

MICROPULS LR50

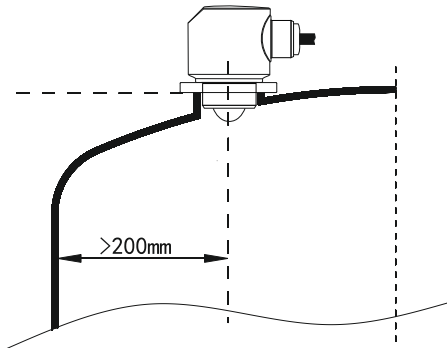
Radar Level Sensor

Two wire 4...20mA / HART / RS485-Modbus



Installation

G1 ½" lower thread connection can be used for tanks. For assembling on tank it is recommended to place the sensor in the middle of half-diameter of the silo. The mounting axis of the sensor must be at least 200 mm from the silo wall. When assembling closer to the wall attention should be paid to any surface in the inner wall that may cause signal reflection.



Technical Specifications

Measuring range	15m(Liquid)
Accuracy	± 2mm
Process connection	G1 ½" threaded
Process pressure	-1 ... 1 bar
Process temperature	-40...110°C
Operating frequency	80Ghz
Measuring angle	8°
Power supply	12...30V DC
Protection class	IP68 / IP66-68

Application Areas

MICROPULS LR50 is a full covered radar level sensor with IP68 housing that meets all expectations especially in open fields for level measurement of stream, river, lake and dam, in water channels, in water and waste water plants and for sensor that has a prospect of staying underwater and where high sealing is necessary. It has direct cable output. The PVDF antenna structure allows it to be used in many aggressive chemicals. Also thanks to the bluetooth feature, it allows adjustment without approaching the tank or dangerous area.

Measuring Principle

Frequency modulated continuous wave (FMCW) is adopted in radar level meter (80G). The antennatransmits the high frequency and frequency modulated radar signal. The frequency of the radar signal linearly increases. The launched radar signal is received by the same antenna at the same moment after it is reflected by measuring media. The frequency difference between emission signal frequency and receipt signal frequency is proportional to the measured distance. For the collected frequency difference signal, its frequency spectrum of reflecting echo is worked out through Fast Fourier Transform (FFT), based on which the distance of the target to be measured is calculated.

Advantages

- Full closed IP68 structure
- Non-contact measuring principle
- High sensitivity
- Maintenance-free structure
- Easy assembly and adjustment via bluetooth

Body and Material

All wet surfaces of the sensor are made of PVDF material. There are no cable terminals on the body. In case the sensor is under water, any formation that may leak into the body is not allowed, it has a direct cable outlet.

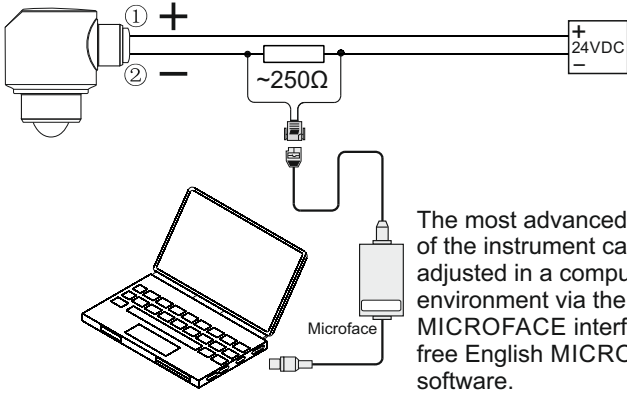
Electronic Options

Sensor electronics are produced as 12...30V DC two-wire 4...20mA HART® or 9...27V RS485 MODBUS according to customer request. They're filled and protected against moisture and vibration.

