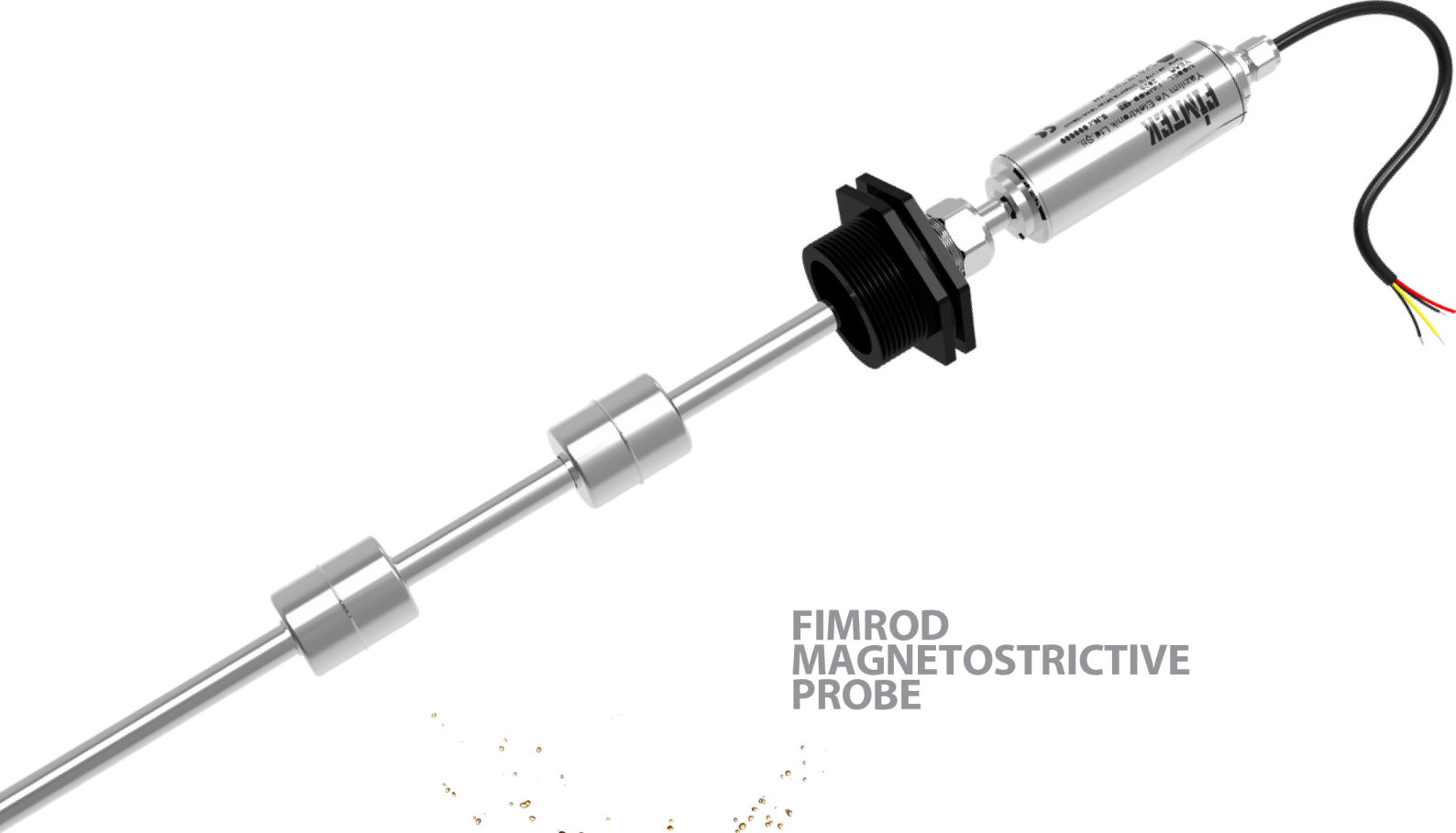




Smart Sensing. Reliable Measuring.



FIMROD
MAGNETOSTRICTIVE
PROBE



Where Precision Meets Perfection.

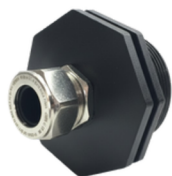
FIMTEK Magnetostrictive Level Probes are ultra-precise liquid-level sensors engineered for industrial and fueling applications where exceptional accuracy, reliability, and stability are essential.

