



INZOC TECHNOLOGY (SHEN ZHEN) CO.,LTD

Industry beautifies life
INZOC optimizes industrial health

Intelligent lubrication monitoring and diagnosis solution provider

- Oil Monitoring Sensor
- Online Oil Condition Monitoring System
- Oil & Fluid IoT Cloud Services
- Portable Oil Analyzer



COMPANY PROFILE

Founded in 2015 and headquartered in Shenzhen, INZOC Technology (Shenzhen) Co., Ltd. is a high-tech enterprise integrating R&D, sales and services for oil monitoring and fault diagnosis. Its offerings cover online oil monitoring solutions, oil analyzers, and IoT big data O&M platforms.

We provide full-lifecycle oil management via professional monitoring & diagnosis on physicochemical, moisture, wear, pollution and aging, enabling data-driven O&M for reliable equipment operation.

Guided by our philosophy, we leverage smart sensing for full-lifecycle equipment management, preventing unplanned downtime and enabling precise maintenance and data-driven decisions.

5000^{m²}
Owned Global HQ Building
SRDI Industrial Park

30000⁺
Over 30,000 units installed worldwide

3000⁺
Served 3,000+ industry-leading clients

TOP³
Leading oil monitoring technology

20⁺
Core Oil Sensor Manufacturing

30⁺
Joint Laboratory

Enterprise Qualifications Certifications & Qualifications



- Granted authoritative certifications: High-tech Enterprise, innovative & national sci-tech SMEs, specialized sophisticated SME, Guangdong Famous Brand, Doctoral Innovation Station & registered tech achievements.
- Thanks to INZOC deep R&D in core oil monitoring tech, we own multiple patents, launch innovative products for diverse scenarios and gain wide market recognition.



Product Catalog

Oil Online Monitoring System			
Product	Main Function	Key Parameters	Typical Use
IOL-H3	Integrated online oil condition monitoring system	Viscosity, moisture, oil quality, ferrous debris, contamination	Heavy industry, mining, power, cement, petrochemical
IOL-H2	Multi-parameter online oil monitoring system	Viscosity, moisture, oil quality, contamination	General industrial lubrication and hydraulic systems
IOL-EX2	Explosion-proof online oil monitoring system	Ex d IIB T4 Gb; 7" screen; viscosity, contamination, moisture, wear	Hazardous industrial environments
IOL-EX	Explosion-proof online oil monitoring system	Ex-proof design; viscosity, moisture, contamination, wear	Petrochemical, hazardous and explosive environments
YJY12	Intrinsically safe online oil monitoring system	Multi-parameter sensing; mining-safe design	Mining equipment and underground applications
IOL-CG	Modular online oil monitoring system	Multi-parameter oil condition monitoring	Steel, cement, power, petrochemical, heavy equipment
IOL-GAT	Distributed online oil monitoring system	4.3" screen; IP65; AC220V/DC24V Ethernet/USB; optional 4G/WiFi	Multi-point distributed monitoring for industrial oil systems

Oil Online Monitoring Sensor			
Product	Main Function	Key Parameters	Typical Use
IFV-345	Compact multi-parameter oil sensor	Viscosity, density, temperature, oil quality, moisture	Compact installations on industrial equipment
IFV-7	High-end multi-parameter oil sensor	Viscosity, water activity, moisture, oil quality, density	Gearboxes, turbines, hydraulic and insulation oil systems
IFM-3	Metal wear particle sensor	Ferrous/non-ferrous particle sizing and counting	Gearboxes, bearings, heavy machinery
IFM-4	Adsorbed wear particle sensor	Fine/coarse wear indication	Early wear warning in lubrication systems
IFJ-3D	Contamination sensor with display	1 - 450 μ m; 8 channels; on-site screen	On-machine contamination monitoring
IFJ-6	Enhanced Anti-Water&Bubble Particle Contamination Monitoring	1-400 μ m; 8 channels; +1 grade; RS485/Modbus RTU; 10-300 mL/min	Multi-Oil Contamination Monitoring for Key Equipment
IFJ-3BW	Online contamination sensor	1 - 400 μ m; 8 channels; $\pm$ 1 grade	Hydraulic, lubrication, turbine and gear oil monitoring
IFD-3	Dynamic imaging particle analysis	1 - 800 μ m particle imaging; 8 channels	Wear analysis, particle morphology, advanced diagnostics
IFE-3	Impedance spectroscopy oil sensor	Diesel dilution, glycol, oxidation oil quality	Advanced oil degradation and contamination analysis
IFR-3	Resistivity sensor	$1 \times 10^9 - 1 \times 10^{12} \Omega \cdot \text{cm}$	High-sensitivity contamination and aging detection
ISL-B	Bypass multi-function oil sensor	Wear, moisture, oil quality viscosity, density	Bypass monitoring in wind, marine, power, petrochemical
ISL-Z	Main-line integrated oil sensor	Wear, moisture, oil quality viscosity, density	Main-line monitoring for OEM and large equipment
ISL-Z2	Split-type main-line oil sensor	Multi-parameter sensing; flexible installation	Main-line systems with limited installation space
IFM-2	Non-contact wear particle sensor	Wear index; particle trend	Critical equipment wear monitoring



Product Catalog

Oil Online Monitoring Sensor			
Product	Main Function	Key Parameters	Typical Use
IFF-2	Oil quality sensor	Oil quality index; temperature	Oil aging and degradation monitoring
IFW-2A	Trace water monitoring sensor	Water activity; trace water ppm	Moisture-sensitive lubrication and hydraulic systems
IFW-2B	Water content monitoring sensor	Water content; trace water temperature	Water ingress and emulsification monitoring
GYM12	Intrinsically safe metal debris sensor	Fine/coarse particle indication	Mining conveyors, shearers scraper systems
GYK12	Intrinsically safe metal wear particle sensor	Ferrous/non-ferrous wear particle statistics	Rotating machinery and mining equipment
GYD12	Intrinsically safe multi-parameter oil sensor	Viscosity, moisture, water activity, oil quality	Coal mining hydraulic and gearbox systems
GYW12	Intrinsically safe contamination sensor	1 - 400 μm ; 8 channels	Mining equipment contamination monitoring
GYD12(A)	Intrinsically safe integrated oil sensor	Wear, contamination, moisture oil quality, viscosity	Mining equipment online monitoring

Oil Analyzer			
Product	Main Function	Key Parameters	Typical Use
ITF-3	Ferrography analysis system	1 - 1000 μm wear particle analysis	Laboratory and offline wear diagnostics
IBM-3E	Portable visual wear analyzer	1 - 800 μm imaging wear concentration; moisture	Visual wear diagnosis and failure analysis
IBJ-3D	Intelligent contamination and wear analysis	1 - 800 μm ; dynamic imaging RS232/485/USB	Oil contamination and wear analysis
IBJ-2J	Portable contamination testing and oil condition analysis	1 - 400 μm ; 7" screen RS232/485/USB	On-site contamination testing for industrial oils
IBF-3	Portable oil analyzer	Viscosity, moisture, wear, oil quality, contamination	Field inspection and quick on-site testing
ITM-3	PQ ferrous wear meter	PQ/PPM measurement 1 - 10000 ppm	Fast offline ferrous wear screening
IFJ-3	Portable particle counting and cleanliness analysis	1 - 650 μm ; 8 channels; RS232 built-in printer	Portable contamination testing for industrial oils and fluids



IOL-H3 series new

Intelligent online oil monitoring system

The new IOL-H3 series online oil monitoring system features a digital dynamic control platform, high-res image sensing, and in-house wide-frequency impedance tech. It includes a 10-inch industrial HMI, simultaneously captures vibration, pressure, and flow data, employs micron-level multi-physics sensors for precise detection of viscosity, wear particles, and contaminants, and uses edge computing for real-time modeling and forecasting, reducing unplanned downtime and maintenance costs.

Remote diagnosis technology • Multi-data fusion technology

Industries and oil types

Industries: steel metallurgy, petrochemicals, energy, cement, heavy machinery, coal mining, underground mining, etc.
Oils: gear, hydraulic, turbine, diesel engine, insulating, phosphate ester-based, water-glycol, special additive oils, etc.

Product Features

New Integration

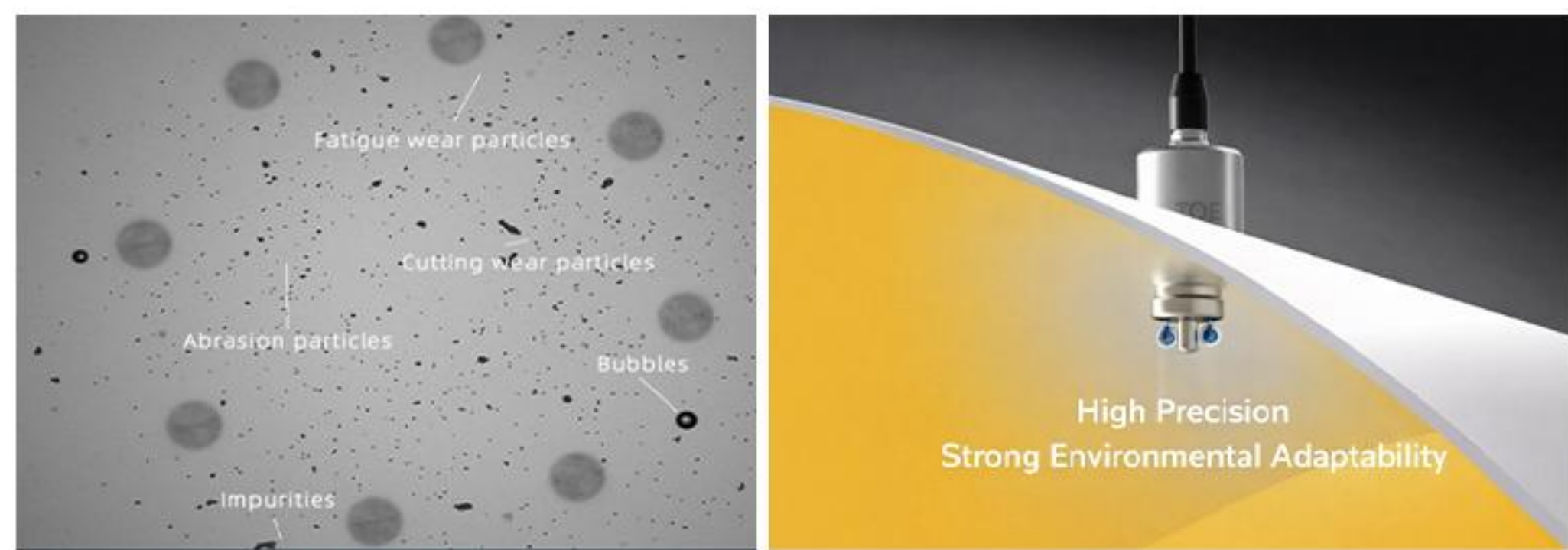
Brand-new industrial-grade 10-inch human-computer interaction terminal and brand-new software.

