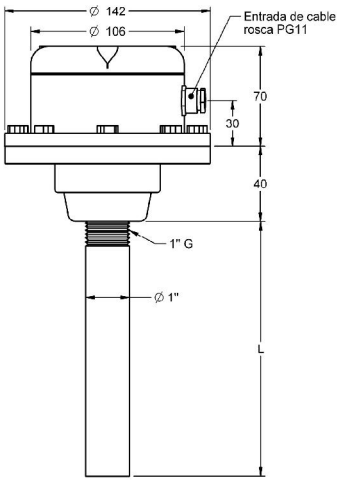
DISIBEINT

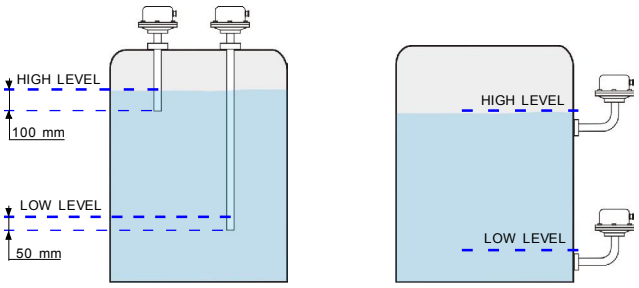
INPN

PNEUMATIC LEVEL SWITCH

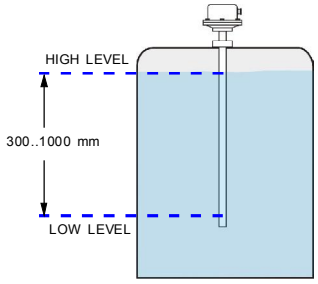


Application field	In addition to liquids, it can control any mix being fluid enough to keep the tank clean when the tube gets empty. They can also be used to signal pressures from 20 mm. water column.
Operating principle	INPN level controllers consist of one or two micro-switch operated by a pressure sensitive membrane. The micro-switch is activated by the compression of the air column captive in the tube and chamber pressure under the membrane. A height of liquid between 3 and 15 mm. (depending on model) on the entrance of the vertical tube is enough to operates the micro-switch.
Process connection	By thread 1" G.
Electrical connection	Aluminium connection housing.
Pressure camera	Polyester with fiberglass. Pressure maximum 4 bar.
Connection tube	Threaded 1" G. The tube is optional and is not provided unless specifically requested.
Membrane	Neoprene (standard). On request in Viton.
Reference / Contact	**INPN-1**: SPDT, 10 Amp. 250 VAC. **INPN-2**: DPDT, 10 Amp. 250 VAC.
Protection	IP53
Cable entry	Threaded hole PG11.
Temperature	+60 ºC
Installation	It can be mounted on virtually any type or size of tanks through an 1" G pipe. This may be made with iron, PVC, PP, stainless steel, etc. The thread in the tube should have a fine end and must be long enough so that the end of the tube makes an even pressure on the joint housed at the base, ensuring the seal. Failure to ensure this union, the air captived into the tube escapes and stops operating the switch. Mounting position: Although it is preferable to mount the sensor horizontally, you can be in any position to take the necessary precautions. Installation distance: The sensor can be installed at a maximum distance of 50 meters far from the tank and its junction with the 1" pipe should be done with a tube of 8 mm inner diameter. See Examples Installation on page 2.

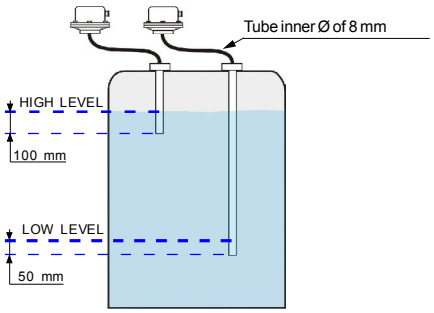
Installation examples



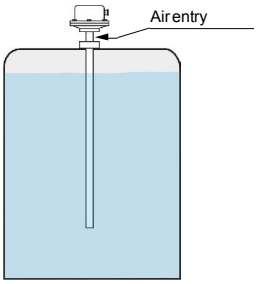
INPN-1: Level control with two controllers simple signaling



INPN-2: Level control with a dual controller signaling. Maximum variation between low and high: 100 cm.



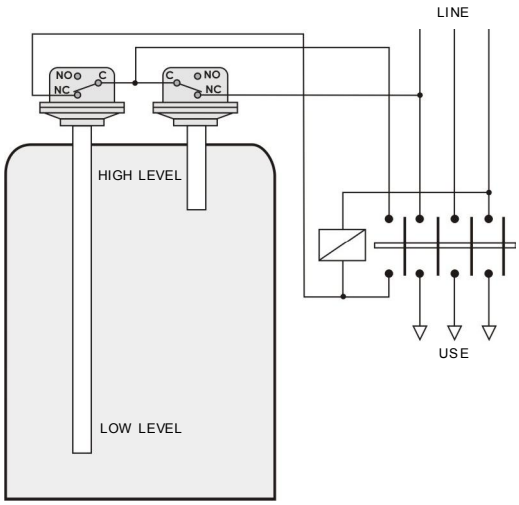
REMOTE CONTROL: With this system the controller can be placed up to 50m. far from the tank. When connecting the pipe, a slight slope towards the tank must be given to avoid accumulation of the liquid in the event of any condensation.



AIR PRESSURE CONTROL: By injecting a small flow of air in the tube can be checked thickened liquids and liquids with strong temperature variations.

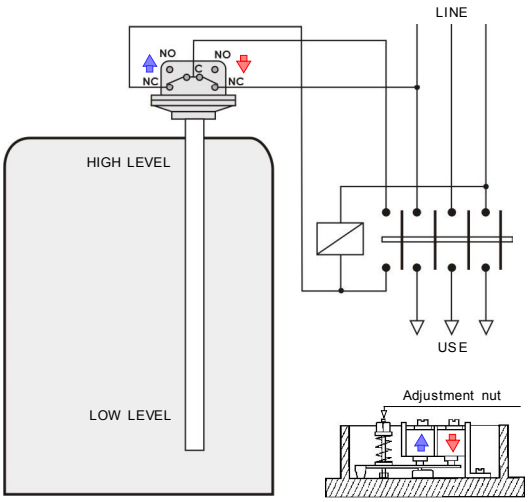
Examples of connections for a AUTOMATIC FILLING CONTROL

Principle of action: When the liquid falls below the low level, pump will start and remain running until the liquid reaches the high level. The cycle is repeated when the liquid returns to the level low.



USING TWO SENSORS INPN-1:

REGULATION: By varying the distance between the high and low inlet fluid tubes, the required differential distance is got.
Level LOW: Starts the filling system. The tube should be 50 mm below the height of the level to be detected.
Level HIGH: Stops filling system. The tube should be 100 mm below the height of the level to be detected.



USING ONE SENSOR INPN-2:

REGULATION: Use the adjusting nut to adjust the differential between low and high levels (start and stop, respectively). The minimum differential is 300 mm and maximum 1000 mm.
Level LOW: Starts the filling system. The tube should be 50 mm below the height of the level to be detected.
Level HIGH: Stops filling system.

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