Utilizing advanced magnetostrictive pulse-time technology, each probe delivers continuous, drift-free, and absolute measurements of product level, water interface, and temperature.

An electromagnetic pulse travels along a stainless-steel waveguide; when it encounters the magnetic float, a torsional wave is reflected back to the sensing head. By precisely timing the interval between transmitted and returned pulses, the probe determines the float's exact position.

This contact-type measurement principle provides continuous monitoring with nanometric-level precision for both product and water levels. Offering ± 0.1 mm accuracy and 0.01 mm resolution, it ranks among the most accurate magnetostrictive probes available today. Built entirely from AISI 316 stainless steel, the probe withstands exposure to hydrocarbons, biodiesel, and urea-based fluids such as AdBlue (DEF). Its hermetically sealed, IP68-rated body ensures full submersion for up to 24 hours without any degradation in performance.

All measuring tubes and floats are certified according to EN 10204 3.1, guaranteeing complete material traceability. Communication through RS-485 (Modbus RTU) provides seamless integration with leading ATG, PLC, and SCADA systems.



**THREADED CAP 2" F
WITH ATEX CABLE**

FIMTEK

Standard Features

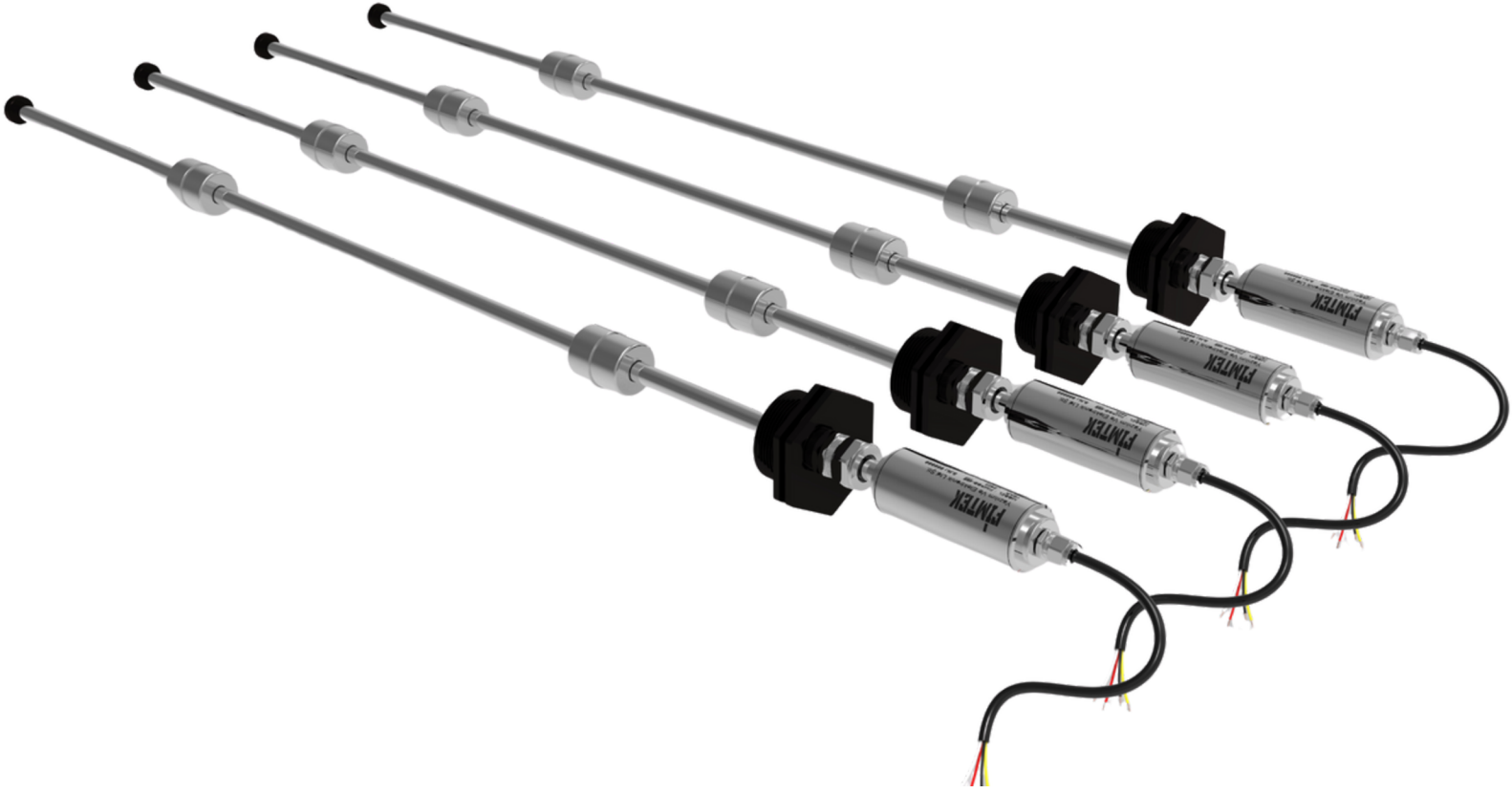
- Magnetostrictive pulse-time level measurement principle for continuous and absolute readings
- Non-contact, drift-free operation ensuring long-term signal stability
- Dual float configuration for simultaneous product and water level monitoring
- Integrated temperature sensor for real-time thermal compensation
- Compatible with Diesel, Gasoline, Biofuels, and AdBlue (DEF)
- Constructed entirely from AISI 316 stainless steel for maximum corrosion resistance
- Hermetically sealed design with IP68 ingress protection (submersible up to 1.2 m)
- Ex ia (Intrinsically Safe) and Ex d (Explosion-Proof) versions available for hazardous areas
- Designed for Zone 0 / Zone 1 classified areas under ATEX & IECEx standards
- Compact mechanical structure suitable for tanks up to 5.00 m (longer versions optional)
- Factory-calibrated with traceable EN 10204 3.1 certification
- Maintenance-free design with over 10 years expected service life
- No periodic recalibration required under normal operating conditions
- RS-485 Modbus RTU communication protocol for easy system integration
- Fully compatible with FIMTEK 7L Automation Console supporting up to 64 tanks
- High immunity to electrical noise and temperature variation
- Designed and manufactured in Türkiye under ISO-compliant production standards