The interface has been updated to integrate resistivity and image visualization analysis data.

Based on wear morphology recognition and other factors, a newly developed sensor is the best Output dynamic images at a speed of nearly 2 seconds.

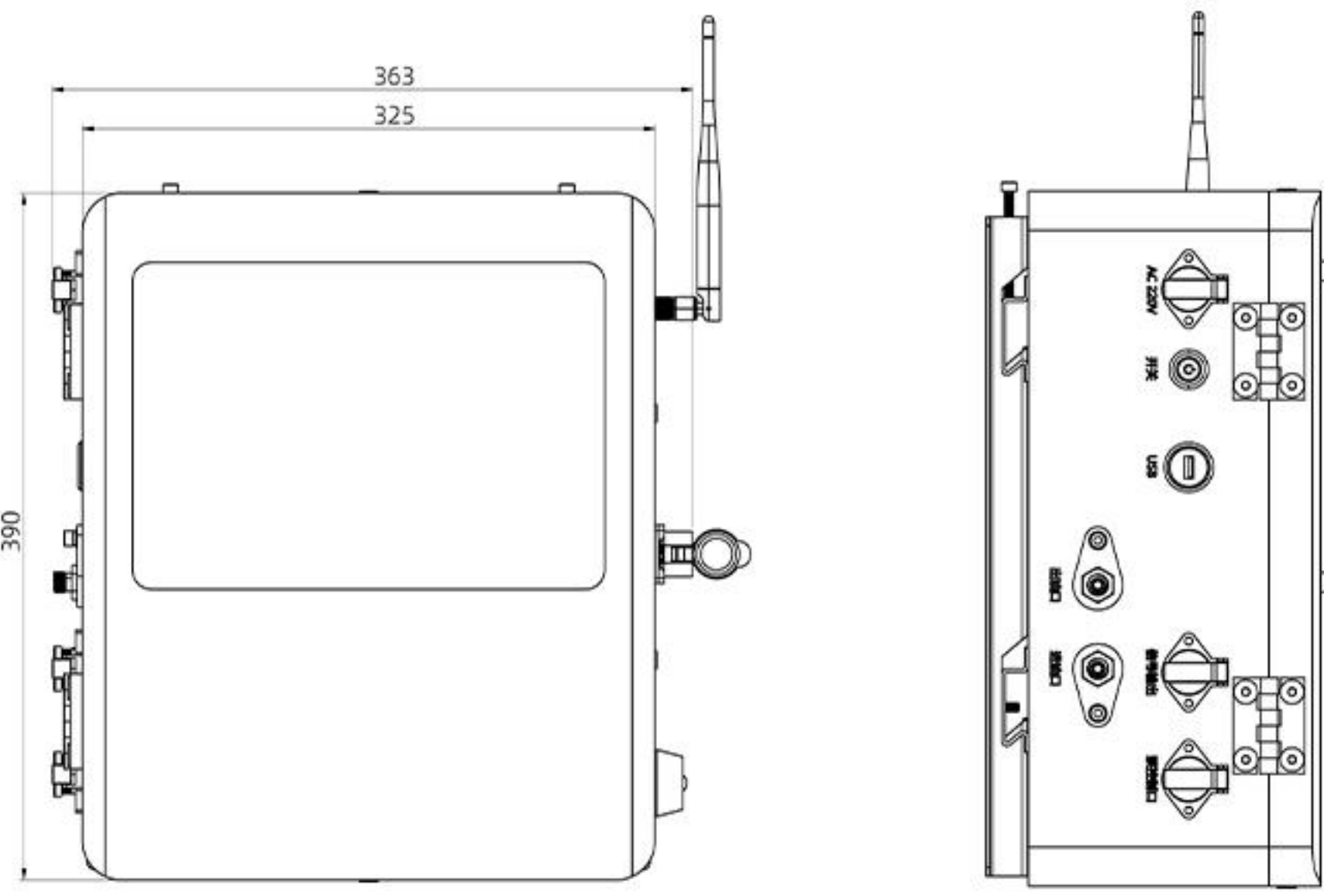
Comprehensive analysis of multi-dimensional monitoring

- Dynamic image particle monitoring technology
- Brand-new self-developed resistivity monitoring technology



appearance recognition					
shape	particle	shape	particle	shape	particle
	2213		218		139
	125		110		79
	46		29		74
					Identification of wear morphology

Product dimensions



Specifications

Physicochem	range	precision	resolution	monitoring indicators	
Viscosity	10-1500cP	±3%or8cP	0.01cP	Dynamic viscosity, kinematic viscosity, kinematic viscosity at 40°C, density, temperature, oil quality	
Trace moisture	0.04-1aw	±0.04 aw	0.001aw		
	1-10000ppm	±10%or50ppm	1ppm	Water activity (aw), moisture content (ppm), temperature	
Water content	0.03 - 100%	±0.3	0.01%	Moisture content, water content (ppm), temperature	
Oil product quality	1 - 100	±3%	0.01	Oil quality, temperature	
metal particles	≥30μm	≥95%	Fe≥30μmnon-Fe≥120μm	Ferromagnetic, non-ferromagnetic, wear concentration	
pollution level	1~400μm	±1Level (typical value)	1μm	Pollution level, total particle count	
Loss tangent	-	±5%	-	tanδ number (TDN), oil temperature	
image analysis	Dynamic particle detection: fatigue wear, sliding wear, cutting wear, fibers, impurities, bubbles			Particle detection range: 1~800μm	
aging analysis	Resistivity	Measurement Range: 1×10^9Ω~1×10^12Ω·cm			Resolution: 0.1×10^9Ω·cm
	EIS	Test content: oxidant, water, impurities, acid value, alkali value, diesel dilution, soot, ethylene glycol (selected according to requirements)			
	Oxide	Detection range: 15-200 mgKOH/g, accuracy ±3mgKOH/g			



IOL-H2 series

Intelligent online oil monitoring system

New-generation IOL-H2 online oil monitoring system: digital control, multi-solution monitoring, vibration/pressure/flow data collection, high-precision sensors (sensitive to oil wear, viscosity degradation, contaminant particles), built-in oil aging curves, software with real-time display, curve analysis, data search, threshold setting and three-level alarm.

Remote diagnostic technology • Intelligent analysis and diagnosis

Industries and oil types

Industries: steel metallurgy, petrochemicals, energy, cement, heavy machinery, coal mining, underground mining, etc.
Oils: gear, hydraulic, turbine, diesel engine, insulating, phosphate ester-based, water-glycol, special additive oils, etc.

Product Features

Direct system output

Kinematic viscosity at 40°C / oil quality / saturation /wear particles Contamination level / water content. It pioneers the integrated data acquisition and monitoring of vibration, pressure, flow rate, etc.,

