

TraceTek Fast Fuel Sensor

TraceTek Fast Fuel Sensor is a fast acting probe designed to detect hydrocarbon fuel floating on water, spreading on a flat surface or collecting in a sump. The probe ignores water, but detects a thin film of fuel floating on the surface.

The probe is available in two lengths for fixed position installations and can also be fitted onto a float assembly if the water level is unpredictable.

Reaction time for the probe is typically a few seconds for light or middle weight fuels such as gasoline, jet fuel, and diesel. It is also responsive to crude oil and some heavier weight fuels and heating oils but becomes progressively slower as the fuel volatility decreases.

In many cases the FFS probe will reset after the probe is removed from contact with the spill and the fuel is allowed to evaporate. Some heavier fuels require that the sensor be dipped in naphtha in order to clear the heavier fuel residuals.

The sensor may be used repeatedly without replacement until it will no longer reset. The probe fails in the "alarm" state so there is no ambiguity when it is necessary to replace the probe.

TT-FFS probes are designed to work **only** with TraceTek leak detection instruments, and are not suitable for use with other non-TraceTek circuits. The probe may be periodically tested using a small amount naphtha (lighter fluid). The probe resets when the naphtha evaporates.

Design Features:

- Fast response to small amount of fuel
- Resets for multiple uses
- Easily tested
- Compatible with TraceTek Instruments
- Intermix up to 6 FFS probes with TT5000 sensor cable to form hybrid cable and probe systems
- Suitable for installation in C1D1 (Zone 0) with appropriate safety barrier
- SIL-2 Rated Safety System Component



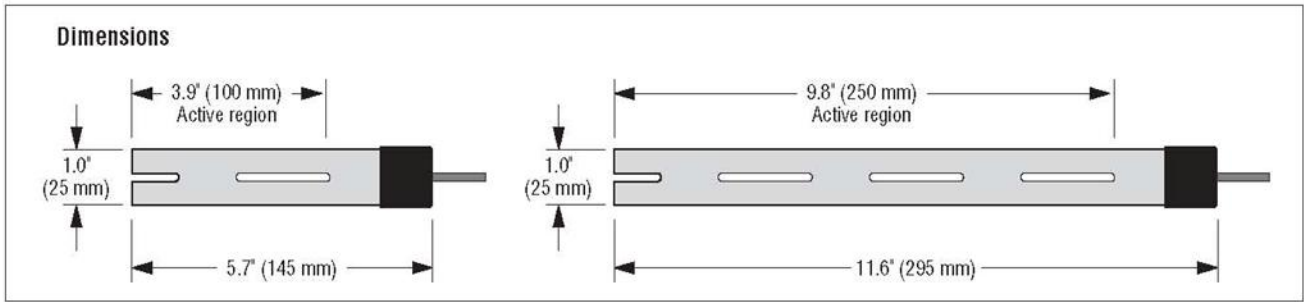
TT-FFS Fast Fuel Sensor Probes

Catalog number	Description
TT-FFS-100-MC	Fuel Sensor Probe, 100 mm active length, with TraceTek metal connector
TT-FFS-250-MC	Fuel Sensor Probe, 250 mm active length, with TraceTek metal connector
TT-FFS-100-L	Fuel Sensor Probe, 100 mm active length, no connector
TT-FFS-250-L	Fuel Sensor Probe, 250 mm active length, no connector

TT-FFS Mounting and Installation Accessories

Catalog number	Description
TT-FFS-Float-1M	Stainless steel float mechanism designed to hold TT-FFS-100-x and automatically adjust probe location as water rises.
TT-FFS-Float-2M	
TT-FFS-Float-3M	
TT-Combi-Floor-Bracket (not shown)	Stainless Steel "L" bracket and nylon tie wraps to hold FFS probe in vertical position on floor surface. Requires bolting or Hilti type attachment to surface.

Note: TT-FFS should not be used in a horizontal position due to large variations in minimum detection depth.



Product Characteristics

External diameter	1 inch (25.4 mm)
Color	Orange
Tube material	PVC with static charge reduction additive
Leader cable	4 x 22 AWG, polyurethane jacketed, fuel resistant
Connector	TraceTek "MC" series compatible with all TraceTek MC components and cable Note: FFS is wired in "End Termination" configuration

Operating Environment Information

Operating/storage temperature	-40°F to 185°F (-40°C to 85°C)
Salt water immersion resistant	30 days in 3% salt water at 20°C without failure or degraded response
Hot water immersion resistant	30 days in 60°C water without failure or degraded response
Acid resistant	24 hours in 10% H ₂ SO ₄ or 10% HNO ₃ without failure or degraded response

Response Time

Representative materials detected:	Typical response time at 20°C:
Gasoline	Less than 5 seconds
Jet A fuel	Less than 5 seconds
Diesel	Less than 5 seconds
Naphtha	Less than 5 seconds
Crude oil	3 minutes
Biodiesel (B100)	45 seconds

Approvals



IS/Class I, Div. 1, Groups A, B, C, D/T4; Class I Zone 0, AEx ia IIC T4 Certificate: J.I. 302535
 NI/Class I, Div. 2, Groups A, B, C, D/T4; Class I Zone 2, Group IIC T4

IEC 61508 Safety Integrity Level -2 (when used with TTC-1)
 Ref BN/PTX/CB859/1580190/06/R/216/0



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