Certifications



Technical Specifications

- Measurement Range: 500 – 5000 mm (standard), >5000 mm upon request
- Measurement Principle: Magnetostrictive pulse travel-time
- Measured Parameters: Product level, water level, temperature
- Accuracy (Level): ± 0.1 mm
- Resolution (Level): 0.01 mm
- Accuracy (Temperature): ± 0.2 °C
- Resolution (Temperature): 0.0625 °C
- Repeatability: ± 0.05 mm
- Linearity Error: $\leq \pm 0.03$ % F.S.
- Response Time: ≤ 0.1 s
- Operating Temperature: -40 °C ... $+70$ °C
- Storage Temperature: -40 °C ... $+85$ °C
- Maximum Pressure: 10 bar
- Medium Compatibility: Diesel, Gasoline, Biofuels, AdBlue (DEF), non-corrosive liquids
- Tube Material: AISI 316 Stainless Steel
- Float Material: AISI 316 / PTFE-coated (AdBlue version)
- Sealing Material: Viton / PTFE
- Head Housing Material: AISI 316 Stainless Steel
- Probe Diameter: $\varnothing 42$ mm
- Mounting Thread: 2" BSP (F) standard / 2" NPT optional
- Weight: ~ 0.8 kg/m
- Power Supply: 12 – 24 V DC
- Power Consumption: $I_i \leq 20$ mA, $P_i \leq 0.15$ W
- Signal Output: RS-485 (Modbus RTU)
- Baud Rate: 9600 s
- Interface Protection: II ½G Ex ia IIB T5 Ga/Gb
- Ingress Protection: IP68
- Shock Resistance: 30 g (11 ms half-sine)
- Vibration Resistance: 10 g (10–2000 Hz)
- Ambient Humidity: 0 – 95 % RH (non-condensing)
- Surface Finish: $R_a \leq 0.8$ μ m (polished)
- Explosion Protection: ATEX 2014/34/EU
- Material Certification: EN 10204 3.1
- EMC Compliance: EN 61000-6-2 / EN 61000-6-4
- Temperature Sensor Type: Integrated precision RTD
- Mechanical Life: > 10 years typical
- Warranty: 24 months shipment / 12 months installation
- Country of Manufacture: TÜRKIYE

**FIMTEK SOFTWARE AND ELECTRONICS
LIMITED COMPANY**

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