

LIQUID LEVEL SWITCH / CONTROLLER

INTRODUCTION : Magnetic float and tube type, level switch in conjunction with control unit is an established and reliable technique in industry for point liquid level sensing and control in open or pressurized vessels. It offers trouble free service in **conductive/non conductive liquids** under widely varying **temperatures, pressure, liquid viscosities and corrosive conditions**. Besides, it provides high repeatability and effect of **shocks/vibrations is minimum**.

CONSTRUCTION & OPERATION : Simple and sturdy construction, consisting of a float and guide tube, made of nonmagnetic material to achieve an undisturbed magnetic flux. The float has a magnetic system within it and moves freely along the guide tube, which contains glass encapsulated hermetically sealed switches, located at preset positions. Reliability of float movement is achieved through suitable clearance between it and the tube. Float follows the liquid level and magnetically actuates the contacts to give an electrical signal, which in turn can operate remote alarm or a relay to control auxiliary devices like solenoid/motorised valve or pump-motor starters. **Single/multiple switching is possible through a single float**, however to suit specific applications, **multiple floats can be employed**. Available in various materials and construction styles to suit wide variety of medias/applications.

INSTALLATIONS : Mounted internally or externally through a chamber as shown alongwith. External mounting adopted to overcome limited space within the tank or where mechanical devices like stirrers operate or where isolation tank is required for regular servicing. It can be installed vertically from top to bottom. Side installation is also possible with slight modification.

CONTROL UNIT : Contains electronics and comes separate as an accessory to the sensor. To allow low power switches to control high amperage or voltage devices. Or To convert non-latching switch outputs into latching alarm outputs. **The relay provided in the Controller is of 5 Amp. capacity. On no account must a switch be used for the direct starting of burners, heaters, motor-pumps, alarm, it is essential that the contacts are wired in series with the relay coil (N/V coil) in a contactor starter.**

Application

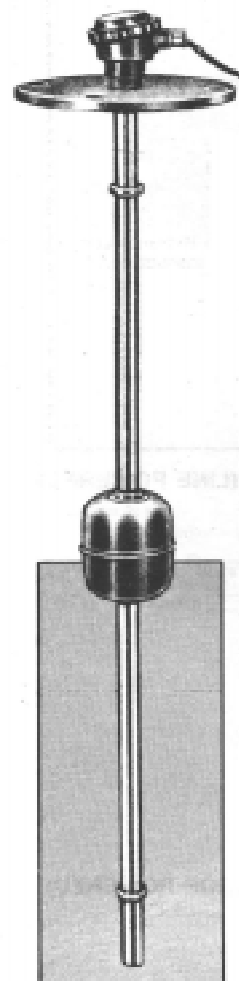
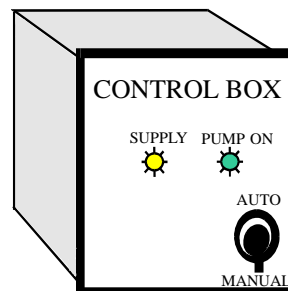
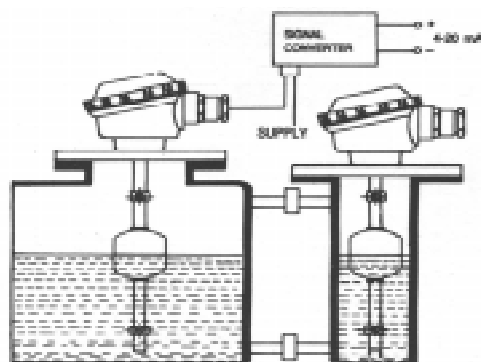
1. Auto Pump Motor Start/Stop for over head/under ground Tanks.
2. Indication of high, low and intermediate levels audible alarm systle and operation of pumps and solenoid valves.
3. Level Switches are widely used in storage tanks and reservoirs of all types chemical processing tanks and systems, automatic safety interlocks, pump motor con trol etc.

Therefore the instruments are suitable for a wide range of aplications for the chemicals and pharamaceutical industries for the petrochemical industry refinieres, oil and fuel tanks, storage tanks etc.

