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# *JF-1A-HP In-line Conductivity Sensor High Pressure*

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The D-2 JF-1A in-line fuel conductivity sensor provides high-accuracy, long-term measurement of conductivity in fuels flowing through pipelines. In-line conductivity measurement, rather than hand sampling, provides significant benefit to operators by offering the ability to continuously measure conductivity, thereby assuring continuous compliance with conductivity level requirements. Operators are instantly alerted to out-of-spec levels of conductivity that may lead to unsafe conditions or undeliverable fuels.

The JF-1A can be connected to automated refinery/terminal management systems to provide a continuous record of product conductivity levels, for reporting purposes, eliminating the requirement for labor-intensive sampling and manual record keeping. In-line conductivity measurement also allows automated polymer addition, eliminating the requirement for manual addition and batch sampling.

The JF-1A conductivity sensor is constructed of two 316 S.S. coaxial electrode sensors, suitable for long-term immersion in fuels. The sensor is mounted on a user specified flange with sensor insertion depth to suit user facility. Sensor electronics are contained in an ATEX or FM-, CSA-, CENELEC- and UL-certified explosion-proof housing, ensuring safe operation in hazardous locations. Designed for operation on a variety of pipe diameters, the low-power JF-1A operates on industry standard 2-Wire Instrument Loop providing a 4-20 mA output scaled from 0 to 500 pS/m\*. A second 4-20mA output of temperature is standard. JF-1A can also be operated in a 4-wire configuration for users requiring serial data output.

\*Optional Ranges Available



## **JF1-A Benefits**

- **ASTM D2624 Listed**
- **ATEX, FM, FMc Certified**
- **Real-Time, continuous conductivity measurement for:**
  - **Alerts to un-safe low conductivity conditions**
  - **Alerts to un-deliverable high conductivity fuels**
  - **Automated record keeping of conductivity value**
- **Labor saving – no periodic hand sampling required**
- **Control system input capability**
- **Conductivity and temperature output capability**
- **Stainless Steel construction for long-term operation in corrosive environments**
- **Flange to Meet Your Site Installation Requirements**
- **Field re-programmable**



**D-2 Inc.**

Precision Industrial Sensors

## In-Line Fuel Conductivity Sensor Specifications

### Sensors

Parameter	Conductivity	Temperature
Range	0-500 pS/m to 0-2,000 pS/m*	-20-60°C**
Accuracy	+/-2 pS/m (+/-2% of reading)	+/-0.5°C
Resolution	0.1 pS/m	0.1C
Sensor Type	316 S.S. Coaxial Electrode	Platinum
Calibration	Internal Source Zero and Scale	NIST Traceable

\*User settable output range. For wider ranges define required span with order.

\*\*ATEX certification max product temperature 40°C

### System

Environmental	Service Pressure: 100 barg max pressure** Storage Temperature: -40 –80 °C
Power	2-wire, using 4-20 mA loop, 25- 40 VDC External (RS-232 4-wire) 7- 40 VDC
Outputs	2-wire 4-20 mA (conductivity and temperature) 4-wire isolated RS-232
Materials	Type 316 SS, Delrin, Cast Aluminum (Housing)
Mounting	2 ½” DIN PN100 (Standard) Consult Factory
Certification	ATEX Ex II2G EExd [ia ]IIC T4 (Pending) FM/FMc I.S. Probe for Class 1, Division 2, GP ABCD T3C @ Ta = 60C



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