

Oil Quality Sensor Node (SD-OSN-2)

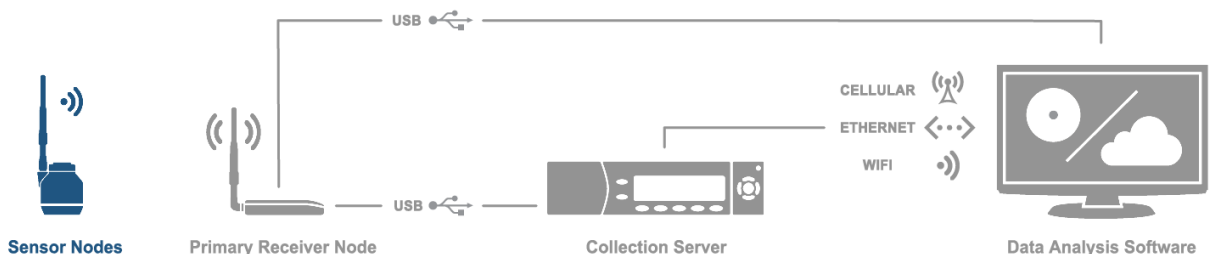
The SmartDiagnostics® family of innovative wireless sensor products enables cost-effective predictive maintenance for industrial equipment. The system provides continuous remote monitoring of key performance indicators to track the operating health of equipment.

- Optimized for long battery life
- Customizable sampling regimes
- Continuous monitoring of moisture and temperature
- Expandable to hundreds of nodes per system



Give Your Machines a Voice™

Reliable Monitoring	Flexible Configuration	Cost Effective
Oil Quality Sensor Nodes provide health monitoring in the most hard-to-reach, rugged locations. Each node communicates via a direct wireless link to a Primary Receiver Node, from which the data is imported into SmartDiagnostics® Software for viewing and analysis.	The system is highly configurable and scalable and KCF can provide transducers to meet a wide array of applications. A system can have hundreds of sensor points, each of which can be configured to transmit data on a user-selected frequency, and unique indicators can be implemented to warn users of potential machine health issues.	Easily installed without the downtime, expense, and labor costs of old-fashioned, hard-wired sensors. Within minutes after the simple installation, data will be flowing. SmartDiagnostics® can predict failure before it occurs, saving money spent on unnecessary replacements and extending machine life. At the same time, energy costs are reduced, as properly maintained machines are more efficient.



Oil Quality Sensor Node Specifications

Mechanical

Configuration	Wireless node with cable whip to oil quality transducer
Weight	4.1 oz (115 g) not including transducer
Enclosure Material	Anodized aluminum and high-strength polycarbonate
Connector Type	8-pin 12x1mm threaded connector
Cable Length	78 in (2 m)
Process Fitting	G 3/4 Male

Environmental (Wireless Module)

Storage Temperature	-40 to 238 °F (-40 to 120 °C)
Min. Operating Temp.	-4 °F (-20 °C)
Max. Operating Temp.	230 °F (110 °C) surface @ 72 °F (22 °C) ambient 212 °F (100 °C) surface @ 105 °F (40 °C) ambient 167 °F (75 °C) surface @ 167 °F (75 °C) ambient
IP Rating	IP65, dust-tight and impervious to water jets
Impact Resistance	Survives 5-ft drop onto concrete surface

Wireless Radio

Radio	KCF DART™ Wireless 2.4GHz ISM band, FCC ID #Z51SD2
Range	800ft (244m) line-of-sight (site survey recommended for installation)
Antenna	Steerable antenna, providing 360° directional coverage.

Power

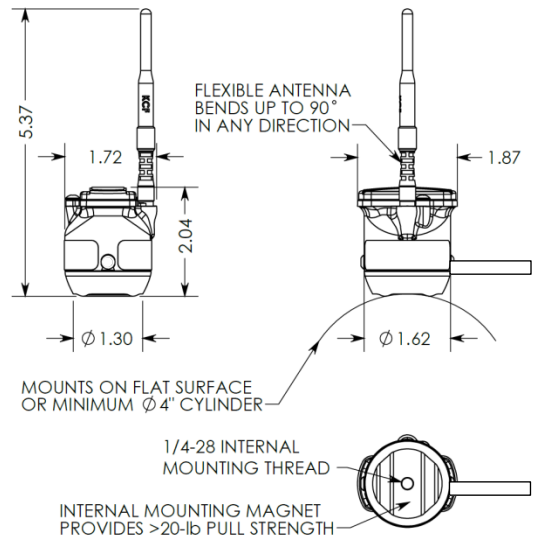
Power Source	3-Volt Lithium Manganese Dioxide (CR123A) KCF Energy Harvester (optional)
Battery Life	Data acquisition every: <ul style="list-style-type: none"> • 1 hour – 4 months • 12 hours – 3 years • 1 day – 6 years Note: battery life is somewhat reduced at extremely cold temperatures

Oil Quality Transducer

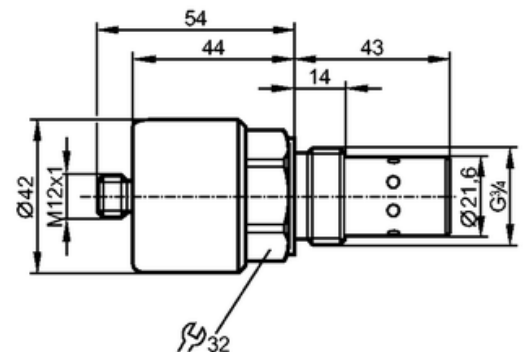
Type	Oil moisture and temperature transducer
Range	0 to 100% relative humidity / -4 °F to 238°F (-20 to 120 °C)
Resolution	1% relative humidity, 0.1 °C
Operating Temperature	-40 to 185 °F (-40 to 85 °C) Typical

Temperature Sensor

Range	-4 to 167 °F (-20 to 75 °C)
Resolution	+/- 1 °F (+/- 0.5 °C)



Wireless Module Dimensions (inches)



Transducer Dimensions (mm)

Configurations

Part Number	Description
SD-OSN-2	Oil quality sensor with flexible antenna
SD-OSN-2-A	Oil quality sensor with RP-SMA connector for tethered antenna