

## Product quality sensor AT04914, AT11918 series



- **Density  $\rho$  (kg/m<sup>3</sup>)**
- **Viscosity  $\mu$  (cp)**
- **Dielectric constant  $\epsilon$**
- **Temperature (°C)**
- **Water level and presence (mm) whit multi-parametric calculation**

The fuel quality sensors of the AT04914 and AT11918 series are equipped with a vibrating fork (Tuning Fork) that measures directly and simultaneously the temperature, viscosity, dielectric constant and fuel density. Thanks to a patented technology the sensor monitors in a direct and dynamic way the relationship between the different multiple physical properties to determine the quality and status of the additives present in fuels. A fluid characterization algorithm is implemented by multi-parametric analysis by performing in-line fluid monitoring for a wide range of applications including monitoring during tank discharge, high pressure and temperature process lines.

A serial protocol communicates with the main Assytech equipment.

### Main characteristics

- Patented high precision "Tuning Fork Technology"
- Static and direct measurement, no moving parts, resistant to turbulence
- No dead zone, measure on all the field
- Robust construction resistant in environments with high pressures and flow rates
- Proprietary coating resistant to corrosion and more aggressive contaminants for wet parts
- Microprocessor execution for real-time analysis
- High reliability and stability over time

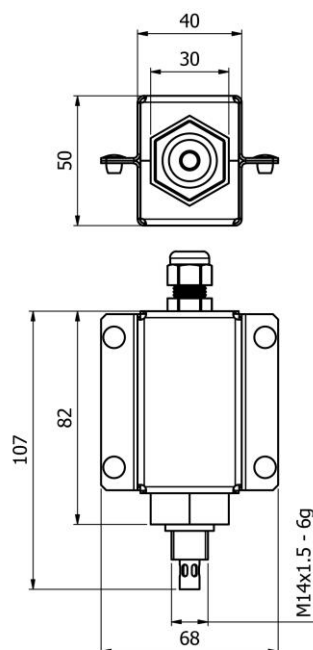
## Applications

- Density measurement for service stations and fuel depots
- Fuel quality in real time
- Anti-crossover function for different fuels
- Cockpit and tank cavity sensors with discriminating function (vacuum state / fuel type / water)

## Technical characteristics

	AT04914	AT11918
• Power supply	12 VDC	12 VDC
• Max consumption	100 mA	100 mA
• Operating temperature	-40 ÷ +125 °C	-40 ÷ +85 °C
• Density	0,65 ÷ 1,5 gm/cc	0,65 ÷ 1,35 gm/cc
• Density accuracy	± 2 Kg/m <sup>3</sup>	0,001 g/cc
• Viscosity (dynamic)	0,5 ÷ 50 mPa-s (cP)	0,3 ÷ 100 cP
• Viscosity accuracy	± 2 % typ < 10 cP	± 2 % typ
• Dielectric constant	1 ÷ 6	N.D.
• Dielectric constant accuracy	± 1% typ	N.D.
• Fuel temperature	-40 ÷ +150 °C	0 ÷ 85 °C
• Temperature accuracy	± 0.1 °C	0,5 °C
• Operating pressure	25 bar max	10 bar
• Vibrations (peak)	20 Grms	BD
• Connection	M 14X1.5	M G 1/2

### AT04914 dimensions



### AT11918 dimensions

38,2X38,2X 74,6 mm

## Example of measured values

Product quality sensor AT04914				
Temperature (°C)	Viscosity (cP)	Dielectr Cst.	Density (gm/cc)	Density 15°C (gm/cc)
23.12	2.95	2.33	0.837	0.843

## Accessories

AT10418	Reducer F14X1,5 - M 1/2"
AT10518	Reducer F14X1,5 - M 1/4"

## Device codes

AT04914/XX*	Product quality sensor
AT11918/1/XX*	Product quality sensor industrial version, threaded connection M G 1/2

/XX: cable length in m (standard 3 m)

Specification subject to change without notice