FEATURES:

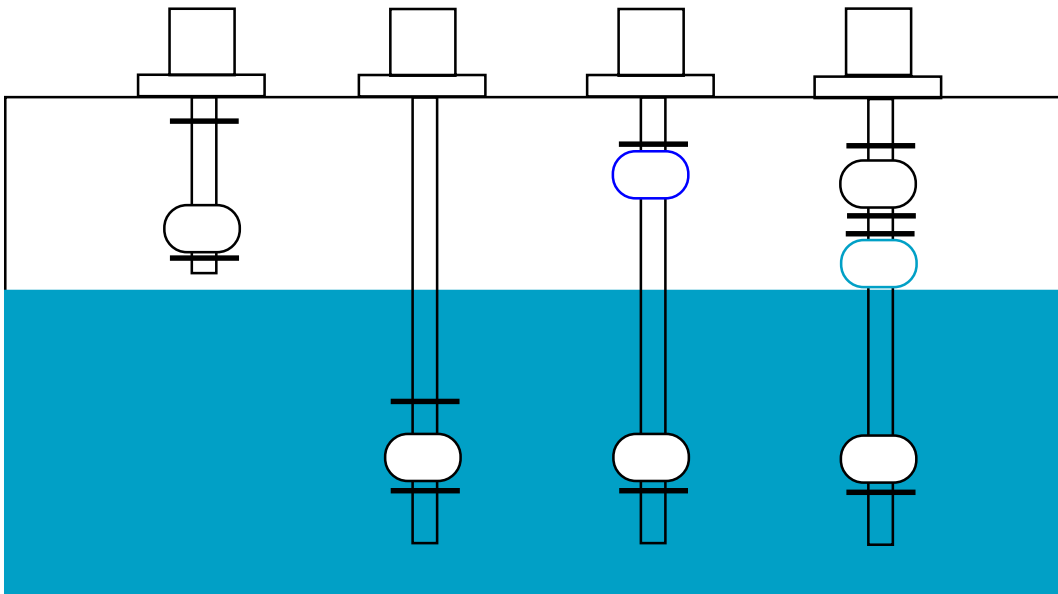
- Safe instrument for domestic / industrial purpose.
- Prevent motor burn-out
- Prevent overflow
- Maintain a minimum level
- Works round the clock
- Require no maintenance & attendant
- Cut down electricity bills
- Auto/Manual switch provided to operate in case of malfunctioning

INSTALLATION



STANDARD SPECIFICATIONS

Installation	: Top, Bottom or Side
Terminal Housing	: Weathproof/Ex-proof in Aluminium with 3/4" NPT cable alternatively plug-in type connector or epoxy potting with extended wires.
Guide Tube	: Normally 304 SS / 316 SS / PP upto 3 mtr length only on request.
Float	: 304 SS / 316 SS / PP / PVC / Nylon in various dimensions
Min. Sp. Gr.	: 0.7 / 0.8 depending upon the float material and dimensions
Mounting	: Flanged or screwed.
Preset Levels	: 1 to maximum of 6 (factory set) depending upto guide tube / float dimensions.
Differential	: 12 mm – 3000 mm.
Accuracy/Repeatability	: ± 2 mm / ± 1 mm.
Load/Insulation	: Resistive or Inductive / PVC or PTFE insulating material to stand 150 mega-ohms at 500 VDC
Max. Temperature	: Upto 120 C depending upon guide tube/float configuration.
Max. Pressure	: Upto 10 Kgs/cm depending upon guide tube/float material & thickness.
Control Unit	: Remote (Wall or Panel Mounted) or Integral.
External Cage (Optional)	: Flanged or screwed mounting, in MS / 304 SS / 316 SS material.



ML - 1 : High Level Alarm/Indication or **Manual Start Auto off.**

ML - 2 : Low Level Alarm/Indication.

ML - 3 : High Level & Low Level Alarms/Indications or **LOW LEVEL PUMP ON HIGH LEVEL PUMP OFF , & vice versa**

ML - 4 : Low Level Pump on High Level Pump off & Extra High Level Alarm/Indication., & vice versa

Various models are for upper tank (over head tank only), if required control for under ground tank (lower tank) can also be provided.

In a typical application using the same sensing probe, but a different control unit, liquid level in more than one tank can also be controlled. A new concept for controlling liquid levels in various tanks, simultaneously.

Ordering Information : Specify

1. Type of liquid & its S.G.
2. Temperature / Pressure
3. Length of probe
4. Type of application required.

Continuous development of our products may necessitate changes in these details without notice.

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