

Sanitary “Smart” Radar Level Measurement Sensors



MODEL	RANGE In Liquids	RESOLUTION	TRI-CLAMP Fitting
R3-50S 3-wire, DC	* to 50' (* to 15m)	0.22" (5.7mm)	2.0"
R3-100S 3-wire, DC	* to 100' (* to 30m)	0.44" (11mm)	2.0"
R4-50S 4-wire, AC	* to 50' (* to 15m)	0.22" (5.7mm)	2.0"
R4-100S 4-wire, AC	* to 100' (* to 30m)	0.44" (11mm)	2.0"

* Minimum distance starts at the lower tip of the antenna.

Features

- Programmable and push-button calibration
- Output: 4-20 mA/20-4 mA (isolated on 4-wire models only)
- PLC compatible (Modbus RTU)
- 3- or 4-wire operation

Applications

- Food and beverage
- Water
- Pharmaceutical

Specifications

Electrical:

Power – AC: 115 VAC, 60 Hz or 230 VAC, 50 Hz ($\pm 20\%$), 1.7 VA
DC: 12 to 30 VDC, 0.07 Amps max. @ 24 VDC
R Load = $(V_s - 6)/24$ mA

Output – 4-20 mA output, 6.1 μ A resolution; 750 ohms (isolated on 4-wire models only)
RS232 or RS485 communications port

Operational:

Operation – Pulse radar

Accuracy – $\pm 0.1\%$ of maximum range in lab using 4-20 mA current output
 $\pm 0.25\%$ of maximum range (typically in field)

Frequency – 5.8 GHz or 6.3 GHz

Loss of Echo Hold – 30 seconds, 22 mA output time

Transmitter Power – 50 μ W average

Calibration – Programmable via communications port or push button

Diagnostics (Echo Profile) – Via communications port

Antenna Dielectric Rod – Polypropylene (standard), PTFE (optional)

Decoupler – Polypropylene (standard), PTFE (optional)

Environmental:

Operating Temperature Range – -40°C to 60°C (-40°F to 140°F)

Installation Category – Class II

Approvals – FCC Part 15 – low-power communication device

Mechanical:

Conduit Entry – 1/2" NPT standard

Enclosure – Aluminum (standard) or stainless steel 316L (optional)

Ingress Protection – NEMA 4 (IP65)

Mounting Options – Swivel socket (galvanized steel); PVC flange with 3"-8 NPT thread

Process:

Temperature – PTFE Rod: -40°C to 204°C (-40°F to 400°F) with tri-clamp

Material Dielectric – Class II

Pressure – 1-10 BAR, 15-150 PSI

Approvals:

CE approval on 5.8 GHz models

Consult factory for others

All specifications are subject to change without notice.



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