

Application Note for Liquid Flow Switch

Operation of LG01 Flow Switch and Bubble Detector

Summary

The LG01 is capable to detect low flow of liquid. Similarly it is sensitive to the presence of bubbles or air inside the flow channel. With this, either liquid flow detection or

bubble detection are feasible with unsurpassed ease. The modes of operation are described in this document.

Detection of Flow

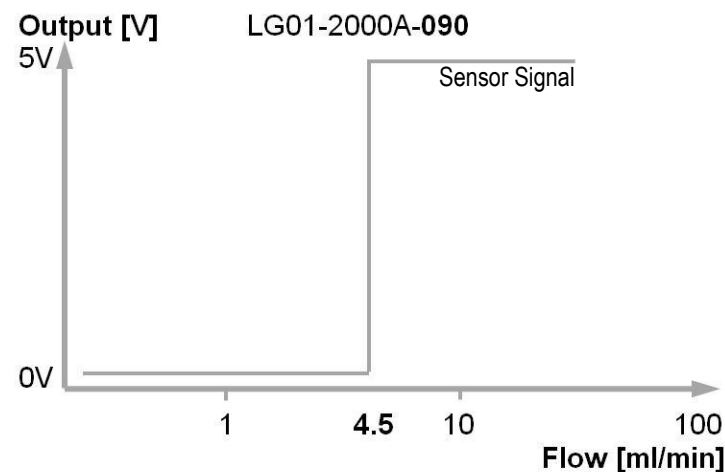
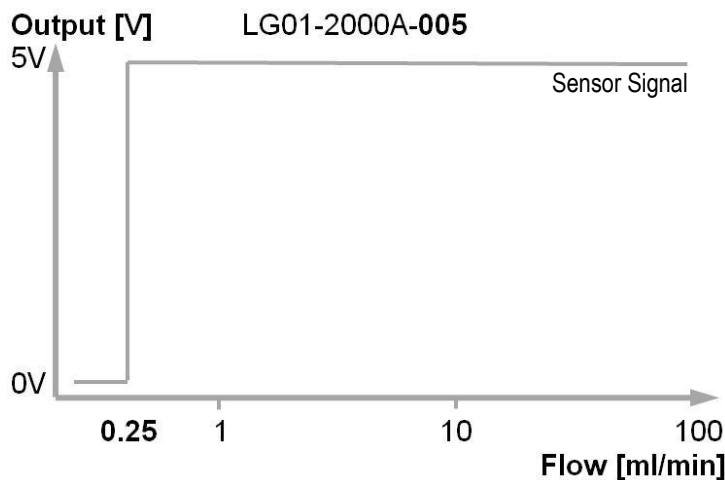
Conditions:

Reliable detection of flow requires the flow channel of the sensor to be completely filled with liquid.
Bubbles larger than 0.1 mm diameter are not permitted for reliable flow detection.

Operation:

Output is 5 V if the sensor indicates a flow rate above the specified Flow Switch Level and does not exceed the Maximum Flow Rate specified in the datasheet.

Output is 0 V if the sensor indicates a flow rate below the defined Flow Switch Level.



NOTE:

Flow Switch Levels are specified for water. Use of other liquids may change the absolute Flow Switch Level. See datasheet.

Detection of Bubbles or Air

Conditions:

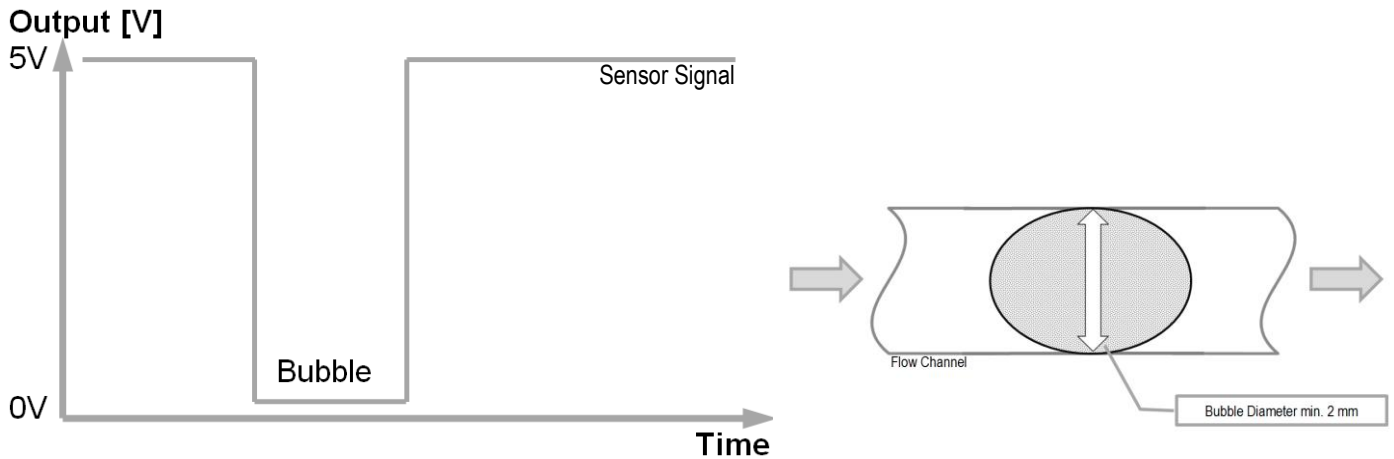
Detection of the presence of bubbles or air requires the instantaneous flow rate to be higher than the specified Flow Switch Level. At the same time the flow rate may not exceed the Maximum Flow Rate (see datasheet).

The bubbles need to be larger than 2 mm in diameter for reliable detection.

Operation:

Output is 5 V if the sensor indicates a flow channel completely filled with liquid.

Output is 0 V if the sensor indicates the presence of a bubble (or a flow channel not completely filled with liquid)



Revision History

Date	Author	Version	Changes
March 2012	UKA	1	First Version

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