Datasheet
Level Switches

Arka Instruments LLP

Datasheet

Level Switches

A Level Switch is an industrial device used to detect and control liquid levels in tanks and vessels. It operates by sensing a preset liquid level and activating a switching signal to start or stop pumps, trigger alarms, or control other equipment. Level switches are widely used in industries such as water treatment, chemical processing, oil & gas, and power plants for high and low level protection, overflow prevention, and automatic process control. They are known for their reliability, simple operation, and low maintenance.

Applications

- Pump control and overflow protection in water and wastewater systems.
- Monitoring and controlling liquid levels in chemical storage tanks.
- High and low level detection in fuel and oil storage tanks.
- Boiler feed water and cooling water level control.
- Liquid level monitoring in processing and storage tanks.
- Level control in mixing and storage vessels.
- Preventing tank overflow and dry running of pumps.
- Activating alarms and automatic process control systems.

Features

- Can be mounted internally in a tank or externally through a chamber.
- Perforated stillwell recommended for liquids under turbulence.
- External mounting suitable for tanks with mechanical devices like stirrers, ladders, or other internals.
- Useful where there is space limitation inside the tank.
- The mounting nozzle ID must be greater than the float diameter for proper installation.
- Float can be removed and reinserted from the bottom of the guide tube during installation if required.
- Supports electrical termination and wiring to a controller.
- Can be connected to a Zener Barrier and controller.

