OiLense

INNOVATIVE OIL CONDITION MONITORING SOLUTIONS

Enhance and Protect Your Valuable Assets with Innovative Oil Condition Monitoring Solutions and Used Oil Analysis

Technical specifications of Oilense portable oil analysis devices

Item	Picture	P/N.	Description
1		OLA9119	**Fast Oil Analyzer** Portable device for detecting on viscosity, density oil quality, water activity, moisture content and temperature of oil sample **1. Density :** 600~1250 kg/m³ ; Accuracy: ±2% or ±5kg/m³(whichever the larger) **2. Viscosity :** 1~1000cSt ; Accuracy: ±5% or 1cSt(whichever the larger) **3. Temperature :** 0～100 °C ; Accuracy: ±0.5°C **4. Water activity(saturation) :** 0～1 aw (0~100%) **5. Moisture content(dissolved water in oil):** 0~5000ppm; Accuracy: ±10% or ±10ppm(whichever the larger) **6. Oil Quality(Dielectric constant):** 1-6 level ; Accuracy: ±5% **7. Functions:** take 5ml oil sample to do test, oil can be heated up to 100°C, support historical data checking and changing trend analysis, warning value setting on each parameters, test report can be exported in Excel format through connecting with computer, conveniently print test report on-site. **8. Standard packing include:** Host+OLS6000 sensor+oil tank+heating device+power adapter+printer paper **9. Net weight:** 3KG / Shipping weight: 8KG
2		OLA9009	**Comprehensive Oil Analyzer** A portable and mobile oil analysis laboratory, features multi-function and quick analyzing on oil samples; Widely detect parameters can meet most of your oil analysis demands with one equipment; User friendly with auto-testing and auto-cleaning, operation on 7 inch touch dispaly simply; Designed with intelligent temperature control system to keep oils tested at 40°C, get accurate test result; Measurement Parameters & Advantages: **1.Contaminants and pollution degree:** NAS1638, ISO4406 and SAE AS4059F standard. Particle size range : 1-100um (oils viscosity can up to 320cSt). Accuracy: ±1 pollution level (Particle counting: ±20%) **2. Physical parameters:** Density : 600~1250 kg/m³ ; Accuracy: ±2% or ±5kg/m³(whichever the larger) Viscosity : 1~1000cSt ; Accuracy: ±5% or 1cSt(whichever the larger) Water activity(saturation) : 0～1 aw (0~100%) Moisture content(dissolved water in oil): 0~5000ppm; Accuracy: ±10% or ±10ppm(whichever the larger) Oil Quality(Dielectric constant): 1-6 level ; Accuracy: ±5% **3. Built-in temperature control system to keep oil viscosity tested at 40℃(temperature accuracy:** ±0.3°C), giving end user a more accurate viscosity value to compare with international standard oil viscosity. **4. Built-in printer can get a test report on-site easily.** **5. Built-in rechargeable battery pack(2 sets) for 2-3 hours work without power supply.** **6. 7 inch LCD touch display.** **7. Size:** 380*300*172mm ; **8. Net weight:** 9.5 KG; Shipping weight: 25KG.
3		OLA8900	**Portable particle counter** for laboratory accurate testing on pollution degree and total solid particles. comply to NAS1638 and ISO 4406 standard. **1. Light Source:** semiconductor laser **2. Eight Channels and detect range:** 1 ～100μm or 4~70μm （C） Size of particle: 1μm, 2μm, 5μm,10μm,15μm, 25μm, 50μm,100μm ; **3. Customized testing range is available under standards :** ISO4406, NAS1638, SAE749D and user defined size range. **4. Sensitivity:** 1μm(ISO4402) or 4μm(C)(ISO11171) **5. Sample Volume:** 10ml at least **6. Detection flow rate:** 5 ～80mL/min **7. Maximum viscosity of sample:** 100 cSt **8. Detection repetition:** RSD<2% **9. Online detection of sample-feeding pressure:** 0.1~0.6MPa (the maximum sample feeding pressure with the decompressor can reach 41MPa) **10. Power supply:** built-in rechargeable batteries for around 4 hours working **11. Communication port:** Standard RS232 interface or selective RS485 interface **12. Oil sample temperature:** 0 ℃~80℃ **13. Dimension:** 435*304*170mm **14. Net Weight:** 5KG / Shipping weight:18KG