Remote Intelligent Operation & Maintenance System

Data upload
www.youyeyun.com



Linux kernel program
Edge gateway computing
Quad-core processor



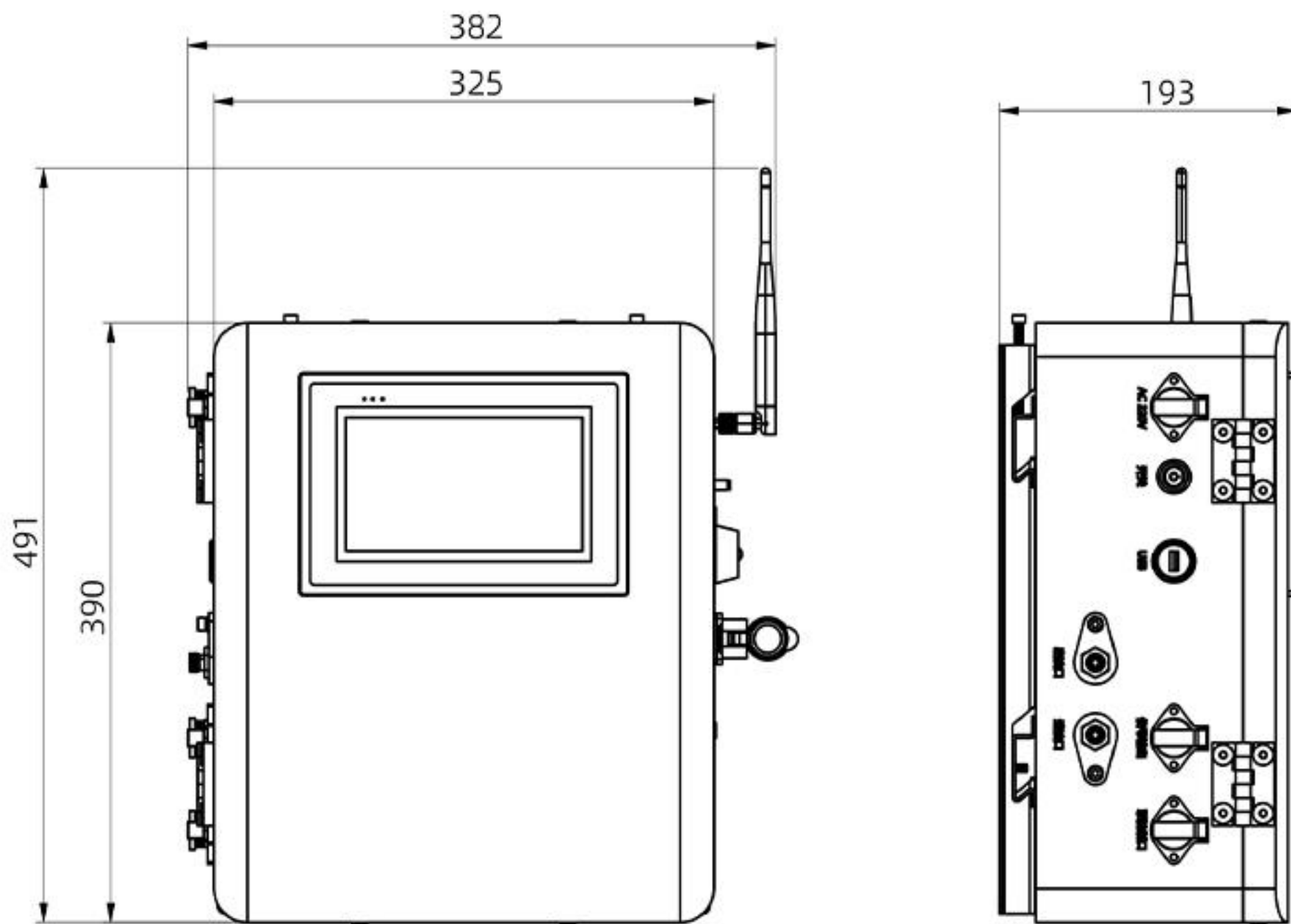
AI-based anti-foaming
analysis algorithm



Automatic control technology

It can comprehensively monitor the oil aging status of the equipment
Equipment Operation Status Monitoring

Product dimensions



Specifications

Sensor	Range	Precision	Resolution	Monitoring indicators
Viscosity	10-1500cP	±3%or8cP	0.01cP	Dynamic viscosity, kinematic viscosity, kinematic viscosity at 40°C, density, temperature, oil quality
Trace moisture	0.04-1aw	±0.04 aw	0.001aw	
	1-10000ppm	±10%or50ppm	1ppm	Water activity (aw), moisture content (ppm), temperature
Water content	0.03 - 100%	±0.3	0.01%	Moisture content, water content (ppm), temperature
Oil product quality	1 - 100	±3%	0.01	Oil quality, temperature
Metal particles	≥30μm	≥95%	Fe≥30μmnon-Fe≥120μm	Ferromagnetic, non-ferromagnetic, wear concentration
Pollution level	1~400μm	±1Level (typical value)	1μm	Pollution level, total particle count
Leakage	0.1ml	-	0.1ml	Monitoring system leakage
Flow rate	0-1l/min	±3%	1ml	System oil circuit flow
Pressure	0.1-10Mpa	±3%	0.1bar	Equipment vibration
Vibration	0.1-9.8mm/s	±3%	0.1G	Equipment vibration



IFD-3 series new

Dynamic Image Particle Sensor

The IFD-3 Dynamic Image Particle Sensor features an industry-first Linux-based HD imaging system. It captures real-time oil flow images in 2 seconds, measuring particle distribution, concentration and water contamination. Its AI model classifies particles per ISO, NAS1638 and ASTM standards.

Ultra-lightweight • Ultra-high resolution

Industries and oil types

Industries: Steel, petrochemical, energy & power, cement, heavy machinery, mining, etc.

Oils: Gear oil, hydraulic oil, turbine oil, diesel engine oil, insulating oil, etc.

Product Features

High Efficiency
Ultra compact size

Data output in as fast as 2 seconds
Result output in as fast as 30 seconds

Excellent architecture
ARM-based platform: compact, cost-effective.
Multi-core processor: high performance & efficiency.

Harsh working conditions
Dynamic particle image sensor
Resistant to dust, moisture, vibration, high temperature, low light, etc.
Real-time monitoring of oil quality

Easily handles various complex on-site working conditions.

Dark-colored oil, AI automatic light compensating analysis
Automatic light-compensating analysis for dark-colored oil

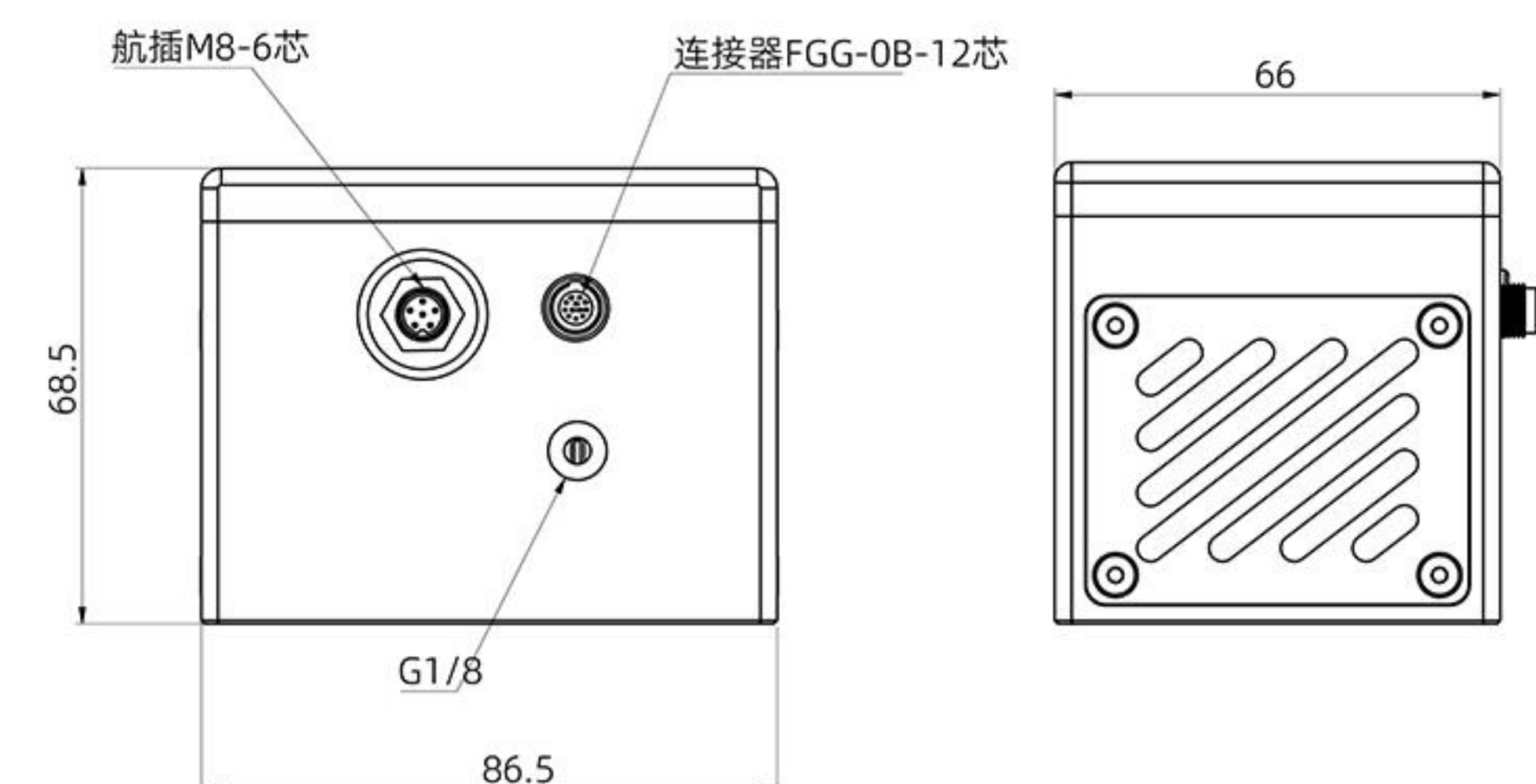
Uses Linux operating system.
Advanced image processing & AI models.
Compact hardware provides reliable wear & contamination data, easy integration.

Imaging Methods
Dynamic particle image sensor
Ultra-strong light source and CMOS ultra-clear presentation of oil contamination

As the sample passes through the flow cell, the sensor is illuminated by the laser particles to be characterized and classified on the basis of the image data.

Multi-interface high-efficiency monitoring
Dual Interfaces:
HDMI outputs real-time HD video with images, particle/bubble counts, contamination level, moisture and wear particle data.
RS485 transmits the same parameters as digital signals.
Fully compatible with mainstream industrial systems.

