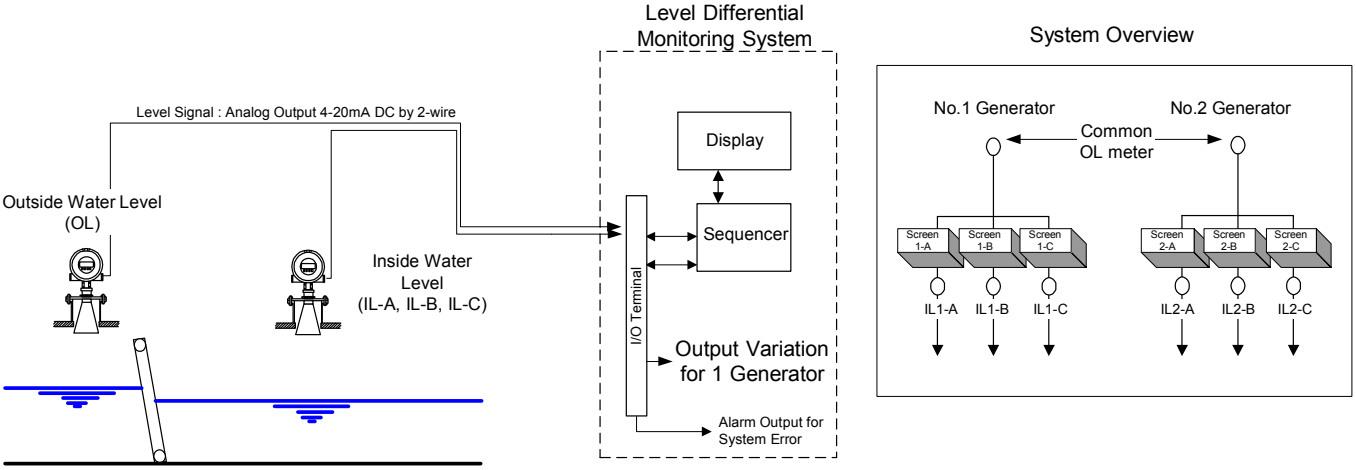
Radar Level Gauge Application Report 1

- Level Difference Monitoring System -



The MRG-10 micropower impulse radar level gauge provides accurate, non-contact level measurement with simple installation over a target fluid.

In this application, a level difference monitoring system, MRG-10 radar gauges insure stable measurement of the level of seawater, unaffected by atmospherics. The filtering screen in front of the inlet gate may clog with dirt or debris resulting in an outside-inside difference in water level. This difference is continuously monitored by the level gauges which activate when necessary, automatic cleaning of the screen to remove the source of clogging in order to maintain stable water levels.

Other systems used in such applications employ ultrasonic level meters, which also offer the advantages of non-contact measurement. However ultrasonic level meters are susceptible to weather conditions (e.g. fog, vapor, wind and so on) which may affect air transmission of ultrasonic waves and result in unstable measurements. Furthermore, the oscillating transducer elements, which generate the ultrasonic signals that are transmitted through the air, are easily damaged by severe atmospheric factors such as high temperatures and humidity.

Radar level gauges, which incorporate electromagnetic waves (microwaves) on the other hand, are least affected by such conditions. Tough sealing materials isolate the microwave-transmitting elements from the environment making these radar gauges highly resistant to harsh ambient conditions.

In addition, the MRG-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 MRG-10's 4-key input menu display also allows parameter setting on site as an alternate method.

	MRG-10	Ultrasonic
Non-Contact	○	○
Vapor (High Temp & High Humidity)	○ Least affected	× Increased errors
Temp. Change	○ Least affected	× Increased errors
Durability	○ Isolated from ambient conditions	× Exposed to ambient conditions

[Application Data]
Typical User : Power plant, steel company
Target : Seawater or river water

[Installation Data]
Main Unit : Radar Level Gauge, MRG-10
Antenna : 8 inch cone antenna
Range : 10m

For more detailed information, please contact your local representative.

Representative in your Area