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info@oilense.com

Semmelweisstraße 36-38 , 4095 Linz/Austria | (+43) 732916991

4		**OLA8001**	**Quick Particle Counter Analyzer(built-in YFJ-4 sensor & moisture sensor)** **1.Contaminants and pollution degree:** NAS1638, ISO4406 and SAE AS4059F standard. Particle size range : 1-100um (oils viscosity less than 100cSt). Accuracy: ±1 pollution level **2. Physical parameters:** Water activity (aw) range: 0～1 aw ; Accuracy: ±0.03aw. Temperature range: 0～100 °C ; Accuracy: ±0.5°C **3. Pressure range:** 0~5bar **4. Flow range:** 20~300ml/mins **5. Equip with a printer can get a test report on-site easily.** **6. Built-in rechargeable battery pack for 4~5 hours work without power supply.** **7. 7 inch LCD touch display.** **8. Size:** 510*418*215mm ; **9. Weight:** 6.5 KG / Shipping weight:18KG
5		**OLA3001**	**Ferrous Debris Monitor / PQ Monitor** Portable and durable equipment for analyzing and tracking wear particles in oils. Self-calibration with our 0PQ, 750PQ and 100-120PQ calibration standard. 5.6 inch touch screen, support export historical test data through USB disk **1. Measure range:** 0～15000PQ **2. Sample volume**: 5ml **3. Capture wear particle:** ＞5 μm (ferromagnetic wear particles) **4. Repeatability:** Measure stable oil samples (such as 750 standard samples), repeat the measurement 100 times, and 90% of the data is within ±0.5% or ±3PQ. **5. Power Supply:** AC110~240V, 50/60Hz **6. Size:** 402×266×186mm **7. Standard package include:** Ferrous debris monitor+0PQ, 750PQ and 100-120PQ calibration standard+100pcs 5ml oil box+charging adapter+cables **8. Weight:** <5KG / Shipping weight:15KG
6		**OLA3900**	**Ferrous Debris Tester** Portable and rapid measurement on Iron concentration content **1. Testing range**: 0-5500 PPM(mg/L) **2. Testing sensitivity:** 1mg/L **3. Repeatability:** ≤1% RSD **4. Sample volume:** 2ml **5. Standard oil samples:** 0 mg/L and 1050 mg/L **6. Oil sample temperature:** 0-50 ℃ **7. Working temperature:** 0-50 ℃ **8. Working hours:** ≥ 5 Hours **9. 5 inch display, 32G storage, historical data query and historical data curve analysis** **10. Alarm Setting:** the testing result of exceeding the alarm value is displayed in red **11. Each testing time after preheating**: 2 seconds **12. Calibration:** Self-calibration with 0 mg/L and 1050 mg/L standard oil sample **13. Power:** AC110-240V; 50/60Hz **14. Size:** 250*218*133mm **15. Instrument Weight:** 2.7KG / Shipping weight:18KG
7		**OLA6001**	**Dual Slide Analytical Ferrograph** Ferrogram slide maker, the wear particles of oil will be deposited on the ferrogram. No limitations of lubricant type to be monitored. **1.** With 2 sets of micro pumps to make sure stable oil transmission. **2.** 1-99 level speed control is convenient to adjust proper speed. **3.** Unique velocity adjusting device at oil outlet to guarantee success rage of making a ferrogram. **4.** No limitations of lubricant type to be monitored. **5. Power adapter:** DC 12V/3A **6. Size:** 400x390x363mm **7. Standard package include:** Ferrograph+100 pcs ferrograph sheet+5 pcs ferrograph sheet box+50pcs oil tube+4pcs beaker+charging adapter+cables+other components(please refer to the detailed packing list) **8. Weight:**18.5KG / Shipping weight:40KG
8		**OLA5001**	**Ferrograph Microscope** Analysis ferrogram and observe the statement of wear particels, such as color,morphology size, composition and quality, to get the information about where the wear part is, how serious it is and what caused the abrasive wear. **1.** Zoom in 50X, 100X, 200X, 500X, 1000X; **2.** Reflected light illumination and Transmitted light illumination **3.** Equip with CCD digital camera 1600 million pixels **4. Weight:** 23KG / Shipping weight: 35KG

