

# **TraceTek** TT-FFS

## FAST FUEL DETECTION PROBE

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### **PRODUCT OVERVIEW**

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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 soaked in isopropyl alcohol 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 3 FFS probes with TT5000 sensor cable to form hybrid cable and probe systems
- Suitable for installation in CID1 (Zone 0) with appropriate safety barrier
- SIL-2 Rated Safety System Component

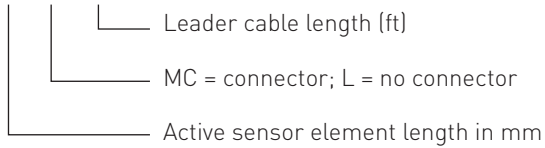
# TT-FFS

## FFS Probes without Connectors

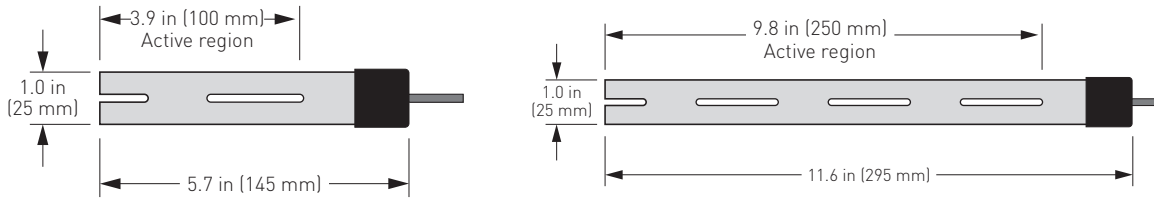
## FFS Probes with – MC Series Metal Connectors

Part number	Description	Part number	Description
P000000984	TT-FFS-100-L-1	P000000990	TT-FFS-100-MC-1
P000000985	TT-FFS-100-L-3	P000000991	TT-FFS-100-MC-3
P000000986	TT-FFS-100-L-10	P000000992	TT-FFS-100-MC-10
P000000987	TT-FFS-250-L-1	P000000993	TT-FFS-250-MC-1
P000000988	TT-FFS-250-L-3	P000000994	TT-FFS-250-MC-3
P000000989	TT-FFS-250-L-10	P000000995	TT-FFS-250-MC-10

TT-FFS-250-MC-10



## Dimensions



## PRODUCT CHARACTERISTICS

External diameter	1 inch (25.4 mm)
Color	Orange
Tube material	Polypropylene 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 <b>Note:</b> 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% H2SO4 or 10% HNO3 without failure or degraded response

**RESPONSE TIME**

<b>Representative materials detected</b>	<b>Typical response time at 20°C</b>
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  
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

Baseefa11ATEX0221X  
IECEX BAS 11.0111X



Ex ia IIC T4 Ga (-40°C ≤ ta ≤ +60°C) (U<sub>i</sub> = 15V)  
Ex ia IIA T4 Ga (-40°C ≤ ta ≤ +60°C) (U<sub>i</sub> = 28V)



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