



## *R Series*

### **Radar Level Sensors**



Madison Company offers a series of low-cost radar sensors for continuous level measurement. This product series offers a logical extension to the ultrasonic sensor series, where application conditions are in need of non-contact liquid level measurement, and where ultrasonic level measurement is not acceptable.

As with all Madison products, this radar technology can be designed for your specific level measurement needs, providing unique considerations for materials to be measured, vessel configuration and system interface.

These radar level sensors are ideal for reflective liquids that have a foaming surface or vapor conditions beyond ultrasonic wave capabilities.

## ***Features***

- Non-contact measurement
- Continuous level measurement
- Pulse radar measurement range 10" to 100' (0.254m to 30m)
- Networkable, multi-sensor with available software
- Programmable and push-button calibration

## ***Applications***

- Various liquids and solids

# Specifications

## Electrical:

**Power Options** – 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, 6.1 uA resolution; 750 ohms (isolated on 4-wire models only)  
Optional RS232 or RS485 communications port

## Operational:

**Accuracy** –  $\pm 0.25\%$  of max. target range (in air)

**Frequency** – 5.8 GHz or 6.3 GHz

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

**Transmitter Power** – 50 uW average

**Calibration** – Programmable via communications port

**Diagnostics (Echo Profile)** – Via programmable port

**Antenna** – Dielectric rod

## Environmental:

**Operating Temperature Range** –  $-40^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $140^{\circ}\text{F}$ )

**Installation Category** – Class II

**Approvals** – FCC Part 15 – low-power communication device  
– CE – 5.8 GHz models

## Mechanical:

**Conduit Entry** – 1/2" NPT standard

**Housing** – Aluminum or stainless steel 316L (optional)

**Ingress Protection** – NEMA 4 (IP65)

**Decoupler** – Polypropylene

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

## Options:

PTFE antenna or sanitary PTFE antenna

1.5" or 2" NPT PTFE decoupler for high-temperature applications

Sanitary designs

Antenna extension: 6" or 8"

## Approvals:

Consult factory

*All specifications are subject to change without notice.*



*Sensor solutions for today and the future™*



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