

# Model LV36 Submersible Liquid Level Transducers and Transmitters with Flush Diaphragm



## Technical Data

Parameters		Units	Specifications	Notes
measuring media			viscous fluid, or fluid with particles which is compatible with 316L SS	
measuring ranges*		mH <sub>2</sub> O	0~1, ~2, ~5, ~10, ~20, ~50, ~100, ~200	1 & 2
overload		%fs	150	
output signal	for transmitters		4~20mA (standard), 0.5~4.5V, 1~5V, I <sup>2</sup> C, SPI	
	for transducers	mV/V	≥ 15	
power supply			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 request	
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	3 & 4 & 5
membrane material			316L SS	
housing material			316 SS	
environment protection		IP rating	IP68	
weight (without cable)		gram	~250	

- Notes: 1. For customer ranges, consult BCM. For ranges ≤ 0.5mH<sub>2</sub>O, accuracy = 1%fs.  
 2. If in your applications the measured medium has different density than water, please inform BCM about the density.  
 3. 4-core cable for mV, I<sup>2</sup>C and SPI bus; 2-core cable for 4~20mA output; 3-core cable for 0.5~4.5V or 1~5V output.  
 4. For cable length ≤ 0.5m, the output can be I<sup>2</sup>C bus without other interface;  
 For cable length = 1m, ..., 15m, an RS-232 interface is applied to realize I<sup>2</sup>C bus.  
 For cable length > 15m, an RS-485 interface is applied to realize I<sup>2</sup>C bus.  
 5. The vent tube is provided in the cable if the pressure type is gauge (relative) pressure. The cable will not be equipped with the vent tube if the pressure type is absolute.

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

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**ROSSMANN ELECTRONIC GmbH**



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## Ordering Information

<b>position (pos.) 1: model</b>						
LV36						
<b>pos. 2: measuring ranges</b>						
1mH2O	10mH2O	100mH2O				
2mH2O	20mH2O	200mH2O				
5mH2O	50mH2O					
Note: Indicate the range as 0/?mH2O, e.g., 0/5mH2O, which is corresponding to the transmitter output options.						
<b>pos. 3: pressure referene</b>						
G: gauge pressure (standard)			A: absolute pressure			
<b>pos. 4: output signal</b>						
15mV/V	4/20mA (standard)	1/5V	0.5/4.5V	I <sup>2</sup> C	SPI	
<b>pos. 5: accuracy</b>						
0.5%fs						
<b>pos. 6: electrical interface</b>						
<p>Φ7.3/2(*)/PVC/vent/2m = Φ7.3mm, 2-core(*) shielded black PVC cable, with a vent tube (for gauge pressure), cable length = 2m, this length is determined by customers.</p> <p>Φ7.3/2(*)/PVC/2m = Φ7.3mm, 2-core(*) shielded black PVC cable, without a vent tube (for absolute pressure), cable length = 2m, this length is determined by customers.</p> <p>(*): 2-core cable for 4~20mA output; 3-core cable for 0~5V or 0~10V output; 4-core cable for mV, I<sup>2</sup>C, and SPI bus.</p>						
<b>pos. 7: customized specifications</b>						
"(*)" is necessary only if any customized parameter is required, otherwise it is neglectable.						
<b>pos.1</b>	<b>pos. 2</b>	<b>pos. 3</b>	<b>pos. 4</b>	<b>pos. 5</b>	<b>pos. 6</b>	<b>pos. 7</b>

### Example of Ordering Code

- standard products: LV36-0/1mH2O-G-4/20mA-0.5%fs-Φ7.3/2/PVC/vent/2m  
LV36-10mH2O-A-15mV/V-0.5%fs-Φ7.3/4/PVC/11m
- customized products: LV36-0/1mDiesel[850kg/m<sup>3</sup>]-G-0.5/4.5V-0.5%fs-Φ7.3/3/PVC/vent/2m  
with the customized medium and medium density.

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## Description

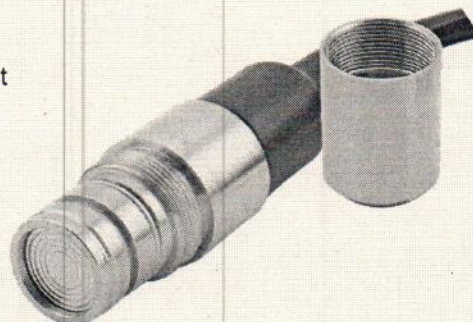
Model LV36 submersible liquid level transducers and transmitters with flush diaphragm is designed for a wide variety of level measurement applications. This model employs BCM piezoresistive pressure sensor and is protected by the stainless steel (SS) housing. Featuring the flush diaphragm makes the LV36 suitable to measure viscous media or media with small particles, so as to have diverse measurement applications.

The standard reference pressure is gauge (or relative) pressure realized through a vent tube in the cable. The reference pressure can also be absolute pressure on request.

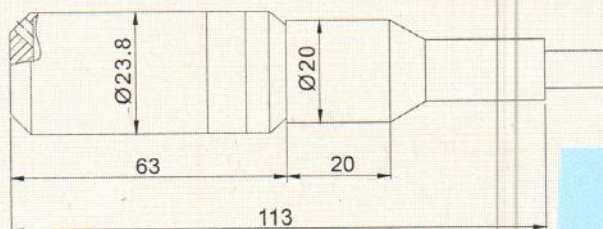
The measuring range of LV36 transmitters spans from 0~1 to 0~200 meter water column (mH<sub>2</sub>O) with measuring accuracy of 0.5%fs (fs = full scale). The output signal of transmitters can be configured to either current loop (4~20mA, standard), voltage output (0.5~4.5V, 1~5V), or digital output (I<sup>2</sup>C or SPI). The millivolt signal directly from the Wheatstone bridge circuit is also available on request (transducer version).

## Features

- measuring ranges: 0~1mH<sub>2</sub>O, ..., 0~200mH<sub>2</sub>O
- output signal: 4~20mA (standard), 0.5~4.5V, 1~5V, I<sup>2</sup>C, SPI, transducer output (~80mV @5Vdc) available on request
- accuracy: 0.5%fs
- compensated temperature range: 0~70°C
- materials: 316L SS (pressure membrane), 316 SS (housing)
- construction: all stainless steel housing, rigid and robust
- environment protection: IP68



## Dimensions



Note: All dimensions are in mm.

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