Product Dimensions



Specifications

Detection Indicators				
Particle Counting: ISO 4406 / NAS 1638 / ASTM D6786 / Custom Ferromagnetic concentration (ppm), particle count & size distribution. Intelligent ferrography: particle classification, size and morphology. Temperature: Real-time oil temperature		Lens pixel: 5 MP Light compensation: auto exposure & linear compensation	Optional Parameters: Moisture Saturation, Moisture Content (ppm)	
		Applicable oil viscosity: 1 - 1500 cP	Range / Accuracy: 1 - 10000 ppm / ±10% or 50 ppm Range / Accuracy: 0.04 - 1 aw / 0.04 aw	
Particle detection range: 1 - 800 μm		Imaging time: 2 - 5s, auto-output based on test conditions.	Judgment output: 30 - 50s, auto-output based on test conditions.	
Number of particle channels: 8		Sensitivity: 1 μm (ISO 4402) or 4 μm (c) (GB/T 18854, ISO 11171)		
Particle Counting Detection Channel (Optional)	NAS1638/SAE4059F: 5-15μm、15-25μm、25-50μm、50-100 μm、>100μm; GOST17216: 1-2μm、2-5μm、5-10μm、10-25μm、25-50μm、50-100μm; GJB420B: >4μm(c)、>6μm(c)、>14μm(c)、>21μm(c)、>38μm(c)、>70μm(c); SAE4059F-CPC: >4μm(c)、>6μm(c)、>14μm(c)、>21μm(c)、>38μm(c)、>70μm(c); ISO4406: >4μm(c)、>6μm(c)、>14μm(c); GB/T14039: >4μm(c)、>6μm(c)、>14μm(c); GJB420A: >2μm、>5μm、>15μm、>25μm、>50μm		Particle Counting Standard	GJB420B、SAE4059F-CPC、ISO4406 GB/T14039、GJB420A、NAS1638 SAE4059F
			Wear Analysis Standard: ASTM D6786	
			Wear Identification: Fatigue Wear / Sliding Wear Cutting Wear / Fibers / Contaminants	



IFJ-3B series Contamination Sensor

IFJ Series Contamination Sensors use single-laser counting technology for fast, stable, high-precision particle size and quantity measurement.
Fourier waveform analysis enhances detection of fine particles and clean oil, with automatic correction for invalid and interfering data.

Built-in data correction • For harsh conditions

Industries and oil types

Industries: Steel, Petrochemical, Energy, Power, Cement, Machinery, OEM, etc.
Oils: Lubricating oil, gear oil, hydraulic oil, turbine oil, diesel engine oil, etc.

Product Features

Precision
Ultra-high

High precision & stable

Detects particles down to 1 μm
Compatible with various oils

Auto-corrects invalid data.

Fourier analysis boosts precision for fine particles and clean oil.

Model Analysis

Integrated with Fourier analysis model

Monitors mechanical wear in oil.

Accurately detects oil particles, enables early fault detection, and supports predictive maintenance.

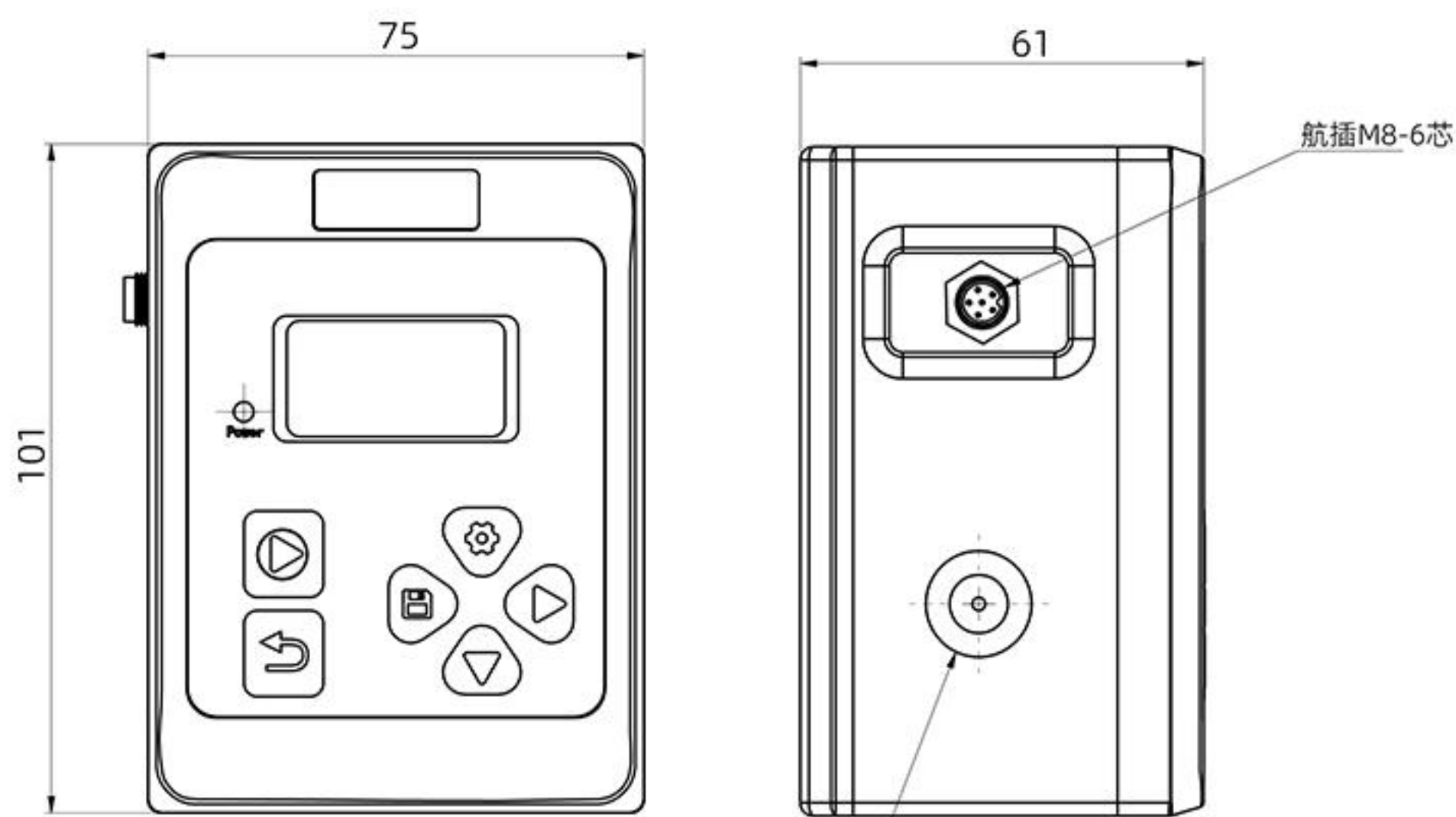
Technical Principle Diagram

Remote Monitoring & Intelligent O&M Diagnosis Center

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- Fast monitoring
- Response feature

Dimensions



Specifications

Test Range	Channel	Detection Channel	Accuracy	Calibration
1-400um	8	1μm、2μm、5μm	±1Level (Typical Value)	ISO4402 ISO11171
		10μm、15μm、25μm		
		50μm、100μm、4μm(c)		
		4.6μm、6μm(c)、10μm(c)		
		14μm(c)、21μm(c)		
		38μm(c)、70μm(c)		
Sensitivity	1μm(ISO4402)或4μm(c)(GB/T18854、ISO11171)			

Electrical specs

Comm Interface	Data transfer	Power	Voltage	Weight	Shell Material	Cable length	Protection class
6-pin aviation plug	Modbus/CAN/4-20mA	$\leq 2\text{W}$	DC 9V-36V	200g	Special Al alloy	1.5m(Customizable)	IP65



IFJ-3D^{series} Contamination Sensor

IFJ series sensors use single-laser obscuration counting, delivering fast, stable, high-precision detection with excellent repeatability for particle size and count distribution.

Fourier waveform analysis boosts fine-particle and clean-oil accuracy, with automatic invalid data correction.

For harsh conditions • Real-time and reliable data

Industries and oil types

Industries: Steel, Petrochemical, Energy, Power, Cement, Machinery, OEM, etc.

