

Liquid-Level Sensors

with Temposonics®
Magnetostrictive Technology



550673 C

Liquid Propane Gas Applications Idea



The application problem

A regional gas utility had to dramatically cut costs through the use of automation at their gas distribution terminal. All pertinent information was data linked via a DCS system to an operations center located remotely from the distribution terminal. The primary requirements the customer had for this application were:

- Level and temperature measurement
- High degree of accuracy
- Installation through existing tank ports
- Ease of maintenance without interruption of vessel integrity

The customer needed to accurately measure changing levels of propane in their tanks under varying seasonal temperatures. Temperature measurement was needed on each tank in order to calculate standard volume under all climactic conditions.

Since this application involved existing pressurized vessels, minimal intrusions into the tank were preferred. The customer desired one measuring device to measure both variables (product level and temperature), reasoning that fewer process connections allowed for less chance of leakage and would eliminate the need for reworking the tank.

The customer required a gauge that was easy to maintain without removing the vessel from service. This was important due to the long periods between tank down time due to the extended heating fuel season.

The liquid-level sensor solution

The customer chose the MTS level MR analog gauge as the best solution. The gauge features:

- Dual-loop gauge with HART® communications
- Dual-cavity explosion-proof enclosure
- 180 in. rigid sensor pipe with a 4 in., 150 lb welded flange process connection and a critical service float

This MTS level gauge measures level and temperature simultaneously in one gauge and outputs these values via the 2 independent analog output channels or via HART communications. The critical service float is designed for applications which require a long service life without access to the float. An RTD (Resistive Temperature Device) is incorporated to measure temperature.

The dual-cavity explosion-proof enclosure allows easy access to wiring for installation and troubleshooting without opening the electronics side of the enclosure.

The contained sensor pipe and user-replaceable magnetostrictive sensor cartridge and electronics allow instrument technicians to perform service or maintenance without violating vessel pressure integrity.

MTS level gauges use magnetostrictive technology, ensuring high accuracy and minimizing the need for scheduled maintenance or recalibration.

All specifications are subject to change. Please contact MTS for specifications that are critical to your needs.

Part Number: 05-05 550673 Revision C
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