SENSORS & CONTROLLERS

ANALYZERS & SAMPLERS

LEVEL, FLOW & PRESSURE

WEB APP & DATALOGGING

ACCESSORIES

RDR 81 DATASHEET

RADAR LEVEL TRANSMITTER

MAIN FEATURES

- Non-contact continuous level measurement
- For liquids (max 20m) and solids (max 10m)
- 80GHz radar pulses
- Visualisation and configuration on removable display module
- Output: 4...20mA; 2 x configurable relays
- Remote control via smartphone

APPLICATIONS

- Wastewater
- Food and Beverage
- Pulp and paper
- Chemical industry
- Swimming pool
- Fish farming
- Drinking water
- Electroplating
- Cooling towers

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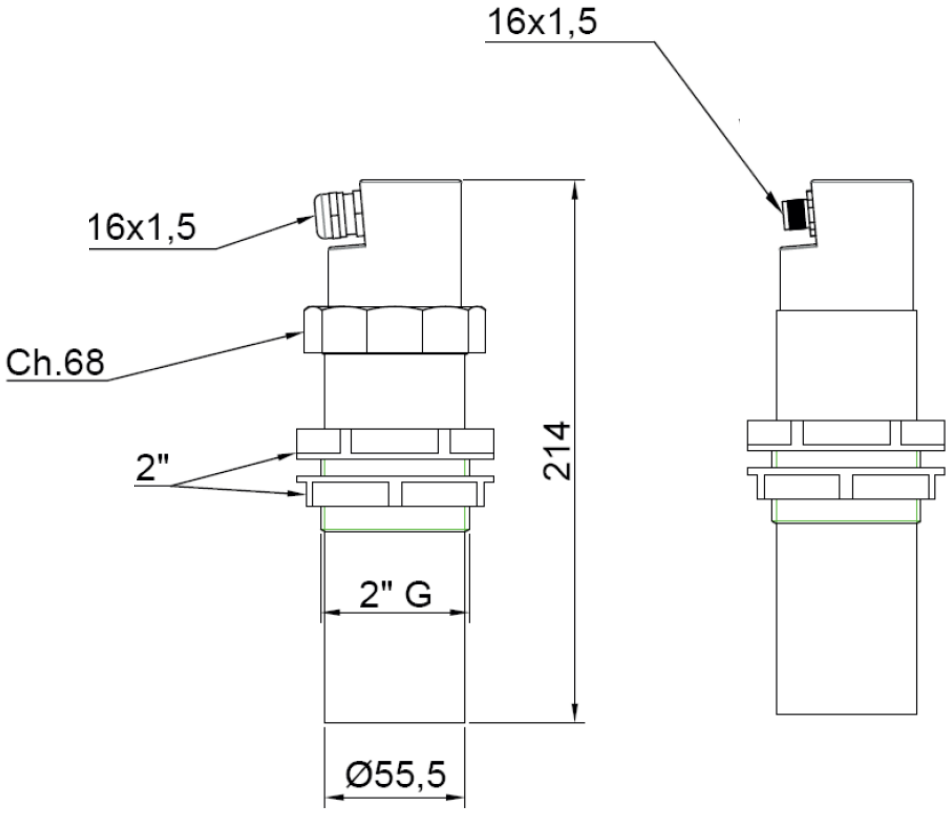
TECHNICAL DATA