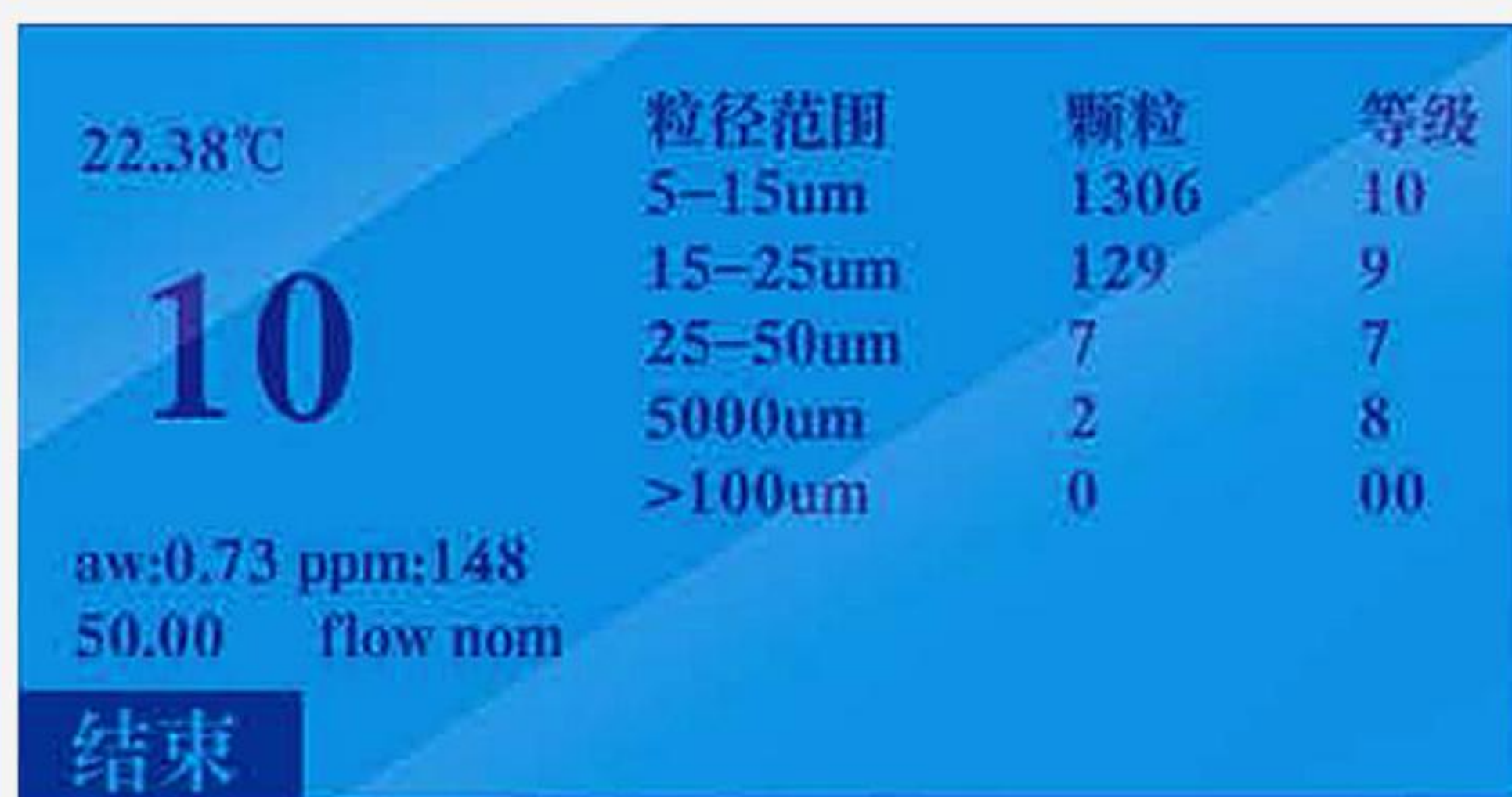
Oils: Lubricating oil, gear oil, hydraulic oil, turbine oil, diesel engine oil, etc.

Product Features

Analysis Model Boosts fine particle accuracy

Built-in bubble elimination structure

Auto-checks oil flow and software on startup.
Interface outputs key data per standards; sensor self-tests on startup.



3.5-inch HD large screen

Precise, interference-resistant.

Built-in degassing structure enhances detection accuracy; core algorithms eliminate interference from trace moisture and bubbles.



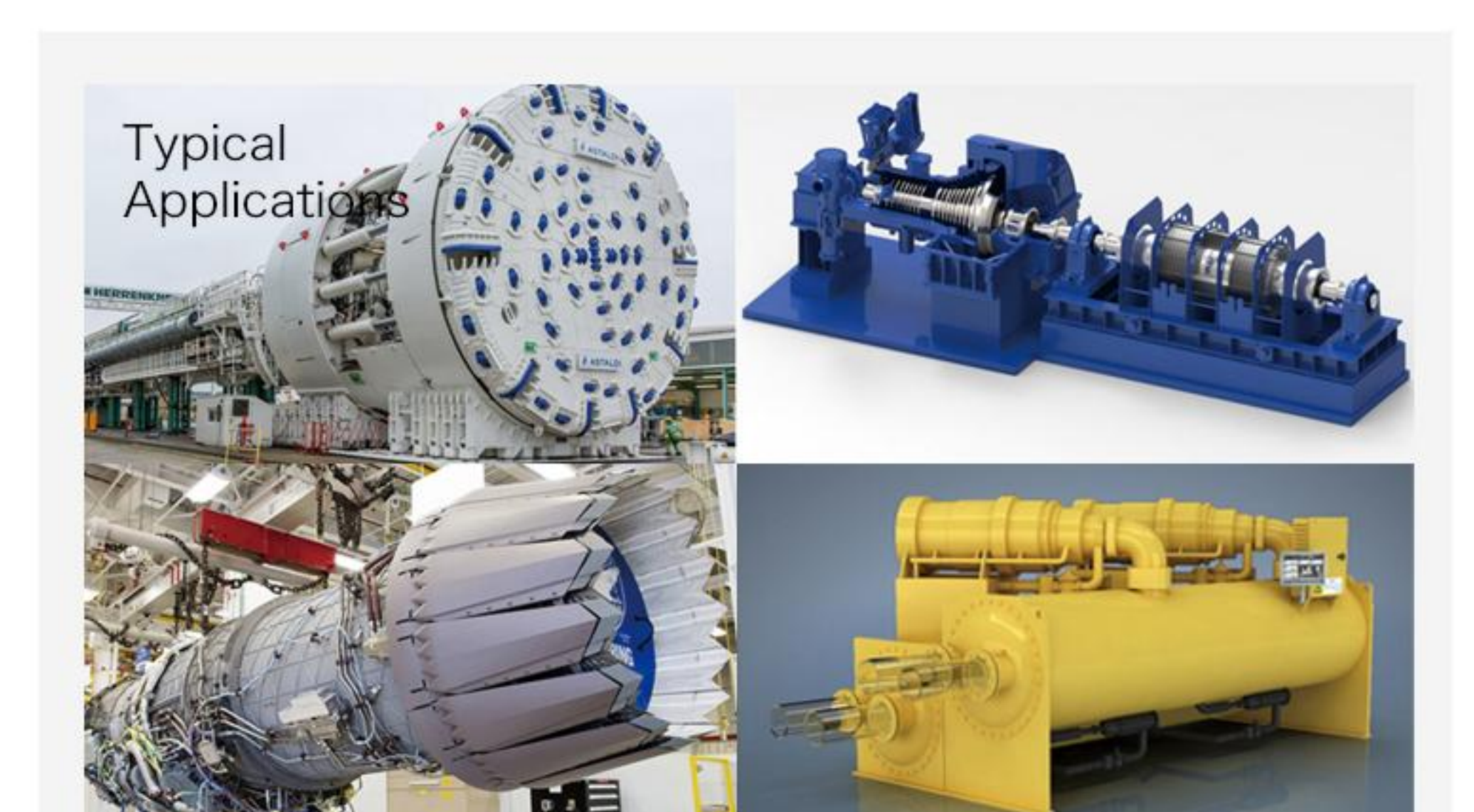
Core data algorithm



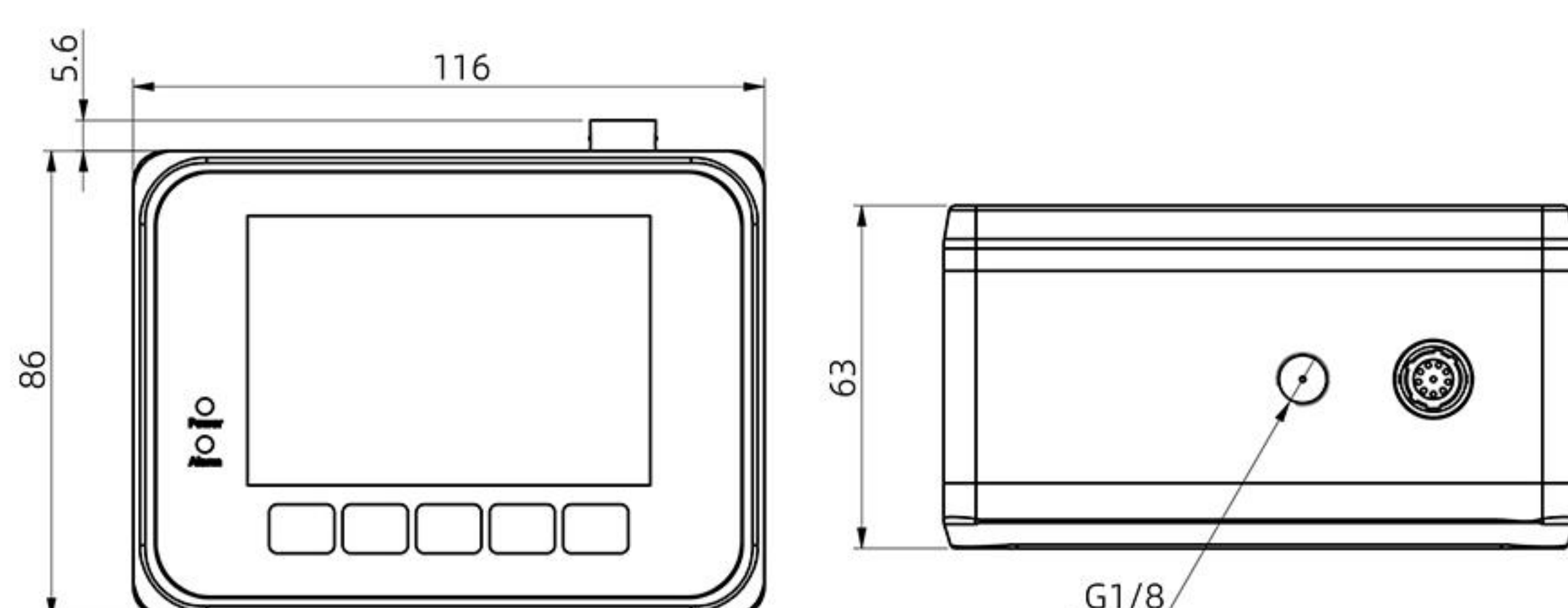
Cancels moisture & bubble interference

Remote Monitoring & Intelligent O&M Diagnosis Center

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Dimensions



Specifications

Test Range	Channel	Detection Channel	Accuracy	Calibration
1-450um	8	1μm, 2μm, 5μm	±1Level (Typical Value)	ISO4402 ISO11171
		10μm, 15μm, 25μm		
		50μm, 100μm, 4μm(c)		
		46μm, 6μm(c), 10μm(c)		
		14μm(c), 21μm(c)		
Sensitivity		38μm(c), 70μm(c)		
		1μm(ISO4402)or4μm(c)(GB/T18854, ISO11171)		

Electrical specs

Comm Interface	Data transfer	Power	Voltage	Weight	Shell Material	Cable length	Protection class
6-pin aviation plug	Modbus/CAN/4-20mA	≤2W	DC 9V-36V	200g	Special Al alloy	1.5m (Customizable)	IP65



IFM-3 series Metal wear particle sensor

IFM series oil metal wear particle sensors use high-precision detection and a microprocessor system. They offer high accuracy, stability and compact size, simultaneously measuring ferromagnetic ($\geq 30\text{ }\mu\text{m}$) and non-ferromagnetic ($\geq 120\text{ }\mu\text{m}$) particles across 15 size channels. 24/7 particle counting ensures accurate, continuous equipment fault monitoring.

