

MICROPULS 61

Radar Level Sensor

4...20mA / HART two wire



Technical Specifications

Measuring range	up to 15/30/70 meter
Accuracy	± 3/10/15mm
Process connection	Threaded, mounting strap or flanged
Process pressure	-1 ... 3 bar
Process Temperature	-40...100°C
Operating frequency	26 Ghz
Measuring angle	6°/12°(Acc. to antenna size)
Power supply	14...36V DC
Protection class	IP68

Application Areas

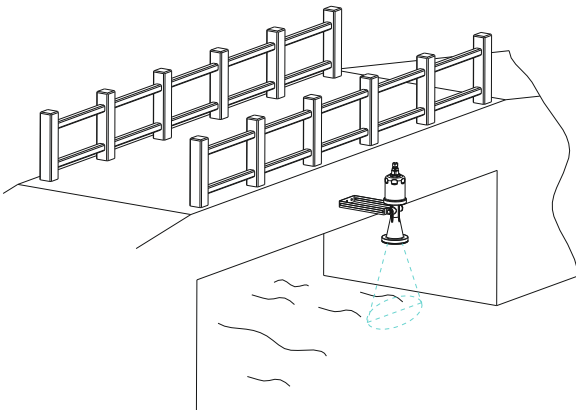
MICROPULS 61 is a full covered radar level sensor with IP68 housing that meets all expectations especially in open fields for level measurement of stream, river, lake and dam, in water channels, in water and waste water plants and for sensor that has a prospect of staying underwater and where high sealing is necessary. In case of need it can be used with a connection flange in liquid tanks such as chemicals, oil, solvent etc. and in all liquid and process tanks where there is no extreme pressure and heat. Thanks to the flow table inside the sensor is also suitable for use as flow measurement in all kinds of open channel such as Parshall, Rectangular weir, V Notch etc.

Measuring Principle

Powerful radar waves will be sent with short pulses to the medium surface by the antenna system. These waves are reflected by the product surface and received again by the antenna system. Depending on the time from emission to reception of the wave the level is measured by determining of the distance.

Installation

In both 1" threaded connection on sensor and optional DN80 flange or mounting strap can be used for mounting in open fields. 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.



Advantages

- Full covered IP68 structure
- Non-contact measuring principle
- High sensitivity
- Maintenance-free structure
- Mounting strap thread or flange connection possibility

Body and Material

All wet surfaces of the sensor is made from PA66 material and the inside from aluminum casting. Optionally PVDF and PP material can be used for full compact covered flange version.

Electronic Options

Sensor electronics are available according to customer demands and process requirements as two-wire 4...20mA/HART® or S485. They're filled and protected against moisture and vibration.

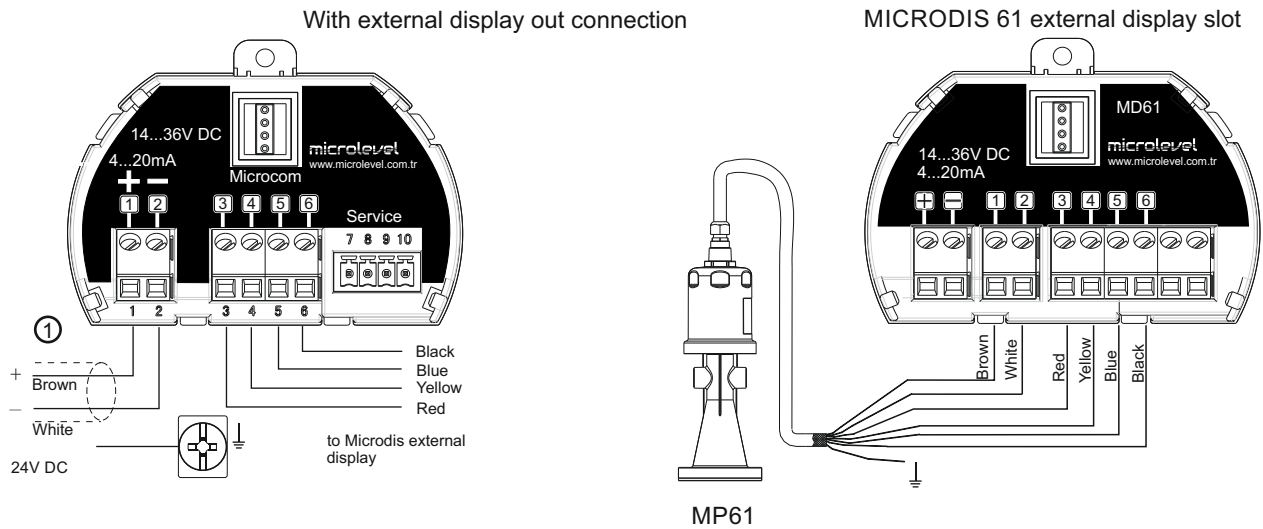
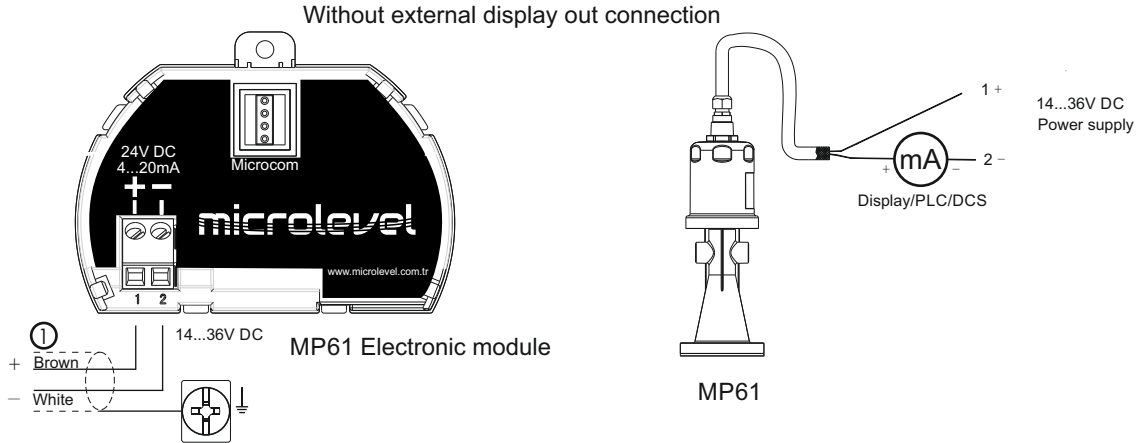
Certificates

