probe vertically from the top, sufficient clearance (equal to the probe length minimum) should be available above the tank top to facilitate to hoist the probe over the tank top for insertion into the tank.

Following precautions should be taken during installations -

During filling operation, the material should not fall directly onto the probe. Otherwise protection shield should be provided over the probe.

During installation of probe with screwed mounting, turn the hexagonal mounting bush of the probe and not the housing.

SWITCHING UNIT INSTALLATION

The standard unit has electronics suitable for remote mounting, off the probe, the housing is suitable for back panel mounting.

For wiring and connection, refer the enclosed drawing.

The Switching unit should not be mounted at the location where the ambient temperature is more than 60° C.

Precaution should be taken to avoid fall of Sunrays on to the Switching Unit housing. In case it is not possible to avoid, a suitable Sun protection cover should be provided over the housing.

FAIL SAFE MODE SELECTION:

Depending upon the process requirement, the minimum or maximum fail-safe mode can be selected in the Conductivity Point Level Switch .

In Conductivity Point Level Switch, the Relay is in energised condition. When level changes state the relay de-energises. Thus, besides level alarm condition, the operator gets an alarm even in case of mains failure or the instrument failure. This imparts a better overall reliability of operation.

Maximum fail safe (FSS) mode means the relay de-energises when the level exceeds the desired or when mains supply fails.

Minimum fail safe (FSS) mode means the relay de-energises when the level drops below the desired level or when mains supply fails.

NOTE: The contacts shown in the connection drawing are for Fail Safe Hi condition. The contacts will reverse when the FS Link is changed to Low position. In 2-channel model the channel 1 is set for fail safe low level and channel 2 is set for high level. You may change the order if you desire by opening the PCB and changing the FSS link in each channel.

ELECTRICAL CONNECTION TO CONDUCTIVITY POINT LEVEL SWITCH:

Connect the cables as per the drawing. The ground terminal should be connected to the vessel and in case the vessel is non-metallic put a conducting wire into the vessel and connects the same with the ground terminal no. 12 of the control card.

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.

In case of flexible wire probe, without mounting head, each wire should be connected through a single wire extension to the switching unit. Individual single terminal connected could be used for joining the probe and the extension cable.

Authorised Dealer



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