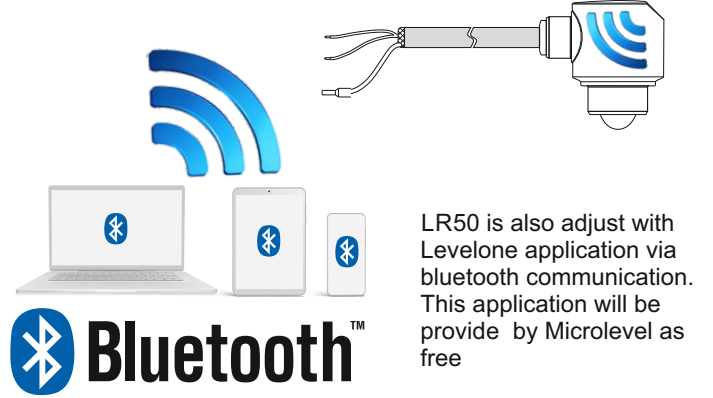
Certificates

Micropuls LR50 has Ex ia IIC T4...T6 Ga certificate

Connection and Adjustment via PC

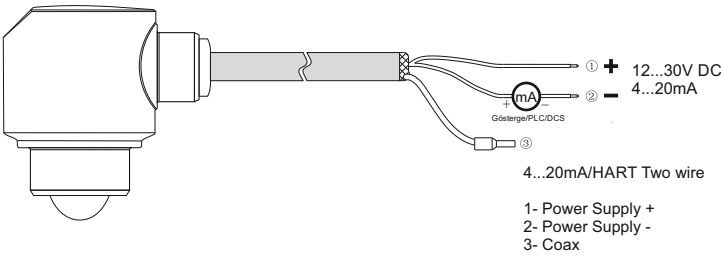


Adjustment with Bluetooth



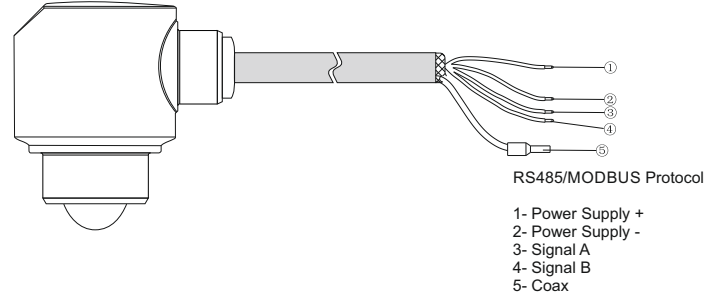
4...20mA HART Connection

The sensor has a system known as two-wire which is operateable with 12...30V DC and which has an 4...20mA output on the same line. The (+) end of the power supply is directly connected to the sensor end 1 and PLC, DCS, indicator and control devices are serially connected to the (-) line 2.

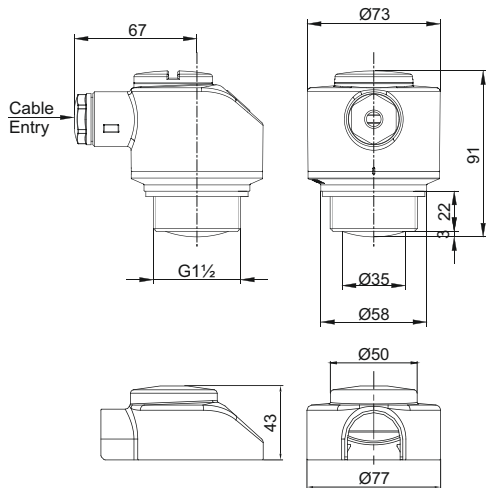


RS485 Modbus Connection

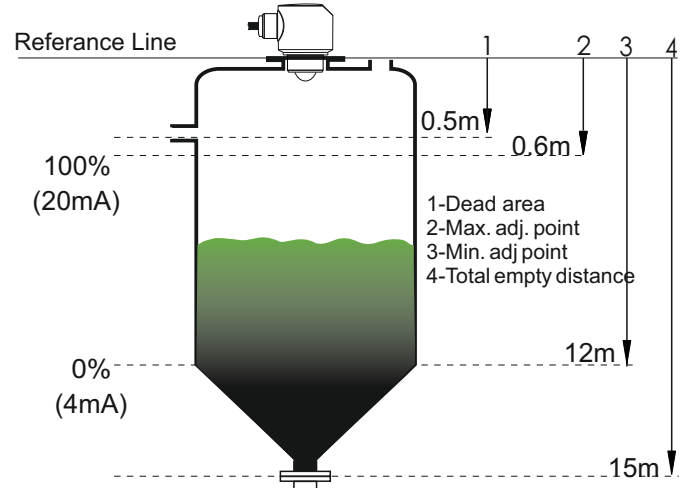
The device features an isolated RS485 output provides a power voltage between 6...30V and supports MODBUS communication protocol.



Tecnical Dimensions



Min. / Max. Adjustment



Applications / Points to Note

