

# SMR61 Radar Level Meter

**RS485 Communication. All-in-One Compact Housing.**

The Radar Level Meter is connected directly via RS485 communication interface, providing simple, reliable, cost-saving process data with remote monitoring, calibration, configuration and diagnostic capabilities. Housing in a robust IP68 proof enclosure, 1500 N tensile strength Kevlar reinforced cable, up to 1.2 km digital data transmission, the transmitter is ideally used in water/wastewater industry.

## Advantages

- All-in-One Compact Housing, Built-in Transmitter and Sensors
- Robust IP68 Water Submersible Protection, Directly Installed in the Field, No Cabinet Required
- 80 GHz Superior Focusing Radar Beam, Beam Angle Less than 6° to Avoid Obstacles and Build up in Confined Spaces
- 120 dB Wide Dynamic Range to Accurately and Reliably Measure Poorly Reflective Liquides, Liquid down to Bottom level, Even with Surface Foam, Extremely Turbulent Flow, and Condensation on Antenna
- High Resistant PVDF Antenna for Long Service Life in Harsh Environment such us Sewers, Wastewater Treatment Plant, Chemical Tanks
- Advanced Intelligent Algorithm and Signal Processing Technology to Eliminate Echo Noise
- Surcharge Hydrostatic Level Sensor, Continue to Provide Uninterrupted Level Masurement
- Plug & Play, On-line Realtime Measurement
- Ultra Low Power Consumption, Ideal for Outdoor Applications
- 1500 N Tensile Strength Kevlar Reinforced Cable
- Surge Protection for Power and RS485 Communication
- RS485 Digital Communication, Minimize Cabling and Engineering Cost
- Standard Modbus RTU Protocol, Direct Connected with PLC, HMI
- Onboard Memory Allowing Users Easily Calibrate and Configure Sensor at Lab and Distribute to Various Fields Sites
- AQCFG Software Tool for Data Monitoring, Calibration, Configuration and Diagnosis

## Applications

Stormwater, surface water, wastewater

## Measurement Method

The sensor combines proven radar measurement technology with state-of-the-art spectral signal processing technology to provide a reliable and accurate way to measure level.

## Installation

Submersible, flow through, pipe insertion



## Specifications

<b>General</b>	
Output Signal	RS485 (Modbus RTU protocol), 19,200 bps, 8 data bits, no parity, 1 stop bit; 4~20 mA
Data Resolution	16 bits (0.001% FS)
Surge Protection	1,500 VDC
Power	5~12 VDC, 0.5 A
Protection	Polarity, Overload, Short circuit
Safety	CE, FCC
<b>Radar Level</b>	
Frequency	80 GHz
Angle	6°
Measurement Range	SMR61-1: 0 ~ 15 m ; SMR61-2: 0 ~ 30 m
Accuracy	±1 mm
Resolution	0.1 mm
Operating Pressure	-1 ~ 3 Kg/cm <sup>2</sup>
Operating Temperature	-40~85 °C
Response Time	1 sec
Protection	IP68
Connection	1"-11 PT; M16 plug fixed cable ; M12 connector, 5-pin
Housing Material	POM (housing) ; PVDF (antenna)
Cable	Kevlar reinforced PUR cable, 1500N tensile strength
Dimensions	ø 90 X 204.8(H) mm (no hydrostatic level sensor) ; ø 90 X 243(H) mm (includes hydrostatic level sensor)
Weight	transmitter: approx. 1.2 Kg (no hydrostatic level sensor), 1.5 Kg (includes hydrostatic level sensor); cable: 80 g/m
<b>Hydrostatic Level</b>	
Measurement Range	0~3 m ; 0~10 m (optional)
Accuracy	±0.1% FS (SS316L); ±0.25% FS (Titanium)
Resolution	0.01% FS
Repeatability	±0.025% FS
Stability (annual)	±0.1% FS
Safety Load	3 X measurement range
Rupture	>4 X measurement range
<b>Temperature</b>	
Sensor	Pt1000
Measurement Range	-30~75 °C
Accuracy	± 0.1 °C
Resolution	0.01 °C
Repeatability	0.1 °C

### Ordering Codes

#### Ordering Codes

#### Measurement Range(m)

0~15 m

1

0~30 m

2

#### Sensor

None

0

Hydrostatic Level

2

Hydrostatic Level + Temperature

3

#### Cable Length (m)

5

#### Cable Type

PUR

#### Housing

POM

#### Wiper

None

#### Wire Connection

Bare Wire

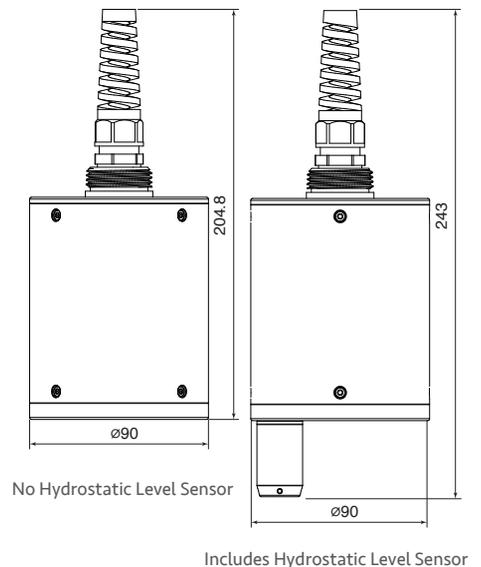
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M12 Connector

1

SMR61 - 1 - 0 - 005 - 3 - 0 - 0 - 1

### Dimensions



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