- Continuous precise measurement
-
- Multi-channel wear monitoring

Industries and oil types

Industries: steel, petrochemical, energy, cement, machinery, mining, excavation
Oils: gear oil, hydraulic oil, turbine oil, diesel engine oil, insulating oil, etc.

Product Features

Metal wear

Track and assess equipment wear

Fe Fe

Equipment early warning
Safe lubrication

Algorithm optimization / Noise filtering

Exclusive filtering eliminates interference, rapidly detecting various particles in oil.

Ferro-wear

Non-Ferro-wear

Up to 15 wear particle size channels

Precise fault monitoring

24/7 particle tracking captures full wear data. Via RS485 Modbus RTU, stable real-time data enables precise fault detection.

Raw Signal of Noise Filter Screen

FFT Spectrum with Wear Particles and Noise

Static

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Remote Intelligent O&M Diagnosis Center

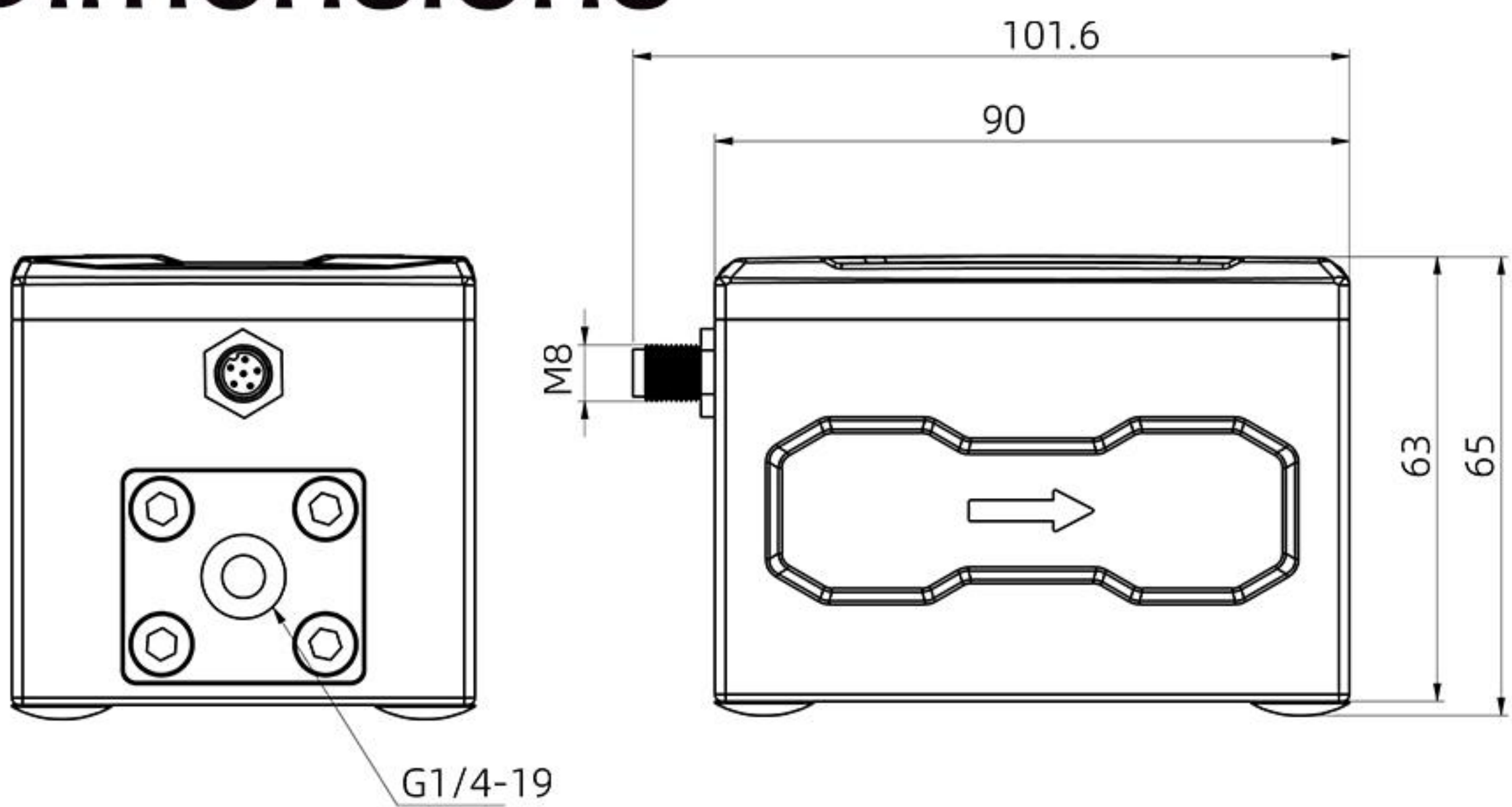
Rapid Monitoring

Real-time Surveillance

Ferromagnetic particles

Non-ferromagnetic particles

Dimensions



Specifications

Ferro-wear	Non-ferro-wear	Total particles	Particle density	Flow rate
30-50 μm	-	24h Total Ferromagnetic Particles	Ferromagnetic & Non-Ferromagnetic Concentrations (mg/l)	Standard configuration
50-100 μm	120-200 μm			
100-200 μm	200-400 μm			
200-400 μm	400-800 μm			
400-800 μm	800-1600 μm			
>800 μm	>1600 μm			
Detection Rate $\geq 95\%$ (Typical)				

Electrical specs

Comm Interface	Data Transmission	power	Voltage	Weight	Shell material	Cable length	IP Rating
6-core Aero plug	Modbus/CAN/4-20mA	$\leq 2\text{W}$	DC 9V-36V	850g	Aero Al Alloy	1.5m	IP65



IBM-3E series new

Intelligent Analytical Ferrograph

The IBM-3E Intelligent Analytical Ferrograph detects ferrous wear particles in lubricants. It uses electromagnetic excitation, optical imaging and AI to analyze particles $\geq 10 \mu\text{m}$. It identifies fatigue, sliding and cutting wear in real time, classifies particle features, and distinguishes contaminants. It provides key data for equipment monitoring, wear warning and maintenance.

Minute-level acquisition • Imaging ferrography

Industries and oil types

Industries: Steel, Petrochemical, Energy, Power, Cement, Machinery, OEM Integration, etc.
Oils: Lubricating oil, gear oil, hydraulic oil, turbine oil, diesel engine oil, etc.

