

We offer a complete line of standard models of advanced ultrasonic level measurement sensors for liquids and solids from Madison, USA. Madison's ultrasonic sensors rely on high-frequency sound waves above the range of human hearing (over 20,000 hertz) to measure level. These sensors use ultrasonic sound waves to sense the level of liquids, solids or powders in airbased containers, tanks and vessels of all sizes and shapes.



### Features :

- ✓ Range: 0.40' to 90' (0.12m to 27.2m).
- ✓ Self-cleaning sensor face.
- ✓ Pulse ultrasonic technology.
- ✓ Temperature compensated.
- ✓ Networkable, multi-sensor with available software.

### Features :

- ✓ Push-button calibration.
- ✓ Elimination of unwanted echoes.
- ✓ Automatic adjustment of power and sensitivity to any environment.
- ✓ Non-contact continuous level measurement.

### Applications :

- ✓ Food and beverage.
- ✓ Water and wastewater.
- ✓ Chemicals and oils.
- ✓ Various liquids, slurries and solids.

### Specifications :

#### Electrical:

Power Options: 115 VAC/ 60 Hz or 230 VAC/ 50 Hz (± 20%) 1.7 VA.  
12 to 30 VDC, 0.07 Amps max. @ 24 VDC.

$$R_{load} = (V_s - 6)/24 \text{ mA.}$$

Output: 4-20 mA or 20-4 mA, 6.1µA resolution; 750 ohms (isolated on 4-wire models only).

Communication: RS232 or RS485 communications port.

Fuse: 0.125 Amps/250 V type 2AG.

#### Operational:

Accuracy: ±0.25% of max. target range (in air).

Beam Angle: 6-12 degrees at -3 dB (model dependent).

Loss of Echo Hold: 30 seconds, 22 mA output.

Temperature Compensation: Onboard sensor.

Calibration: Push-button or optional programmable.

Diagnostics (Echo Profile): Via optional programmable port.

Dead Zone Range: Model dependent or engineered to minimum.

#### Environmental:

Operating Temperature Range: - 40°C to 60°C

Pressure: 1 BAR (15 PSIG max.)

#### Mechanical:

Conduit Entry: 1/2" NPT hole (PVC only)

Enclosure: PVC-94V0

Ingress Protection: IP65

Housing: PVC, Kynar, CPVC

#### Optional Features:

Sanitary designs.

BSP thread types.

Various housing materials (may affect approval).

High-temperature designs (125°C).

Remote display.

Other **PEPL Products** : Indicators, Controllers, Isolators, Converters, Timers, Electrical Transducers, Flow Totalizers, Alarm Annunciators, Temperature Scanners/ Temp. Max Transmitters, Speed Measuring Instruments, PLC, SCADA, HMI, AC Drive, Ultrasonic/Radar level Transmitters, Wireless Radio and CCTV etc.

Madison's (USA) radar sensors use improved microwave pulse technology to track any target material from the tip of its antenna to the bottom of the tank. Their power, pulse widths and sensitivity depend on the distance of the target from the antenna and the dielectric constant of the reflecting material. The antenna is offered in Polypropylene or an optional high-resistance PTFE (Teflon®) that resists material build up.



*Radar Level Sensor*

## Features :

- ✓ Pulse radar measurement range 10" to 100' (0.254m to 30m).
- ✓ Non-contact continuous level measurement.
- ✓ Networkable, multi-sensor with available software.

## Features :

- ✓ Microwave pulse technology.
- ✓ Simple push-button calibration.
- ✓ Elimination of unwanted echoes.
- ✓ Low dielectric mode.
- ✓ Diagnostics and data logging software.

## Applications:

- ✓ Food and beverage.
- ✓ Water and waste water.
- ✓ Chemicals and oils.
- ✓ Various liquids, slurries and solids.

## Specifications :

### Electrical:

Power Options: 115 VAC/ 60 Hz or 230 VAC/50 Hz (± 20%), 1.7 VA.  
12 to 30 VDC, 0.07 Amps max. @ 24 VDC.

$R_{load} = (V_s - 6) / 24 \text{ mA}$ .

Output: 4-20 mA, 6.1  $\mu$ A resolution; 750 ohms.  
(Isolated on 4 - Wire models only).

Communication: RS232 or RS485 communications port.

### Operational:

Accuracy: ±0.25% of max. target range (in air).

Frequency: 6.3 GHz.

Loss of Echo Hold: 30 seconds, 22 mA output.

Transmitter Power: 50  $\mu$ W average.

Calibration: Push-button or optional programmable.

Diagnostics (Echo Profile): Via optional programmable port.

Antenna Dielectric rod.

### Environmental:

Operating Temperature Range: -40°C to 60°C (Available upto 204 °C)

Installation Category: Class II.

Approvals: FCC Part 15 low-power communication device.

### Mechanical:

Conduit Entry: 1/2" NPT standard.

Housing: Aluminum or stainless steel.

Ingress Protection: IP65.

Specifications are subject to change without prior notice.

### Manufacturing facilities :

**Pyrotech Electronics Pvt. Ltd.**  
F-16 A, Road No. 3, MIA, Udaipur-313003  
Ph. : 91-294-2492123-25, Fax : 2492126  
Email : pyrotech@peplelectronics.com  
Web: www.peplelectronics.com

### Delhi office :

**Pyrotech Electronics Pvt. Ltd.**  
917-920, International Trade Tower  
Nehru Place, New Delhi - 110019  
Ph. : 91-11-26443694, Fax : 26464922  
Email : pmpp@pyrotechindia.com

### Branch Offices :

Bangalore - 09342530078  
Baroda - 09327226863  
Bhopal - 09329476677  
Durgapur - 09332271711  
Hyderabad - 09391385939  
Jamshedpur - 09334625450  
Muzaffarnagar - 09358919280  
Lucknow - 0933-5232330  
Nagpur - 09372391487  
Raipur - 093-29485257  
Rourkela - 09337407452

### Our Associates :

Chennai - 09840177668  
Kolkata - 03323241105  
Korba - 09425532765  
Mumbai - 09322676597  
Tinsukia - 09435035800  
Vizag - 08912550479