# **TRM Sensors LLC**

#### **Data Sheet**

## **TRM-WLS**

# Water, Water/Glycol Sensor



### **Product Description**

TRM-WLS is designed to detect water or water/glycol mix on an indoor flat surface. Detection occurs when a puddle of water comes into contact with two electrodes that protrude from the bottom of the sensor.

TRM-WLS uses a 3" hockey puck for the body of the sensor and is a compliment to the similar "hockey puck" diesel fuel sensor: TRM-DFS-3

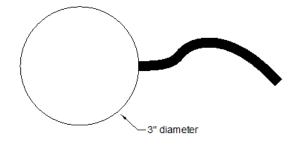
TRM-WLS water sensor should be monitored using the TRM Relay Unit Type-CV. Up to 10 TRM-WLS water sensors can be monitored by a single TRM Relay Unit Type-CV. The same TRM Relay Unit Type-CV can simultaneously monitor up to 10 diesel fuel sensors; 20 sensor in all. A typical application uses one TRM-WLS water sensor paired with a TRM-DFS-3 diesel fuel sensor placed in a drip pan under a diesel engine powering a generator. The pair of sensors are monitored by a single TRM Relay Unit Type-CV. This system is capable of detecting a fuel leak, a lube oil leak or a coolant leak that results in liquid collecting in the drip pan.

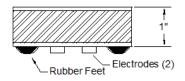
There are no moving parts or active electronic components in the sensor. The TRM-WLS qualifies as "simple apparatus" per CSA/EN/IEC/UL 600779-11 Clause 5.7 a) & b). It may be installed in hazardous using zener barriers.

The water or coolant mix must be liquid to be detected. For water this means that the operating temperature range is OC to 100C. Neither ice nor water vapor is detected. For 50/50 water/glycol mixtures the operating temperature range is -34C to 106C

#### **Key Features**

- Fast detection of conductive liquids including water and water/glycol coolant.
- Simple monitoring options with TRM Relay Unit Type-CV
- No moving parts
- Sensor resets immediately when removed from the water puddle the fuel evaporates
- Reusable





#### **Product Specifications**

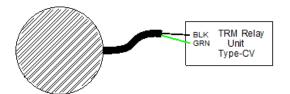
- DFS-WLS is a passive resistance device.
  Measurement voltage is supplied by monitoring instrument. Recommended monitoring device is TRM Relay Unit Type-CV
- Qualifies as simple apparatus per CSA/EN/IEC/UL 600779-11 Clause 5.7 a) & b). May be installed in hazardous areas with appropriate zener barrier
- Dry resistance > 5 meg-ohm
- Wet resistance depends on conductivity of the spill fluid. Typically in the range of 10 k-ohm for tap water.
- Dimensions: 1" thick x 3" dia. (25.4 mm x 76.2 mm dia.)
- Weight: Approx. 6 oz. (412 gm)
- Body material: hard rubber
- Operating Temperature determined by freezing/boiling temperatures of target fluid: OC to 100C for tap water; -24C to 106C for 50/50 glycol/water coolant.
- Resets immediately upon remove from puddle, may be dried with damp cloth
- Replaceable sensor elements available
- Supplied with 2 m (6 ft.) of 2-wire leader cable.

#### **TRM-WLS Installation Instructions**

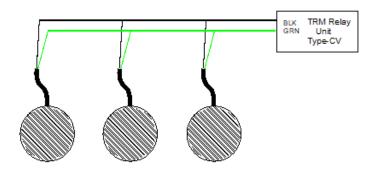
- Place TRM-WLS sensor on the floor or in a drip pan near the potential source of water or coolant leakage.
- The sensor should rest evenly on its rubber feet and the electrodes should clear the floor by about 1 mm
- TRM Sensors recommends the use of TRM-DFS-3-SSHD hold down fixture to secure the sensor to the floor or drip pan in its intended location. A sensor than has been kicked out of place or tipped one edge will not be effective.
- 4. Connect the black and green wires from the sensor leader cable to the BLK and GRN terminals on the TRM Relay Unit Type-CV. Up to 100 m (330 ft.) of additional jumper wire (2 x 22 AWG or larger) may be used to connect the sensor to the Relay Unit.
- 5. Up to 10 TRM-WLS water sensors may be wired in parallel to the TRM Relay Unit Type-CV.
- In addition to up to 10 TRM-WLS water sensor, the same TRM Relay Unit Type-CV can monitor from one to 10 TRM-DFS-3 diesel fuel sensors wired in series.

#### TRM-WLS Care and Cleaning

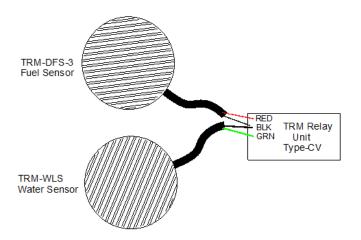
- 1. The TRM-WLS water sensor usually resets immediately when it is lifted from the spilled fluid.
- 2. Use a dry cloth to remove any residual water.
- 3. Use a damp cloth to remove any residual water/glycol



Basic Single TRM-WLS Sensor Wiring



Up to 10 TRM-WLS Sensors can be wired in parallel and monitored by a single TRM Relay Unit Type-CV



TRM Relay Unit Used to Monitor both TRM-DFS-3 Fuel Sensor and TRM-WLS Water Sensor