Technical specifications of Oilense sensors

Item	Picture	P/N.	Description
1		**OLS6000**	**6-in-1 oil condition sensor** **1. Density :** 600~1250 kg/m³ ; Accuracy: ±2% or ±5kg/m³(whichever the larger) **2. Viscosity :** 1~1000cSt ; Accuracy: ±5% or 1cSt(whichever the larger) **3. Temperature :** -40～120 °C ; Accuracy: ±0.5°C **4. Water activity(saturation) :** 0～1 aw (0~100%); Accuracy: ±3% **5. Moisture content(dissolved water in oil) :** 0~5000ppm; Accuracy: ±10% or ±10ppm(whichever the larger) **6. Oil Quality(Dielectric constant) :** 1-6 level ; Accuracy: ±5%
2		**OLS3000**	**3-in-1 oil condition sensor** **1. Density :** 600~1250 kg/m³ ; Accuracy: ±2% or ±5kg/m³(whichever the larger) **2. Viscosity :** 1~1000cSt ; Accuracy: ±5% or 1cSt(whichever the larger) **3. Temperature :** -40～120 °C ; Accuracy: ±0.5°C HS CODE: 9031809090
3		**OLS4000**	**4-in-1 oil condition sensor** **1. Density :** 600~1250 kg/m³ ; Accuracy: ±2% or ±5kg/m³(whichever the larger) **2. Viscosity :** 1~1000cSt ; Accuracy: ±5% or 1cSt(whichever the larger) **3. Temperature :** 0～120 °C ; Accuracy: ±0.5°C **4. Oil Quality(Dielectric constant):** 1-6 level ; Accuracy: ±5%
4		**OLSF9**	**Moisture content sensor (dissolved water in oil)** Detect water activity (aw) and micro moisture content (ppm) and temperature of oil sample **1. Water activity(saturation) :** 0～1 aw (0~100%) ; Accuracy: ±3% **2. Moisture content(dissolved water in oil):** 0~5000ppm; Accuracy: ±10% or ±10ppm(whichever the larger) **3. Temperature range**: -40～120 °C ; Accuracy: ±0.5°C
5		**OLSQ1**	**Oil quality sensor (oil aging state)** Detect Oil Quality(Dielectric constant) and Temperature of oil sample **1. Oil Quality(Dielectric constant):** 1-6 level ; Accuracy: ±5% **2. Temperature:** -40～120 °C ; Accuracy: ±0.5°C
6		**OLSP1**	**Oil particle counter sensor** **1. Light Source:** semiconductor laser **2. Eight Channels and testing range:**1～100μm or 4~70μm(c) **3. Sensitivity:**1μm(ISO4402) or 4μm(C) (ISO11171,GB/T18854-2002) **4. Standards:** NAS1638, ISO4406 **5. Particle size:** 1μm, 2μm, 5μm, 10μm, 15μm, 25μm, 50μm, 100μm ; 4μm(c), 4.6μm(c), 6μm(c), 10μm(c), 14μm(c), 21μm(c), 38μm(c), 70μm(c) **6. Accuracy:** ±1 pollution level (Particle counting: ±20%) **7. Liquid temperature:** 0～80℃ **8. Online pressure:** 2~100bar; **9. Online flow:** 10～300mL(Most accurate measurement at 25mL/min) **10. Dimension:** 100mm×75mm×71mm

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Semmelweisstraße 36-38 , 4095 Linz/Austria | (+43) 732916991

7		**OLSW21**	**Oil wear debris sensor** Detect the content of wear particles in oil sample **1. For Fe particles >40um, Five channels:** 40~99um; 100~199um; 200~299um; 300~399; ≥400μm; **2. For Non-Fe particles >150um, Five channels:** 150~199um; 200~299um; 300~399um; 400~499; ≥ 500μm; **3. Accuracy:** The detection rate is not less than 85% **4. Oil temperature:** -30～105 °C **5. Online oil flow rate:** 0.3～1.5 L/min or 0.1～0.5m/s
8		**OLSW1000**	**Online oil sensor for Vehicle (Engine /Gearbox /Transfer Case)** Integrate OLS6000 sensor and OLSW1000 Wear debris sensor Measurement range: **1. Density :** 600~1250 kg/m³ ; Accuracy: ±2% or ±5kg/m³(whichever the larger) **2. Viscosity :** 1~1000cSt ; Accuracy: ±5% or 1cSt(whichever the larger) **3. Temperature :** 0～100 °C ; Accuracy: ±0.5°C **4. Water activity(saturation) :** 0～1 aw (0~100%) **5. Moisture content(dissolved water in oil):** 0~5000ppm; Accuracy: ± 10% or ± 10ppm(whichever the larger) **6. Oil Quality(Dielectric constant):** 1-6 level ; Accuracy: ±5% **7. Wear particles:** 10 size distribution of wear particles For Fe particles >40um ; Five channels: 40~99um; 100~199um; 200~299um; 300~399; ≥400μm; For Non-Fe particles >150um; Five channels: 150~199um; 200~299um; 300~399um; 400~499; ≥500 μm; Accuracy: The detection rate is not less than 85% **8. Output:** RS485 MODBUS RTU **9. Power:** DC 24V±10% **10. Maximum pressure:** 15bar **11. Fluid temperature:** 0～100 °C **12. Output:** RS485 MODBUS RTU **13. Shell material:** aluminum alloy **14. Mechanical interface:** External thread M14*1.5 **15. Dimension:** 282×96×110 mm **16. Weight:** 3.5KG **17. IP65** **18. Standard Package:** One sensor and 2 meters inlet/outlet oil tube;

