PRODUCT DATA

FLS-TS

FUEL LEAKAGE SENSOR *for double wall diesel fire pump fuel tanks*

Utilizing a corrosion resistant float sensor, the **FLS-TS** detects fuel leakage in the annular space, between the inner and outer wall, of a double wall diesel fire pump engine fuel tank.

The sensor is designed for double wall tanks with a bottom located outer tank drain port. The sensor simply screws into the drain port replacing the existing plug. Any leakage flows to the outer tank drain and into the sensor. The sensor is field wired to a Fuel Leak alarm lamp provided by fire pump controller manufacturer or to a separate low voltage alarm system.

The **FLS-TS** includes a new tank drain plug located on the bottom of the assembly. A wiring junction box with conduit connection is provided.

FLS-TS Fuel Leakage Sensor Assembly

All units are factory tested prior to shipment. The sensor can be field tested after installation by removing the drain plug and manually actuating the sensor switch.

All electrical components in the **FLS-TS** are U.L. Recognized or Listed. The assembly is simple to install, economical, requires no maintenance and is backed by a 2 year limited warranty.

FEATURES

- ***Detects leakage in the annular space of a double wall diesel fire pump engine fuel tank***
- ***Capable of sensing as little as 3oz (90ml) of leakage***
- ***Designed for use on double wall fuel tanks with a bottom located outer tank drain connection***
- ***Connects to an alarm in the Fire Pump Controller or other low voltage alarm system***
- ***Corrosion resistant Polypropylene float switch***
- ***Field testable while installed***
- ***2 year limited warranty***

MODEL FLS-TS TECHNICAL SPECIFICATIONS

- **Sensor Switch Material** Polypropylene
- **Operating** Temperature 20°F to 150°F - Pressure to 75 PSIG @ 70°F
- **Switched Output** Normally Open (NO) contact closes on leakage detection
- **Switch Maximum Resistive Load** 30 VDC, 0.3 Amps
- **Sensitivity** Switch closes when 3oz. (90ml) or more fluid enters the assembly
- **Piping Assembly** Steel / Cast Iron
- **Tank Connection** 1" Male NPT (may be bushed to match outer tank drain size)
- **Drain Plug** 1-1/2" NPT
- **Conduit Connection** 1/2" Female NPT
- **Wiring Connections** # 22 AWG Lead Wires
- **Electrical Components** are U.L. Recognized or Listed
- **Shipping Weight** 5 Lbs.

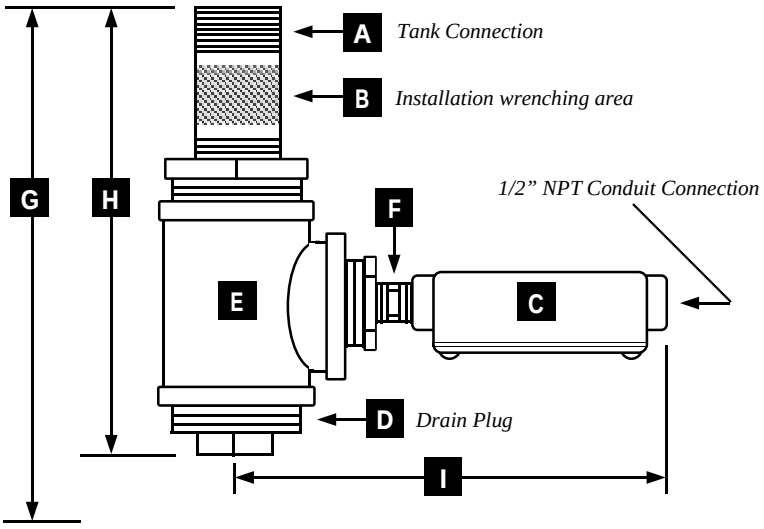
CTSi

Chicago Technical Sales, Inc.
Two Mid America Plaza, Rt. 83 & 22nd St., Suite 800, Oakbrook Terrace, IL 60181
Phone (630) 889-7121 • Fax (630) 889-8020

FLS-TS
FUEL LEAKAGE SENSOR

FLS-TS 07-06D

COMPONENTS AND DIMENSIONS



Note: The sensor must be mounted vertically with the 1" NPT connection (**A**) on the top and the drain plug (**D**) on the bottom

KEY

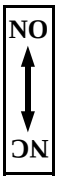
A	1 Inch NPT Tank Connection
B	Wrench **ONLY** on shaded area
C	Junction Box - 1/2 Inch NPT
D	1-1/2 Inch NPT Plugged Drain
E	Iron Tee
F	Polypropylene Sensor Switch
G	12 Inches free space (305 mm)
H	8-1/4 Inches (210 mm)
I	8 Inches (203 mm)

Note: Dimensions H and I are approximate for reference only

INSTALLATION INSTRUCTIONS

- **THE CAPLUG MUST BE REMOVED FROM THE TANK CONNECTION INLET PIPE and THE SENSOR MUST BE MOUNTED VERTICALLY**
- **DO NOT USE THE JUNCTION BOX FOR LEVERAGE DURING INSTALLATION**
- **DURING INSTALLATION WRENCH ONLY ON AREA (B) OF THE PIPE NIPPLE**
- **USE CAUTION IF IT IS NECESSARY TO ROTATE THE JUNCTION BOX (see step #3)**
- **DO NOT APPLY WEIGHT TO THE JUNCTION BOX. SUPPORT ALL CONDUIT.**
- **THE SENSOR IS FOR USE ONLY ON DOUBLE WALL TANKS WITH A BOTTOM LOCATEDANNULAR SPACE DRAIN CONNECTION**

1. Remove the plastic protective caplug from the tank connection pipe end (**A**).
2. Locate the outer tank, annular space, drain plug. Remove plug.
3. Thread the 1" NPT connection (**A**) on the sensor assembly into the annular space drain connection. Bush as required. The threads are pre-taped for installation convenience. Tighten the assembly with a pipe wrench. ***CAUTION! Wrench only on the specified area (B) located on the pipe nipple. Do not use the junction box for leverage. The junction box (C) is attached to the polypropylene switch (F) and any leverage or weight applied to the box may damage or break the switch.*** *Sensor damage caused by improper application or installation is not covered by warranty.*
4. Connect the conduit and wiring.
   CAUTION! *The junction box (**C**) is connected to the float switch (**F**) which is rotationally sensitive. The assembly is shipped with the conduit box cover facing down. For most installations no modification to this should be required. If it is necessary to rotate the junction box, place a 5/8" wrench on the float switch flats (**F**) to prevent it from rotating in relation to the body tee (**E**). After rotating the junction box, insure the float switch flats (**F**) are vertical and parallel with the body tee.* ***The N.O. marking, located on the float switch flat, must be on the top.***



5. After installation is complete, the sensor may be field tested by removing the drain plug (**D**) on the bottom of the assembly. With the leak detection electrical circuit activated, move the float sensor gently upward. The alarm should signal. The float should move straight up and down. If it does not move straight up and down, realign the float switch flats as described in step # 3. Reinstall the drain plug.

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