

# SSI Technologies – Application Note DT-AN1

## Digital Fluid-Trac™ (Model DFT-100)

### Ultrasonic Drum Level Gauge Product Overview

#### Product Description

Digital Fluid-Trac™ (Model DFT-100) drum level gauge is a cost competitive non-contact continuous liquid level drum gauge. It is designed for use on vertical drums ( $\leq 32$  inch depths) storing a wide variety of media such as water, waste water, motor oil, hydraulic fluid and diesel fuel.

The Digital Fluid-Trac™ drum level gauge is NOT intended for use with gasoline.

The Digital Fluid-Trac™ drum level gauge is currently available for use with standard 55 gallon drums. Contact SSI Technologies – Controls Division at (608) 758-1500 for availability with other standard ANSI-MH2-1997 drum sizes.

#### Measurement Technology

The Digital Fluid-Trac™ DFT-100 drum level gauge uses ultrasonic technology to generate a high-frequency sound wave and measures the time for the echo to reflect off the target fluid's surface and return. The distance from the Digital Fluid-Trac's sensor to the liquid is calculated based on the speed of sound.

The Digital Fluid-Trac™ has a LCD which continuously displays the liquid level pictorially as well as in gallon units. The liquid level is automatically updated every 15 minutes. The liquid level may also be manually refreshed anytime by pressing the on/off button until the back-light is illuminated. During this time, several readings are taken and then averaged for the displayed value.

#### Product Features

- **Easy to install:** Digital Fluid-Trac™ drum gauge has no components to protrude into the drum.
- **Standard:** Fits NPT openings (2" or  $\frac{3}{4}$ " )
- **More Accurate:** Accurate to 1 gallon with a resolution of +/- 0.5 gallon.
- **More Reliable:** No components to chemically corrode inside liquid media.
- **Chemical compatibility:** Digital Fluid-Trac™ drum gauge works with a wide variety of media such as water, waste water, motor oil, hydraulic fluid and diesel fuel.



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#### Electrical Interface

The Digital Fluid-Trac™ drum gauge is powered by two 9 volt batteries (not included). If the battery is low, “LoB “ will continuously flash to notify the user to replace the batteries.

#### Mounting

Digital Fluid-Trac™ works well on ANSI MH2 standard 55 gallon drums as it mates with closed-head standardized bunghole arrangements. The LCD mounts on top of the drum with a standard 2” NPT thread connector. A ¼ inch NPT threaded adapter is included with each Digital Fluid-Trac™ so either bung opening can be used on the drums.

When using the Digital Fluid-Trac™, it is important to keep the mounting perpendicular to the liquid level by storing the drums in an upright position.

#### Electrical Specifications

Resolution	0.5 gallons
Accuracy	1.0 gallons
Range	Up to 32 inches
Operating Temperature	0°C to 50°C
Battery Life	30 days

