

Effective: October 2015

Supplement 1100-44R

KING-GAGE®

Tank Level Transmitter

Tank Liquid Level

Inventory Monitoring

Process Integration

LevelWAV Radar Level Transmitter

- Advanced Smart Radar Improves Reliability
- Compact Size for New or Retrofit Applications
- Sanitary Configurations for Food & Dairy

KING-GAGE LevelWAV microwave level transmitter provides continuous measurement of liquids in storage or processing vessels. Measurement is independent of dielectric constant, temperature, pressure and density variations. It is suitable to a broad range of level measurement and control applications including process conditions exhibiting visible vapors, foam, high temperature and/or pressure. Level measurement is possible for highly corrosive materials (caustics, acids, solvents) and slurries.

LevelWAV utilizes advanced smart circuitry that automatically adjusts transmit energy and receiver gain to detect only the reflection from the measured material in the tank. 2-wire technology is easy to install and simplifies wiring requirements at the tank. Accurate and reliable operation with no moving parts or product contact eliminates the maintenance requirements of other level technologies.

The compact size and mounting footprint makes tank top mounting of the LevelWAV radar transmitter suitable for even tight spaces. Radar level measurement is a practical solution in retrofit applications to replace failing or erratic level transmitters. Model offerings include sanitary configurations with stainless steel construction and food-grade PTFE antenna cover.



LevelWAV
Model 3700

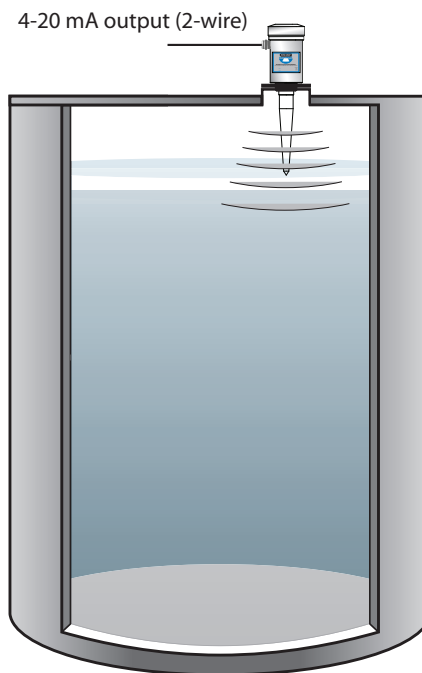
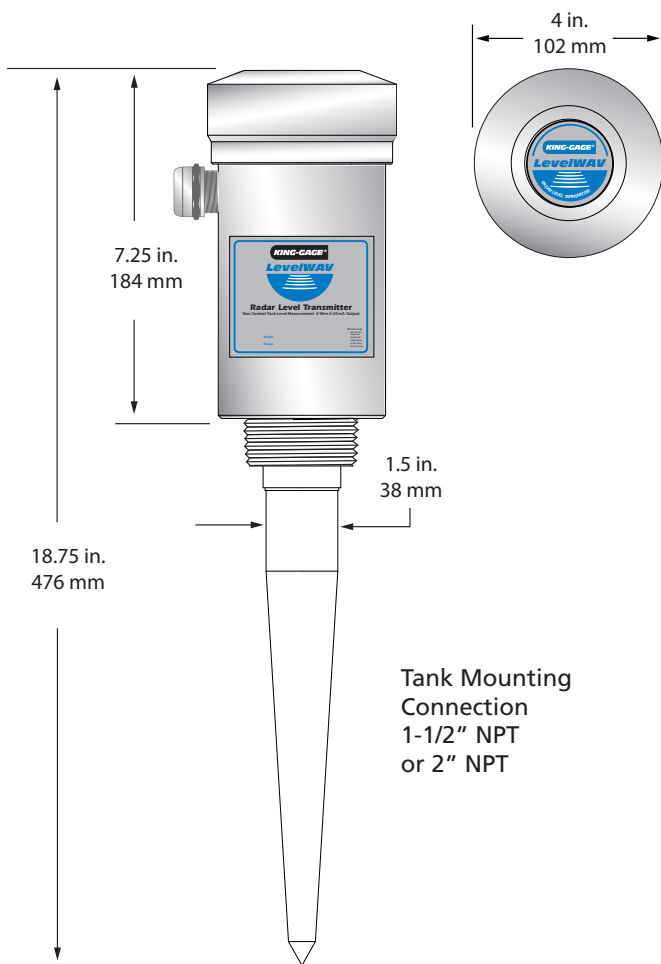
Applications

**Food/beverage • Chemical/Petrochemical • Energy Generation
Pharmaceutical • Water/wastewater • Pulp & Paper • Marine**

Radar Level Transmitter

Microwave pulses are emitted into free space where they are reflected by the liquid surface. Using the time of flight (ToF) principle, the returning echo is received at the device which determines the distance to the liquid surface. Pulse burst radar does not require the greater power and more complex processing needed for frequency modulated continuous wave radar transmitters. KING-GAGE LevelWAV radar level transmitters are more proficient at sorting through extraneous echoes and isolating the one generated by the actual level. Thus, they provide more accurate level measurement and reliability regardless of changes to specific gravity, dielectric constants* or conductivity of the liquid in the tank.

Minimum dielectric constant must be greater than 2.0



Pulse burst microwave (radar) energy is emitted downward and echos back from the liquid surface. Smart circuitry adjusts the transmit energy and receiver gain to distinguish level from any other reflected signals due to the tank structure.

Specifications

Pulse burst non-contact radar transmitter

Radar Frequency

6.3 GHz

Process Connection

1-1/2" NPT or 2" NPT

Housing

Polished aluminum (standard) - with polypropylene antenna cover

316 stainless steel (optional - sanitary configuration includes PTFE antenna cover)

Environmental Rating IP68 (NEMA 6)

Temperature

Ambient -40 °F to 140 °F (-40 to +60 °C)

Process -40 °F to 176 °F (-40 to +80 °C)

Pressure (Process)

5 bar (72 psi)

Accuracy: ± 0.25% of range

Maximum Measurement 0-15m (0-50 Ft.)

Optional extended ranges - consult factory

Output

2-wire analog 4-20mA_{dc}

Power Requirement

20-35 V_{dc}

Maximum Load (Resistance)

33 ohms @35V_{dc}

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