Level Switches

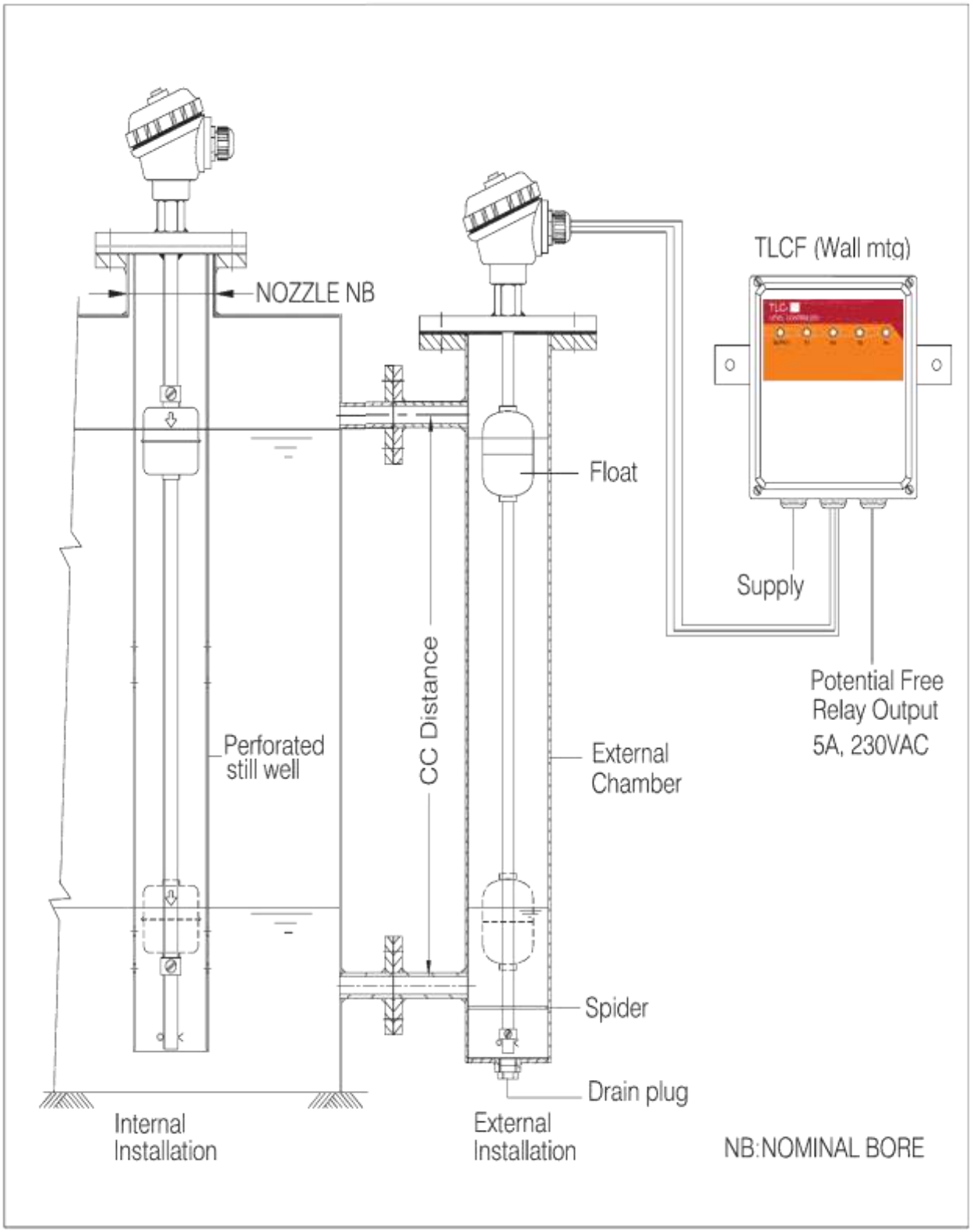
Specifications

Parameter	Specification
Installation	Outdoor / Indoor
Mounting	Top
No. of Preset Levels	1 to 4 (with cable extension) / Max 2 with plug connector
No. of Floats	Single / Multiple (Max 4)
Liquid Specific Gravity	0.65 to 1.2 depending on float size
Interface Detection	Minimum 0.2 difference between SG of upper & lower liquid
Process Connection	Flanged, Screwed or Tri-clover
Switch Type	Glass encapsulated hermetically sealed reed switch
Reed Switch Rating	40 VA or 120 VA, NO (SPST Potential free contacts)
	5 VA or 60 VA, 1 C/O (SPDT Potential free contacts)
Differential	Fixed 10 ± 5 mm / Fixed 3 to 5 mm
Accuracy / Repeatability	±2 mm / ±1 mm
Load Type	Resistive or Inductive
Insulation	100 MΩ at 500 VDC
Max Temperature	70°C (PP), 100°C (PVDF), 125°C (SS)
Max Test Pressure	2 Kg/cm² (PP/PVDF), 10 Kg/cm² (SS)
Input Supply	24 VDC
Output	24 VDC / 110 mA
Enclosure MOC & Size	ABS, 40 × 115 × 90 mm
Mounting	DIN Rail

Installation

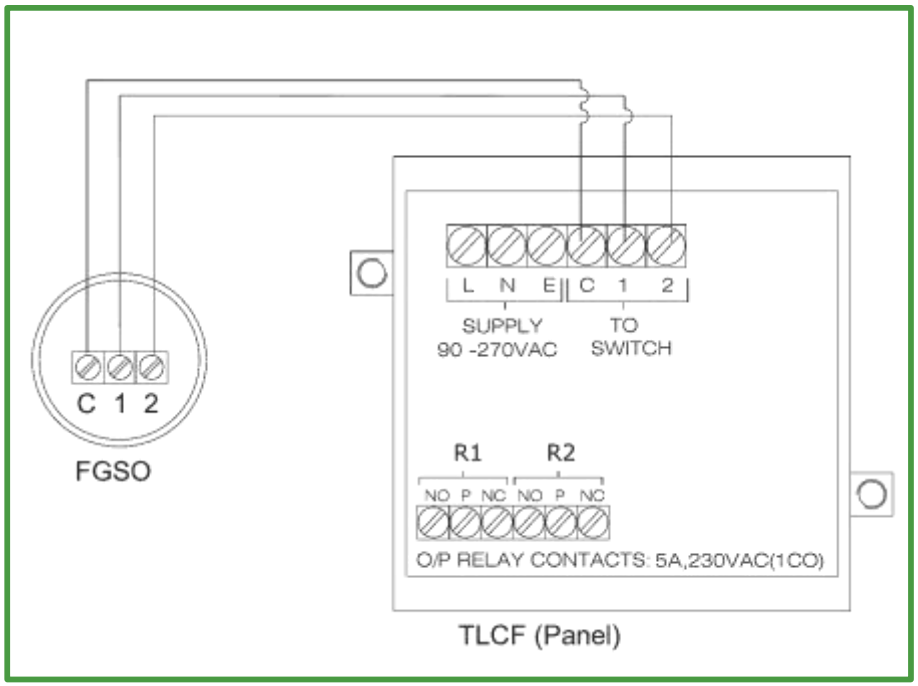
It can be mounted internally or externally through a chamber as shown in figure

1) Internal Installation
   It is top mounted on the tank. A stillwell with perforation is recommended for liquids under turbulence. For fitment of stillwell, ensure that NB of tank nozzle is greater than the diameter of stillwell.
2) External Installation
   It is top mounted on a chamber, external to the tank. This installation is adopted when the tank contains mechanical devices such as stirrers, ladders, or other internal structures.
3) Ensure that ID of mounting nozzle is greater than float diameter.In case, float diameter is greater than nominal bore, remove float from guide tube & reinsert the float from bottom of guide tube, after installation


TLCF (Wall mtg)
NOZZLE NB
Float
Supply
Potential Free
Relay Output
5A, 230VAC
Perforated
still well
CC Distance
External
Chamber
Spider
Drain plug
Internal
Installation
External
Installation
NB:NOMINAL BORE

Wiring

Switch with Controller



Switch with Zener Barrier and Controller