Technical specifications of Oilense online oil analysis equipment

Item	Picture	P/N.	Description
1		OLSOM1	**On-line Oil Monitoring System** Features: **1.** Integrated OLS6000 6 in 1 oil, particle counter sensors and wear debris sensor,which can real-time detect and monitor the density, viscosity, dielectric constant (oil quality and aging state), water activity, moisture, and temperature, wear particles, as well as total solid particle quantity. **2.** Easy installation and on-site check test results,wide range of detection, can work on 24 hours for better trend analysis of oil condition. **3. Size:** 352*278*160mm; **4. Weight:** 13KG; / Shipping weight: 25KG **5. Material:** Die-casting aluminum. **6. Included items:** 7 inch display screen, software design, built-in sensors,oil tubes, oil grooves, wiring and circuit design, 4G module for wireless data transfer, power supply adapter,fixtures etc. Software display interface and fucntions a. Directly check real-time test result on display. b. Connect to control centre or PLC through RS485 MODBUS protocol communication; c. Wireless data transfer to cloud platform for remote checking and control via local SIM card. d. Given viscosity value at 40°C for reference according to actual viscosity test result. e. Historical data check for around 5 years. f. Trend analysis on each test parameters. g. Alert setting and warning setting. **Installation condition requirements** 1. Pressure should be less than 10bar. 2. Flow rate should be less than 0.3 m/s. 3. The installation position shouldn't have heavy vibration.
2		OLSOF1	**Measurement: (built-in OLS6000 sensor + OLSP1 Particel counter sensor)** **1. Density :** 600~1250 kg/m³ ; Accuracy: ±2% or ±5kg/m³(whichever the larger) **2. Viscosity :** 1~1000cSt ; Accuracy: ±5% or 1cSt(whichever the larger) **3. Temperature :** 0～100 °C ; Accuracy: ±0.5°C **4. Water activity(saturation) :** 0～1 aw (0~100%) **5. Moisture content(dissolved water in oil):** 0~5000ppm; Accuracy: ±10% or ±10ppm(whichever the larger) **6. Oil Quality(Dielectric constant):** 1-6 level ; Accuracy: ±5% **7. Detect particle size range:** 1～100 μm, complys NAS1638 and ISO4406 standard **8. RS485 Modbus RTU output.**
3		OLSOF2	**Measurement range: (built-in OLS6000 sensor + OLSW21 wear debris sensor)** **1. Density :** 600~1250 kg/m³ ; Accuracy: ±2% or ±5kg/m³(whichever the larger) **2. Viscosity :** 1~1000cSt ; Accuracy: ±5% or 1cSt(whichever the larger) **3. Temperature :** 0～100 °C ; Accuracy: ±0.5°C **4. Water activity(saturation) :** 0～1 aw (0~100%) **5. Moisture content(dissolved water in oil):** 0~5000ppm; Accuracy: ±10% or ±10ppm(whichever the larger) **6. Oil Quality(Dielectric constant):** 1-6 level ; Accuracy: ±5% **7. Wear particles:** 10 size distribution of wear particles For Fe particles >40um ; Five channels: 40~99um; 100~199um; 200~299um; 300~399; ≥400μm; For Non-Fe particles >150um Five channels: 150~199um; 200~299um; 300~399um; 400~499; ≥500μm; Accuracy: The detection rate is not less than 80% **8. RS485 Modbus RTU output.**
4		OLDIS1	**Panel box to connect sensor** Display real-time test results on 7inch pannel box, include software design Software design and functions of the pannel box as below: **1.** Directly check real-time test result on display. **2.** Connect and send data to control centre or local system. **3.** Historical data check for around 5 years. **4.** Trend analysis on each test parameters. **5.** Alert setting and warning setting. **6.** RS485 Modbus RTU protocol communication. **7.** 4G/WIFI module and GPS module is optional **8. Dimension:** 265.5*186*96.5mm

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