

Radar Level Gauge Application Report 32

- Level monitoring at water tank -



The KRG-10 radar level gauge features accurate, non-contact, level measurement with simple installation over a target fluid. In applications such as solid or powder process tanks where the sensing elements of contact type level instruments are exposed to stuck and substance adhesion, non-contact means of measurement which are unencumbered by such concerns are preferable for durability and reliability of measurement.

At this particular site, the KRG-10 is installed at a tank beside of large fuel Oil tank and measuring water level to monitor underground water level. If the underground water level increased near to oil tank, it will have buoyancy pressure to float the tank. If tank will be emptied even underground water level increased, the tank will be damaged and broken. To avoid damage to the tank, high accurate measurement is required in any environments. Hence Non-contacting radar level gauge KRG-10 is the most appropriate solution for this purpose.

Other popular measurement methods include ultrasonic level gauges are also frequently employed as a non-contact means of level measurement. This type of gauge measures the round-trip transiting time of high frequency sounds to and from the surface of a fluid and converts this into distance. Ultrasonic level gauges however are easily affected by dust, fog, vapor, pressure, temperature changes, and other environmental factors.

Radar level gauges, which incorporate electromagnetic waves (microwaves) on the other hand, do not require direct contact with Fluid, density parameters or complex capacitance comparisons. Microwave-based level gauges are also least affected by ambient conditions.

In addition, the KRG-10 radar level gauge offers HART 2-wire loop communication protocol so customers can change any parameter from a central computer station with PC and configuration software. The KRG-10's 4-key input menu display also allows parameter setting on site as an alternate method.

	KRG-10	Pressure	Capacitance	Ultrasonic
Non- Contact	○	×	×	○
Vapor / Dust (High Temp & High Humidity)	○ Least affected	○ Not affected	×	×
Temp. Change	○ Least affected	○ Not affected	○ Not affected	×
Sediment	○ Not affected	×	○ Not affected	○ Not affected
Durability	○ Isolated from tank ATM.	×	×	×
		Wet	Wet	Exposed to tank ATM.

[Application Data]

Typical User : Oil distributor company
 Target : Water
 Location : Japan

[Installation Data]

Main Unit : Radar Level Gauge KRG-10
 Antenna : 4inch Cone antenna
 Range : 28m

For more detailed information, please contact your local representative.

Representative in your Area