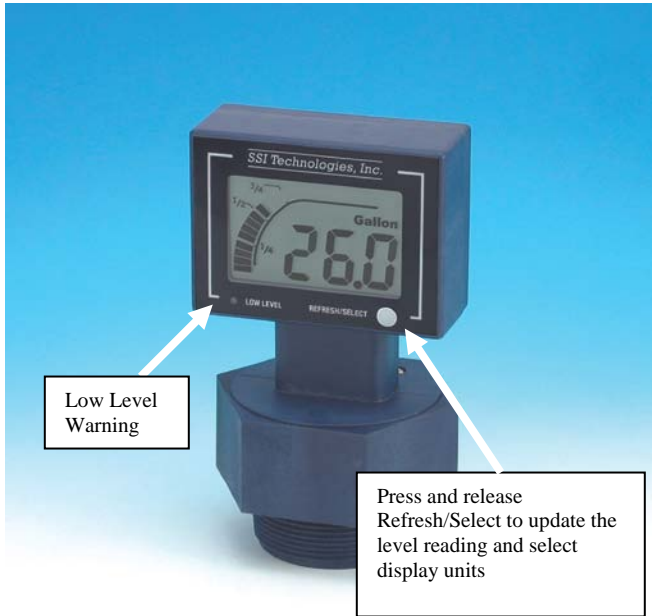


# SSI Technologies – Application Note DT-AN3

## Digital Fluid-Trac™ (DFT-105) 55 Gallon Drum Gauge Product Overview



### Product Description

Digital Fluid-Trac™ Model DFT-105 drum level gauge is a cost competitive non-contact liquid level drum gauge. It is designed for use on 55 gallon or 208 liter vertical drums ( $\leq 32$  inch depths) storing a wide variety of media such as water, waste water, motor oil, hydraulic fluid and diesel fuel.

Model DFT-105 replaces the Model DFT-100 version of the Digital Fluid-Trac™ 55 gallon drum gauge. The previous Digital Fluid-Trac™ Model DFT-100 would continuously monitor and display the level reading value in gallons only.

Model DFT-105 updates the display value only when the Refresh/Select button is depressed, has a low level warning light and a longer battery life than the Model DFT-100. In addition, the user can select the units to display the level reading in (gallons or liters).

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### Product Features

- **More Accurate:** Accurate to 2% of volume with a resolution of +/- 0.5 gallon.
- **Longer Battery Life than previous Digital Fluid-Trac™ Model DFT-100**
- **NEMA 4 Packaging**
- **Static Display Useful for Usage Consumption Calculations:** The static level reading can be used for manual rate calculations – i.e. daily or weekly consumption.
- **Selectable Units:** 55 gallon or 208 liters
- **Low Level Warning Light:** A red LED will flash once every 5 seconds when the volume is at 25% or below the maximum volume.
- **Easy to install:** Digital Fluid-Trac™ drum gauge has no components to protrude into the drum.
- **Standard:** Fits NPT openings (2" or ¾")
- **More Reliable:** No components to chemically corrode inside liquid media.
- **Chemical compatibility:** Digital Fluid-Trac™ DFT-105 drum gauge works with a wide variety of media such as water, waste water, motor oil, hydraulic fluid and diesel fuel.

The Digital Fluid-Trac™ DFT-105 drum level gauge is NOT intended for use with gasoline.

SSI can customize the drum level gauge for other sizes for large volume OEM orders.

Contact SSI Technologies at (608) 758-1500.

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Revision 1



RoHS

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## Digital Fluid-Trac™ (DFT-105) 55 Gallon Drum Gauge Product Overview

### Measurement Technology

The Digital Fluid-Trac™ DFT-105 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™ DFT-105 has a LCD which displays the liquid level pictorially as well as in gallon (or liter) units. The display shows the level reading from the last time the Refresh/Select button was pressed.

When the Refresh/Select button is pressed and released, the DFT-105's back-light is illuminated and the unit will continuously monitor the media in the 55 gallon drum for 15 seconds. After the 15 seconds, the unit will go into a battery saver mode where the back-light is shut off and the level reading is displayed. The level reading will remain static until the Refresh/Select button is depressed again.

A low level warning light (red LED located on the bottom left of the LCD display), will flash once every 5 seconds when the liquid level is  $\leq$  25% the maximum volume.

### Electrical Interface

The Digital Fluid-Trac™ DFT-105 drum gauge is powered by two 9 volt batteries (not included). The unit can run on alkaline or lithium batteries.

If the battery life is low, "LoB " will continuously flash to notify the user to replace the batteries.

### Selecting the Display Units

The Digital Fluid-Trac™ DFT-105 55 gallon drum gauge can display the level reading in either gallons or liters.

#### Set Up Procedure for 55 Gallon Display

- a) Enter the Select Mode: Press and hold the Refresh/Select button down for 5 seconds. The display will show gAL and flash.
- b) Release the Refresh/Select button and then press and hold for 5 seconds to select the gallon units. The gAL will stop flashing.
- c) Press and release the button 3 times to scroll through the other settings until 55 is flashing.
- d) Press and hold the Refresh/Select button for 5 seconds to select the 55 gallon volume setting.
- e) After 55 stops flashing, release the button. Press and release the button 2 more times to place the unit back into the monitoring mode.



# SSI Technologies – Application Note DT-AN3

## Digital Fluid-Trac™ (DFT-105) 55 Gallon Drum Gauge Product Overview

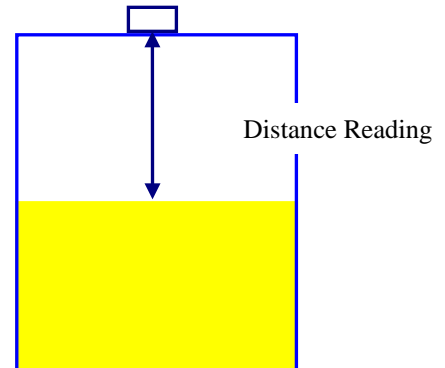
### Set Up Procedure for 208 Liter Display

- a) Enter the Select Mode: Press and hold the Refresh/Select button down for 5 seconds. The display will show gAL and flash.
- b) Press and Release the Refresh/Select button once. The display will show Lit and flash. Then press and hold for 5 seconds to select the gallon units. The LIit will stop flashing.
- c) Press and release the button 2 times to scroll through the other settings until 208 is flashing.
- d) Press and hold the Refresh/Select button for 5 seconds to select the 208 liter volume setting.
- e) After 208 stops flashing, release the button. Press and release the button 2 more times to place the unit back into the monitoring mode.

### Mounting

Digital Fluid-Trac™ works well on ANSI MH2 standard 55 gallon drums as it mates with closed-head standardized bunghole arrangements. The 55 gallon drum gauge mounts on top of the drum with a standard 2" NPT thread connector. A ¾ inch NPT threaded adapter is included with each Digital Fluid-Trac™ Model DFT-105 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 (Max Height)	Up to 32 inches
Operating Temperature	0°C to 50°C
Battery Life*	60 days (Alkaline) 120 days (Lithium)

\* Battery Life will vary dependant on operator's usage. Battery specification is based on two level readings per day.

