

## Product Description

The FluidInspectIR® Inline-mini is a compact system for real-time monitoring of the oil condition.

The FluidInspectIR® Inline-mini is the high-volume option, either as a stand-alone sensor or as part of a distributed network for multiple asset monitoring and belongs to the FluidInspectIR® family of oil condition monitoring systems.

The FluidInspectIR® Inline-mini is a plug & play analyser and can be installed remotely in the oil circuit bypass line or can draw oil from circuit reservoir. It provides the user with key oil degradation parameters in the same format, units and accuracy as per standard oil analysis laboratory reports.



## Summary Information

- Measurement of key parameters in oils and lubricants in assets such as gears, engines, turbines, hydraulic and transmission systems, metal working (Steel and Aluminium)
- Correlates to ASTM / DIN
- Configuration options for application field
- All data in conventional laboratory Units and same accuracy as in an oil laboratory
- Cloud Dashboard Capability
- Plug and Play remote installation of system

## Configuration

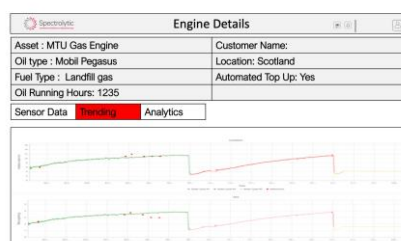
- Configured with electric valve on oil by-pass OR pump to draw oil from reservoir.
- Oil temperature: Standard up to 120C. Higher temperature is an option
- LTE / ethernet/ Wi-Fi, RS232,RS485
- MODBUS (RTU,TCP) and MQTT
- 230VAC PS
- 160mm L x 70mm W x100mm H / 2.5kg

## Key Benefits

- Reduce oil laboratory sampling costs
- Reduce unplanned downtime
- Safely change oil drain intervals
- Reduction in H&S Hazards
- Data driven maintenance
- Reduction of CO2 footprint
- Support for warranty claims
- Deep dive trends and parameter slopes for asset efficiency

## Data Acquisition Options

- Data is sent to Spectrolytic's cloud. Option to view/download data via a dashboard
- We support customer's cloud (Azure, AWS) via MQTT or Web API protocols
- Direct integration available with on-site controller systems





### Oil Condition Sensor Parameters

- Measurable Parameters: Note that not all of these parameters can be measured all at once with same device.
- Repeatability: <+-5% of measured value
- Accuracy: <+-5% of measured value
- Methodology Default: DIN 51453/51451 – can be calibrated to ASTM/DIN
- Configurations available in common metal working applications for specialised additive packages and accurate water in oil measurements

Measurable Parameters	Correlates to Standard	Unit
<b>Group I-IV Oils including PAO (PolyAlphaOlefins)</b>		
<b>Base Oil Changes</b>		
Oxidation	ASTM E2412, DIN 51453	A/cm or A/0.1mm
Nitration	ASTM E2412, DIN 51453	A/cm or A/0.1mm
Sulphation	ASTM E2412, D7415	A/cm or A/0.1mm
<b>Properties</b>		
TBN	ASTM D664	mgKOH/g
TAN	ASTM D2896	mgKOH/g
ipH		
Viscosity	ASTM D445	mm <sup>2</sup> /s
<b>Additives</b>		
ZDDP AW	ASTM E2412	A/cm or A/0.1mm
Phenol / Amine AO	/	%
Others Upon Request	Correlates to reference analysis	A/cm or A/0.1mm, mg/kg or %
<b>Contaminants</b>		
Soot	ASTM E2412	A/cm or A/0.1mm, wt%
Water	ASTM E2412	A/cm or A/0.1mm, wt% or ppm
Ethylene Glycol	ASTM E2412	A/cm or A/0.1mm, wt%
Diesel	ASTM E2412	A/cm or A/0.1mm, wt%
Gasoline	ASTM E2412	A/cm or A/0.1mm, wt%
<b>Group V Polyolester and Phosphate Ester</b>		
Ester Breakdown 1	ASTM E2412	A/cm or A/0.1mm
Water	ASTM E2412	A/cm or A/0.1mm, ppm
Phenol AO	/	%
Amin AO	/	%
TAN	ASTM D2896	mgKOH/g

### Distributed Network

- The FluidInspectIR<sup>®</sup> Inline-mini is the high-volume system integrated as part of a distributed network of FluidInspectIR<sup>®</sup> systems and additional sensors.

