# Model LV36
# Liquid Level Transducers and Transmitters

## Description

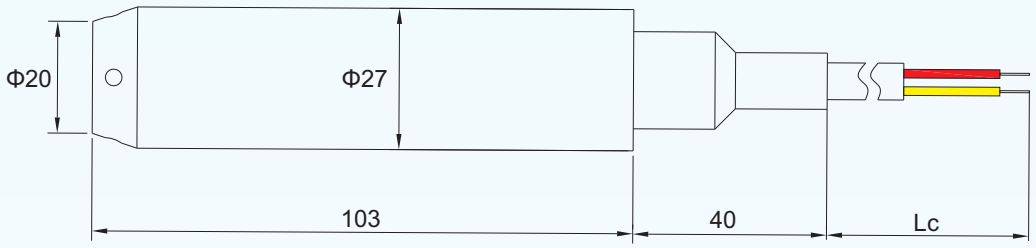
Model LV36 submersible liquid level transmitter is composed of BCM piezoresistive pressure sensor and signal conditioning electronics, fitted into a stainless steel (SS) housing. Designed for applications requiring complete submersion in dilute liquid, LV36 transmitters have an all-welded SS housing and an electrical cable with an atmospheric vent tube inside the cable jacket.

The measuring range of LV36 transmitters spans from 0~1 to 0~200 meter water column ($mH_2O$) with measuring accuracy of 0.5%fs (fs = full scale). The output signal of LV36 transmitters can be configured to either current loop (4~20mA, standard), voltage output (1~5V, 0~5V), or digital output ($I^2C$). The millivolt signal directly from the Wheatstone bridge circuit is also available on request (transducer version).

## Features

- measuring ranges: 0~1mH2O, ..., 0~200mH2O
- output signal: 4~20mA (standard), 1~5V or 0~5V
  transducer output (~80mV) available on request
- accuracy: 0.5%fs
- compensated temperature range: 0~70°C
- materials: 316L SS (pressure membrane), 304 SS (housing)
- construction: all stainless steel housing, rigid and robust
- environment protection: IP68

## Dimensions




Notes:
- Lc = cable length. The standard cable length depends on the measuring ranges of the products. Other length is available on request.
- The product can have its outer diameter of Φ22 and its length of 89 instead of 103, when measuring range ⩾ 4mH2O.
- For customized diemensions, consult BCM.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## Technical Data

| Parameter | | Units | Specifications | Notes |
|---|---|---|---|---|
| measuring media | | | dilute liquids which are compatible with 316L SS | |
| measuring ranges* | | $mH_2O$ | 0~1, ~2, ~5, ~10, ~20, ~50, ~100, ~200 | 1 |
| overload | | %fs | 150 | |
| output signal | for transmitters | | 4~20mA (standard), 1~5V, 0~5V, $I^2C$ | |
| | for transducers | mV/V | ⩾ 15 | |
| power supply | for transmitters | Vdc | 24 (typical), 12, ..., 36 | |
| excitation | for transducers | Vdc | 5, …, 10 | |
| | | mA | 0.5, …, 2 | |
| accuracy | | %fs | ⩽ ±0.5 | |
| long-term stability | | %fs/year | ⩽ ±0.2 (standard), ⩽ ±0.1 is available on requst | |
| response time | | ms | < 1 (10%~90% of leading edge) | |
| input resistance | for transducers | Ω | 2000~8000 | |
| output resistance | | Ω | 3500~6000 | |
| load resistance | for transmitters | Ω | 250~1150 | |
| insulation resistance | | MΩ @500Vdc | > 500 (transducer only) | |
| storage temperature range | | °C | -40~+100 | |
| operating temperature range | | °C | -20~+85 | |
| compensated temperature range | | °C | 0~70 | |
| temperature coefficient of zero | | %fso/°C | ⩽ ±0.02 | |
| temperature coefficient of span | | %fso/°C | ⩽ ±0.02 | |
| process connection | | | submersible in | |
| electrical connection | | | Φ7.3mm, 4-core shielded black PVC cable with/without a vent tube | 2 & 3 & 4 |
| membrane material | | | 316L SS | |
| housing material | | | 304 SS, option: 316 SS available on request | |
| environment protection | | IP rating | IP68 | |
| weight (without cable) | | gram | ~250 | |

Notes: 1. For customer ranges, consult BCM. For ranges ⩽ $0.5mH_2O$, accuracy = 1%fs.
2. 4-core cable for mV and $I_2C$ bus; 2-core cable for 4~20mA output; 3-core cable for 1~5V or 0~5V output.
3. For cable length ⩽0.5m, the output can be $I_2C$ bus without other interface;
For cable length = 1m, ..., 15m, an RS-232 interface is applied to realize $I_2C$ bus.
For cable length > 15m, an RS-485 interface is applied to realize $I_2C$ bus.
4. A vent tube is provided if required pressure type is gauge (relative) pressure.

The listed specifications and dimensions are subject to change without prior notice.

## How to order: model-range-output-accuracy-cable length-customized requests

**Example of Ordering Code**

- standard products: LV36(Φ27)-1mH2O(G)-4/20mA-0.5%fs-(Φ7.3,2-core,shielded,blkPVC,vent,2m)
LV36(Φ22)-10mH2O(A)-4/20mA-0.5%fs-(Φ7.3,2-core,shielded,blkPVC,12m)

- customized products: LV36(Φ22)-10mH2O(A)-4/20mA-0.5%fs-(Φ7.3,2-core,shielded,blkPVC,12m)-(316 SS housing)

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