MICROPULS 61 has an ATEX approval for use in hazardous areas. The instrument also has CE approvals for EMC Directive 2004/108/EC EN61326-1: 2006 EN61326-2-2: 2006 and Low voltage Directive 2006/95/EC EN 61010-1: 2010.

Electrical Connections

□ 4...20mA HART

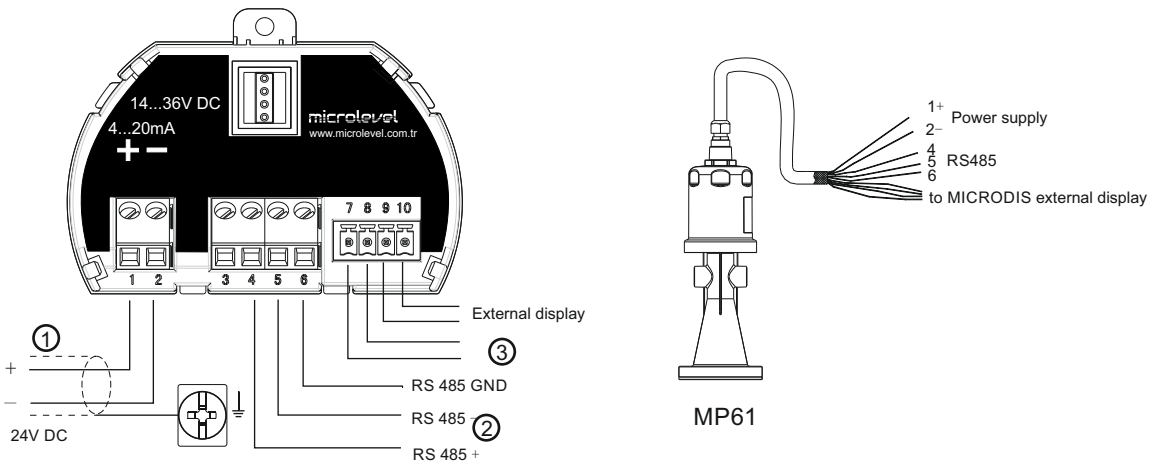
The sensor has a system known as two-wire which is operable with 14...36V DC and which has an 4...20mA output on the same line. The (+) end of the power supply is directly connected to the sensor end 1 and PLC, DCS, indicator and control devices are serially connected to the (-) line 2.



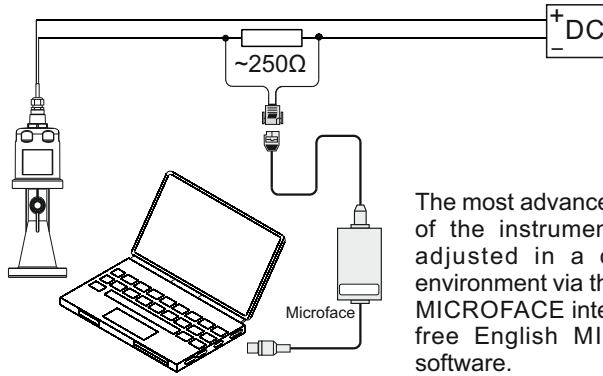
□ Rs485 Modbus

6...24V isolated RS485 out, support MODBUS communication protocol

1-(1,2) 6...24V DC Power supply 2-(4,5,6) RS485 out interface 3-(7,8,9,10) external display out

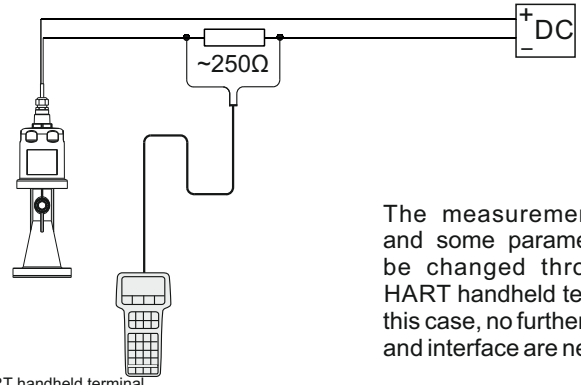


Connection and Adjustment via PC



The most advanced settings of the instrument can be adjusted in a computer environment via the optional MICROFACE interface with free English MICROWIN software.