Product Features



High-res dynamic imaging of wear particle ferrograms

wear particle ferrogram



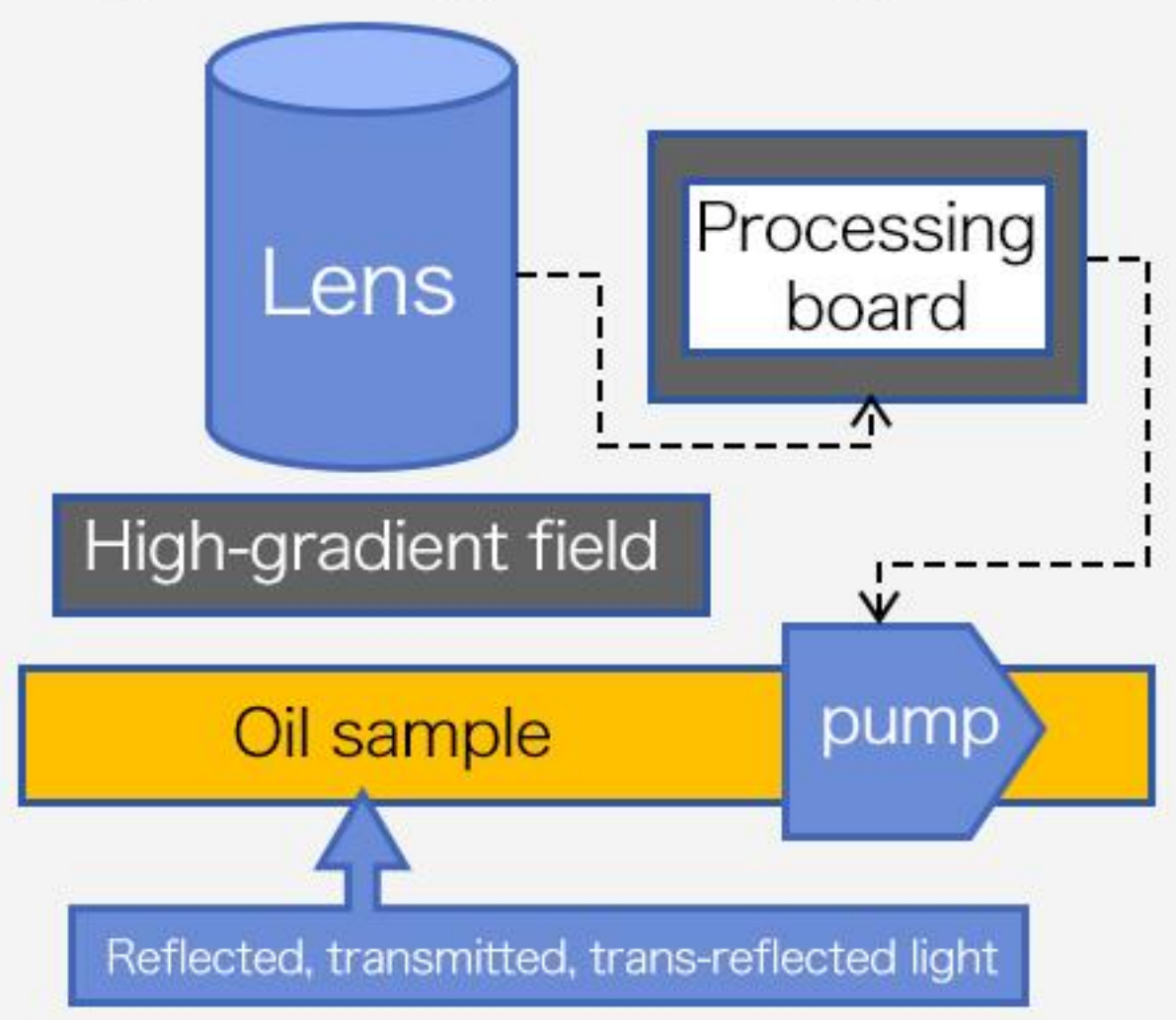
Single detection time ≤ 1 minute

Wear particle imaging size: 5 - 1000 μm

Visual detection

The HD camera captures abnormal particles in real time. With the wear database, it rapidly analyzes particle size, shape and quantity.

Image recognition algorithm



Particle types: cutting, sliding, fatigue wear; non-metallic: oxides, carbides, polymers, etc.

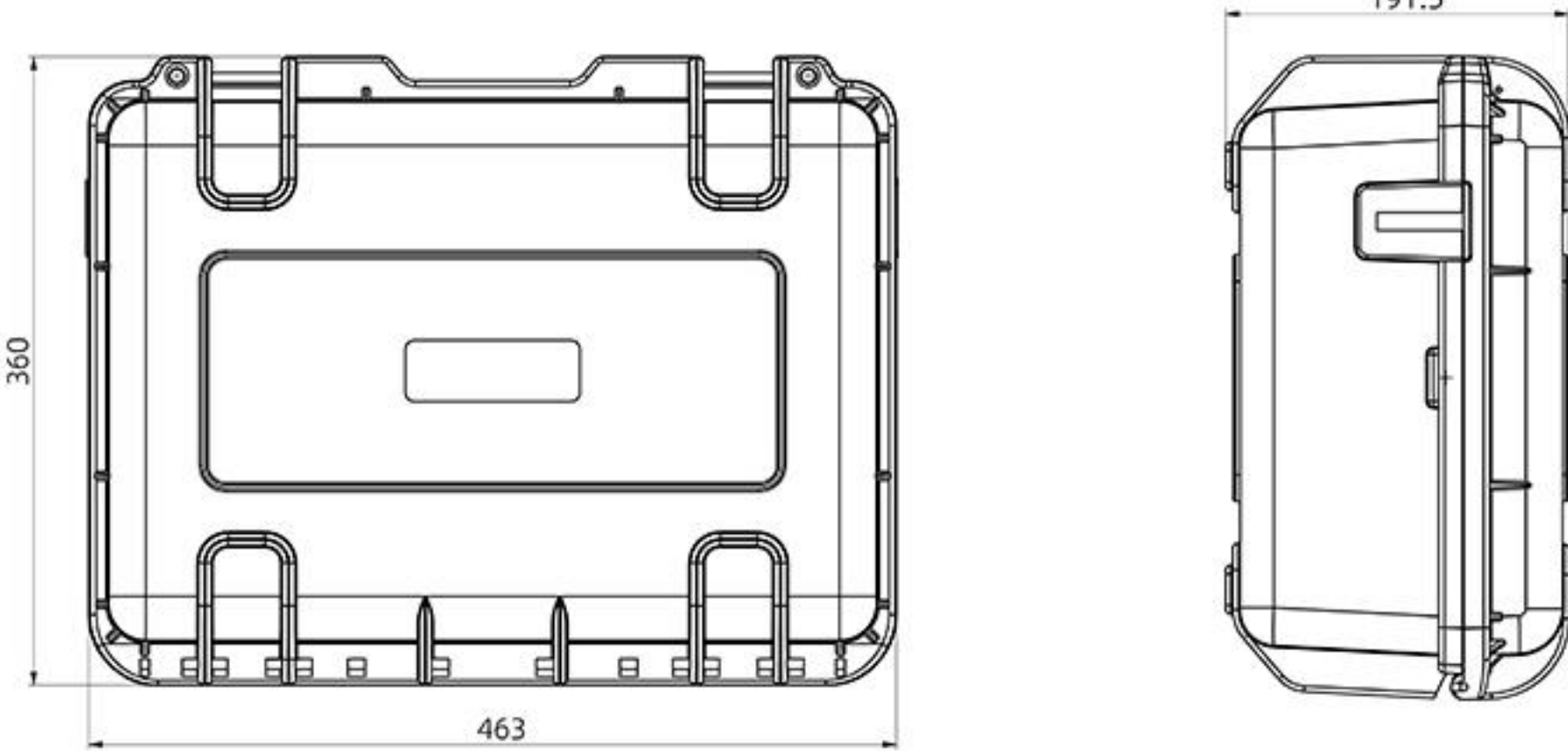


Easy to operate

The instrument features a touchscreen HMI interface, simple and user-friendly.

Keyboard + mouse touch screen (Optional)

dimensions



Specifications

Particle Morphology Definition			
Wear particles: cutting, sliding, fatigue. Non-metallic particles: oxides, carbides, polymers; also water content and saturation.			
Indicator	Technical Parameters		
Detection capability	Analyzes wear particles in engine, transmission, hydraulic and gear oils.		
Wear particle imaging size	5~1000 μm		
Moisture detection	Saturation: 0.04 - 1 aw, Moisture content: 1 - 10000 ppm		
Max MMF (F) for wear particle deposition	1200 AN		
Indicator	Technical Parameters		
Detection cycle	≥ 1 min		
Optical magnification	3 times		
Imaging pixel	5 million		
Wear classification	Fatigue / Sliding / Cutting wear / Fibers / Impurities / Bubbles		
Abrasive particle slide	Abrasive slide: 1024×768 pixels, with scale bar.		
Data stats & management	Wear statistics, calculation and trend analysis by unit, equipment type or single equipment.		

Electrical specs

Op. temp.	Storage temp	Power adaptability	Oil circuit interface	Data output
-20-85°C	-30-60°C	AC 220V±10%, 50Hz	G1/4 (adaptable to other specs)	RS485, USB



IBJ-2J series

Portable contamination detector

Featuring advanced sensing, the IBJ-2J portable contamination detector measures oil aging and digitally shows contamination, wear, viscosity and moisture, while reducing bubble and water interference.

Widely used in aerospace, power, petrochemical and metallurgy, it tests various oils to monitor equipment health.

Oil life assessment • Wear state analysis

Industries and oil types

Industries: steel, petrochemical, tunneling, power, wind, heavy equipment, labs

Oils: hydraulic oil, turbine oil, diesel engine oil, gear oil, transformer oil

Product Features

Oil Aging Test Solution

Comprehensive oil aging indicators detection

Oil data analysis

It cleans residual oil for accurate data and supports optional quick report printing on wear, moisture, viscosity and aging.

Easy to operate

Touchscreen operation with user-friendly interface, simple to use.

HOME PAGE

Sample name: 1504-18, Sampling position: Hydraulic tank, Sample NO.: 2022, Equipment type: 201, Detection, Clean, Settings, Inquire, Calibration, Alarm, Sample NO.: 检测记录, Flushing time: Pre-departure time, 检测进度: 50%, 流量: 30ml/min

Wear analysis

Wear analysis screenshot showing various parameters and their values.

Aging performance analysis

Aging performance analysis screenshot showing various parameters and their values.

Product dimensions

311, 321, 204, 170.6, 180

Specifications

Sensor	Range	Accuracy	Resolution	Test indicators			
Viscosity 40° C	10-1500cP	±3%or8cP	0.01cP	Kinematic Viscosity at 40° C, Density, Oil Quality			
Moisture	1-10000ppm	±10%or50ppm	1ppm	Aw, Moisture(ppm), Temp			
Moisture content	0.03 - 100%	±0.3	0.01%				
Wear particles	30 - 800μm	95%	FM≥30μmNFM≥120	Water content (ppm), temperature			
Oil quality	1 - 100	±3%	0.01	Oil quality, temperature			
Contamination	1~400μm	±Level 1 (Typical Value)	1 μm	Ferro, non-ferro, wear concentration			
Density	600-1300kg/m³	±3%	0.01kg/m³	Contamination level, total particle count			
Max oil temp	Sample viscosity	Sampling pressure	Screen size	Battery powered	Report output	Data output	
+85°C	0-1200cP	0-40Mpa(Customization)	7-inch	6h	Print supported	USB/COM	



IBJ-3D series

Intelligent Contamination Analyzer

The portable IBJ-3D analyzer uses dynamic imaging for real-time $1\mu\text{m}$ -level particle detection in lubricants. It identifies particle morphology, size, concentration, and distinguishes wear debris, bubbles, water droplets and contaminants. Compatible with gear, hydraulic, diesel and dark engine oils, it enables rapid contamination and system condition evaluation.

