LV1

Liquid Level Controller

Description

Level control unit of conductive liquids which can be configured for FILLING or EMPTYING. The unit can be used as a two probe system for alarm purposes or a three probe system to control HIGH and LOW levels of a reservoir. Up to four LV1 can be utilized in the same reservoir by connecting all commons (pin 7). The sensitivity of the unit can also be adjusted.

FEATURES

- Fail-safe control feature
- Rear DIP switch selectable FILLING / EMPTYING
- Adjustable sensitivity
- Modulated AC probe signal to prevent electrolytic corrosion
- Low voltage probe signal
- Power supply ON and Relay ON LEDs
- Output 10A SPDT

Level Sensing Input Specifications

Probe Voltage	4 VAC
Probe Current	2.5mA
Probe Frequency	100Hz
Sensitivity	4 - 50k
Response Time	1 sec
Max. Probe Cable Length	400 m
2.5 twin and earth screened	

Output Specifications

Output Specifications	SPDT
Rated Isolation Voltage	6000 VAC (contact / electric) 1000 VAC (contact / contact)
Nominal Rate in AC1 (Ag-Ni)	1500 VA
Rated Current	10A
Rated Voltage	250V
Mechanical Life	$10x10^6$ cycles
Electrical Life	$110x10^3$ cycles (at max load)
Operation Frequency	≤ 1800 cycles/h

Supply Specifications

Power Supply AC Type (Galvanic)	110, 230, 400V 525V ± 10% 50 / 60 Hz ± 5Hz
Isolation	4kV
Consumption	± 3VA ± 6VA 525 V
Power Supply DC Types (Non-galvanic)	12,24,48 V ± 10%
Isolation	None
Consumption	± 100 mA

General Specifications

Power ON Delay	≤ 300 ms
Power OFF Delay	≤ 200 ms
Indication for	
Power Supply ON	LED red
Output ON	LED green
Environment	
Degree Of Protection	IP 20
Operating Temperature	-10 to + 50°C
Storage Temperature	-50 to + 85°C
Weight	200g

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Mode of Operations

Filling

When the level of the reservoir drops below the low level probe the relay will energize. The relay remain energized until the level of the reservoir rises to the high level probe. The relay de-energizes when the high level probe is submerged and will remain off until the level drops below the low level probe.

Example
Level control for conductive liquids Filling a reservoir.

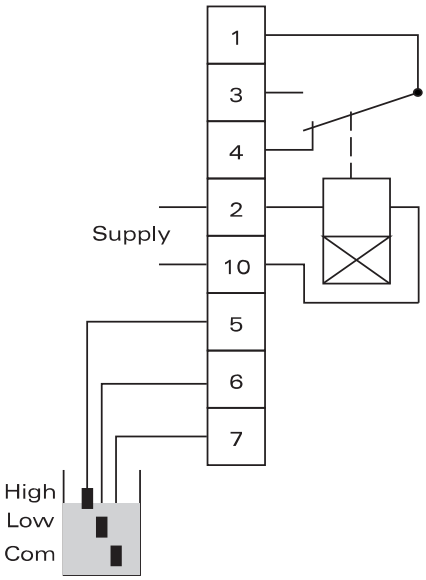
Emptying

When the level of the reservoir rises to the high level probe the relay energizes. The relay remains energized until the low level probe is no longer submerged. When the level passes below the low level probe the relay de-energizes and remains of until the level reaches the high level probe again.

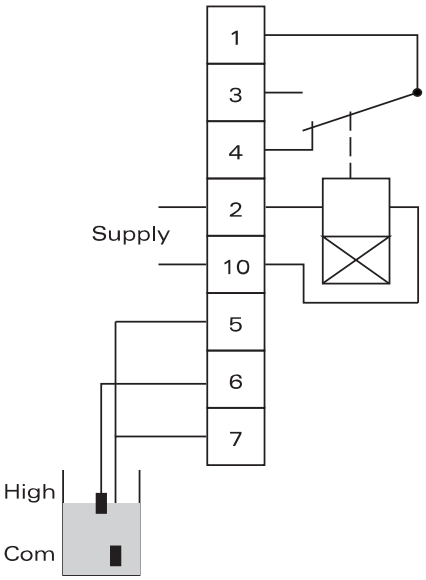
Example
Emptying a reservoir 2 wire control over long distance.

Wiring Diagram

Three Probe System

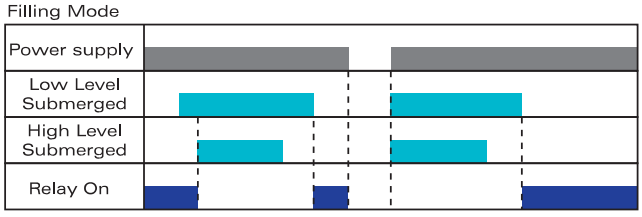


Two Probe System



Operations Diagram

Filling Mode



Emptying Mode