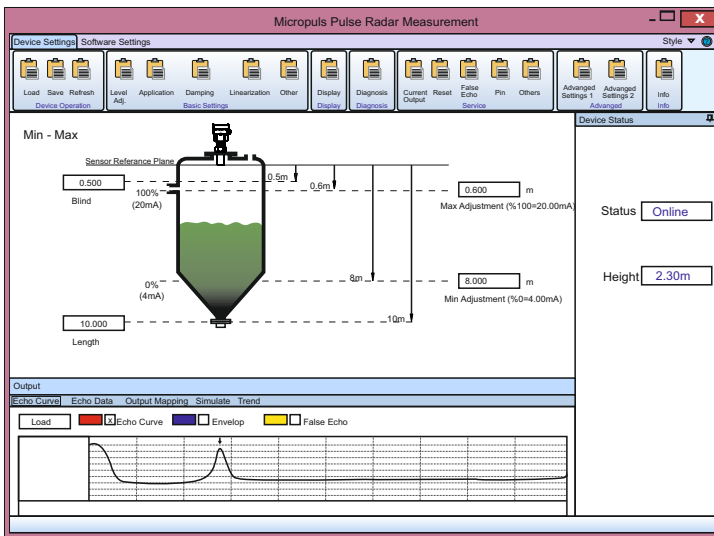
Adjustment with HART Handheld Terminal



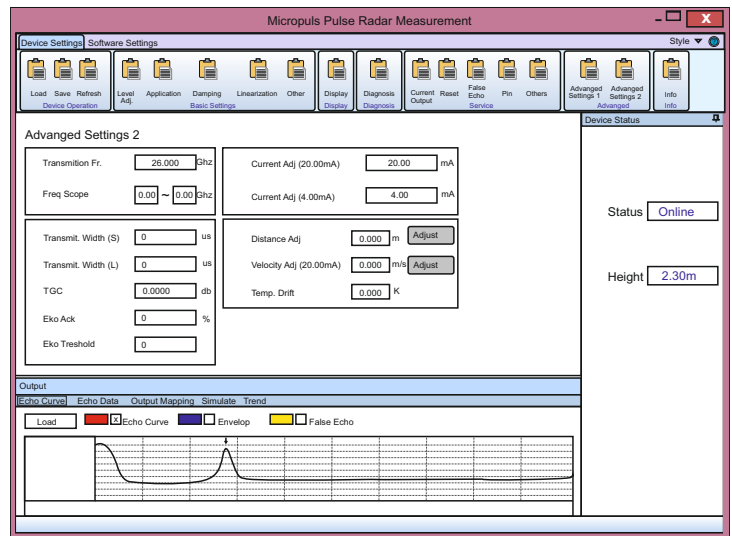
The measurement range and some parameters can be changed through the HART handheld terminal. In this case, no further software and interface are needed.

HART handheld terminal

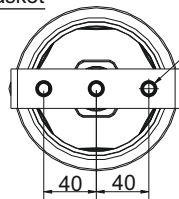
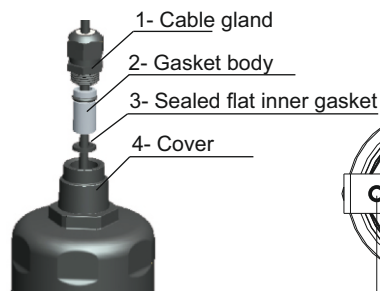
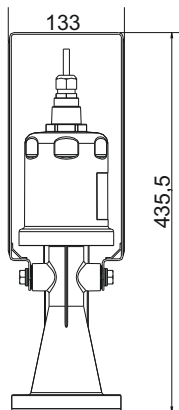
Adjustment with Software



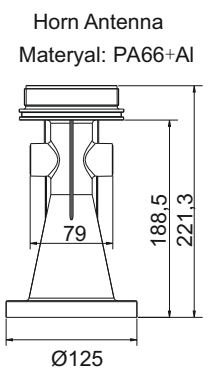
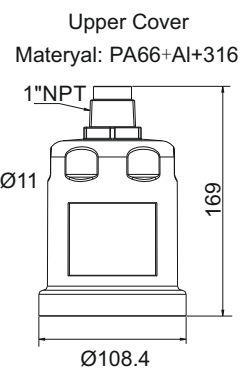
Advanced Parameter Setting



Technical Dimensions



Technical Dimensions (Housing)



Various Applications / Considerations