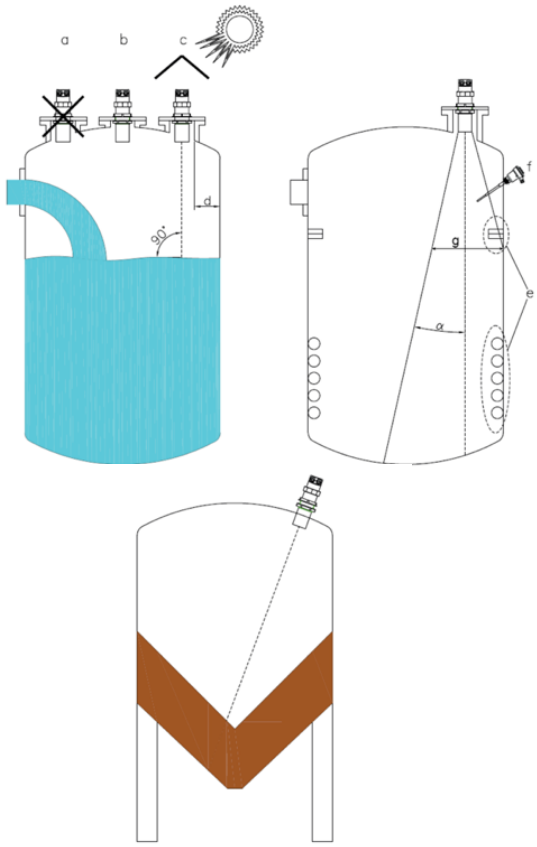
Housing / sensor material	PP
Mechanical installation	2 "GAS M (DN80 PP flanges optional)
Degree of protection	IP66 / IP68 (Sensor) - IP68 optional
Electrical connection	Terminal blocks or waterproof connector cer. IP68 (optional)
Working temperature	-30... 70°C; 80°C not continuous
Pressure	0.5 to 1.5 bar (absolute)
Power supply	24Vdc
Absorbed power	5W peak; 2.5W average
Analogue output	4 ... 20mA, max 750ohm
Relay in output	N° 2 3A 230Vac (n.a.)
Digital communication	Modbus RTU
Maximum measuring range	0.05...20mt The distances expressed are valid for measurements from perfectly reflective surfaces, otherwise the maximum measurable distance is degraded
Block distance	0.05m
Accuracy	± 0.2% (of the measured distance) however not better than ± 3mm.
Resolution	2mm
Calibration	Vers. IP66 display optional - 2 buttons - Modbus / vers. IP68– Modbus / Bluetooth via dedicated App
Visualization	VL611 programming module (optional)

DIMENSIONS



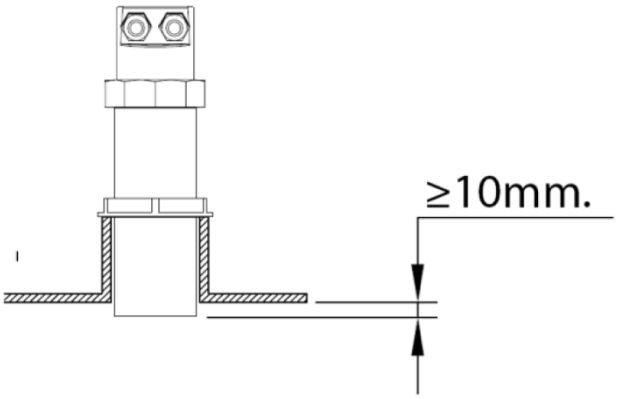
MOUNTING POSITION

- Leave a minimum distance of 300mm between the sensor and the smooth wall of the tank (d).
- Use a cover (c) to protect the sensor from rain and direct light.
- Do not install the sensor near the loading area (a).
- Make sure that in the emission beam (lobe "α" 5 °) of the probe there are no obstacles (f-e) that can be intercepted as a level.



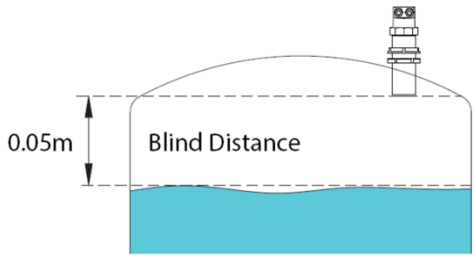
INSTALLATION IN SOCKET

When installing the RDR81 sensor in a socket, make sure that the emitting part protrudes at least 10mm from the socket itself.



BLOCK DISTANCE

- During installation it is important to remember that there is a BLIND ZONE near the probe (or BLIND DISTANCE) of 0.05m within which the sensor cannot measure



PRESENCE OF AGITATORS

The level measurement is however made possible thanks to the automatic measurement filtering system.

Only rarely is it necessary to adjust the filter setting by acting on 2 programming parameters of the RDR81 sensor:

- FILTER: this parameter is present in the quick configuration menu and in the SETUP menu advanced configuration; increasing the value of this parameter decreases the sensitivity of the sensor to sudden changes in the level by increasing the response delay.

- WINDOW: this parameter is present in the SERVICE menu of advanced programming; decreasing the programmed value of this parameter increases the immunity of the sensor to false echoes.