Image Recognition & Analysis • Oil Aging Detection

Industries and oil types

Industrial Fields: Steel, Petrochemical, Tunneling, Power, Wind, Heavy Machinery, Labs
Oils: Hydraulic oil, turbine oil, diesel engine oil, gear oil, transformer oil

Product Features

Dynamic Imaging



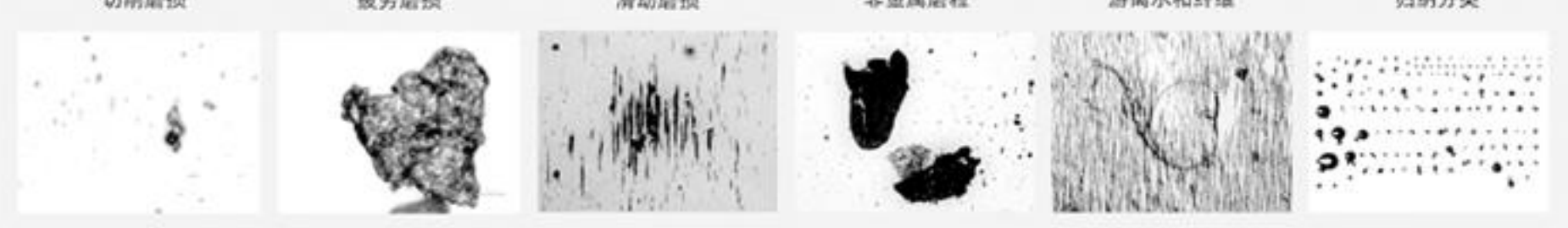
5MP
Pixels

High-Res Dynamic Imaging

Sample Condition Evaluation
Oil Wear Condition



Impurities
Fiber contamination
Cutting wear
Bubbles
Fatigue wear

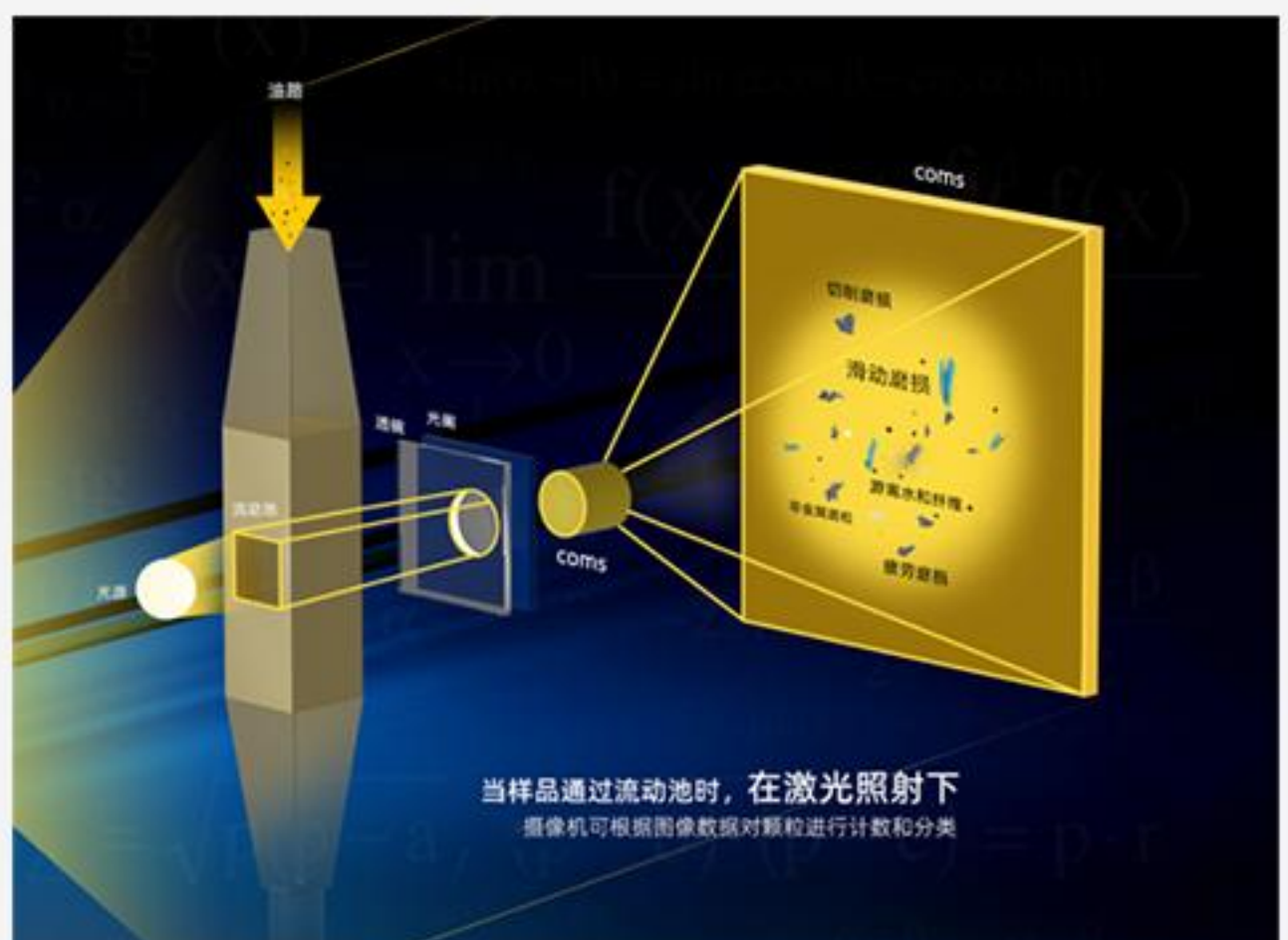


切削磨损 疲劳磨损 滑动磨损 非金属颗粒 游离水和纤维 归纳分类

Wear Particle Morphology

Visual Inspection

HD lens captures particles in real time, identifying their size, shape and quantity via the wear database.



当样品通过流动池时，在激光照射下，摄像头可捕捉到颗粒的轮廓并进行计数和分类

AI Wear Analysis Algorithm



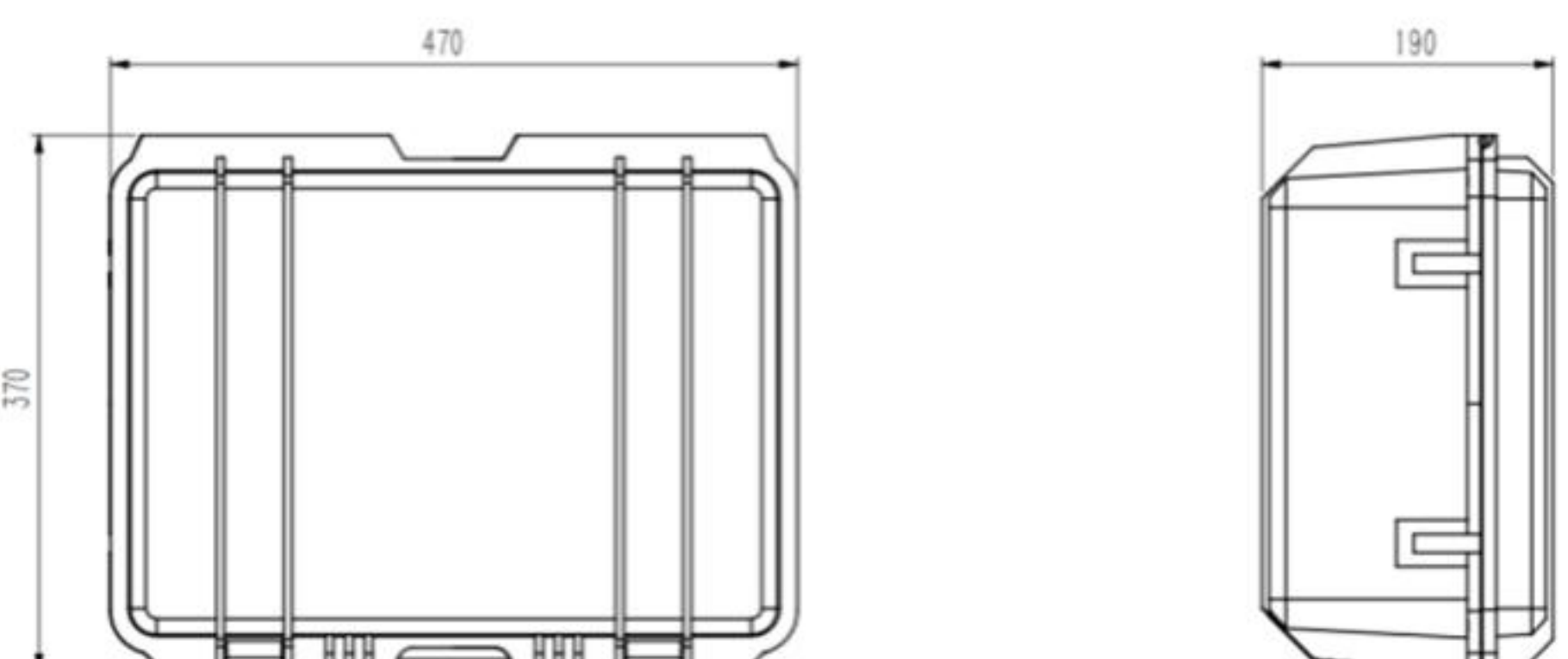
Oil Aging Analysis



Easy to operate

The instrument features a touchscreen interface with ergonomic design for easy operation.

Product dimensions

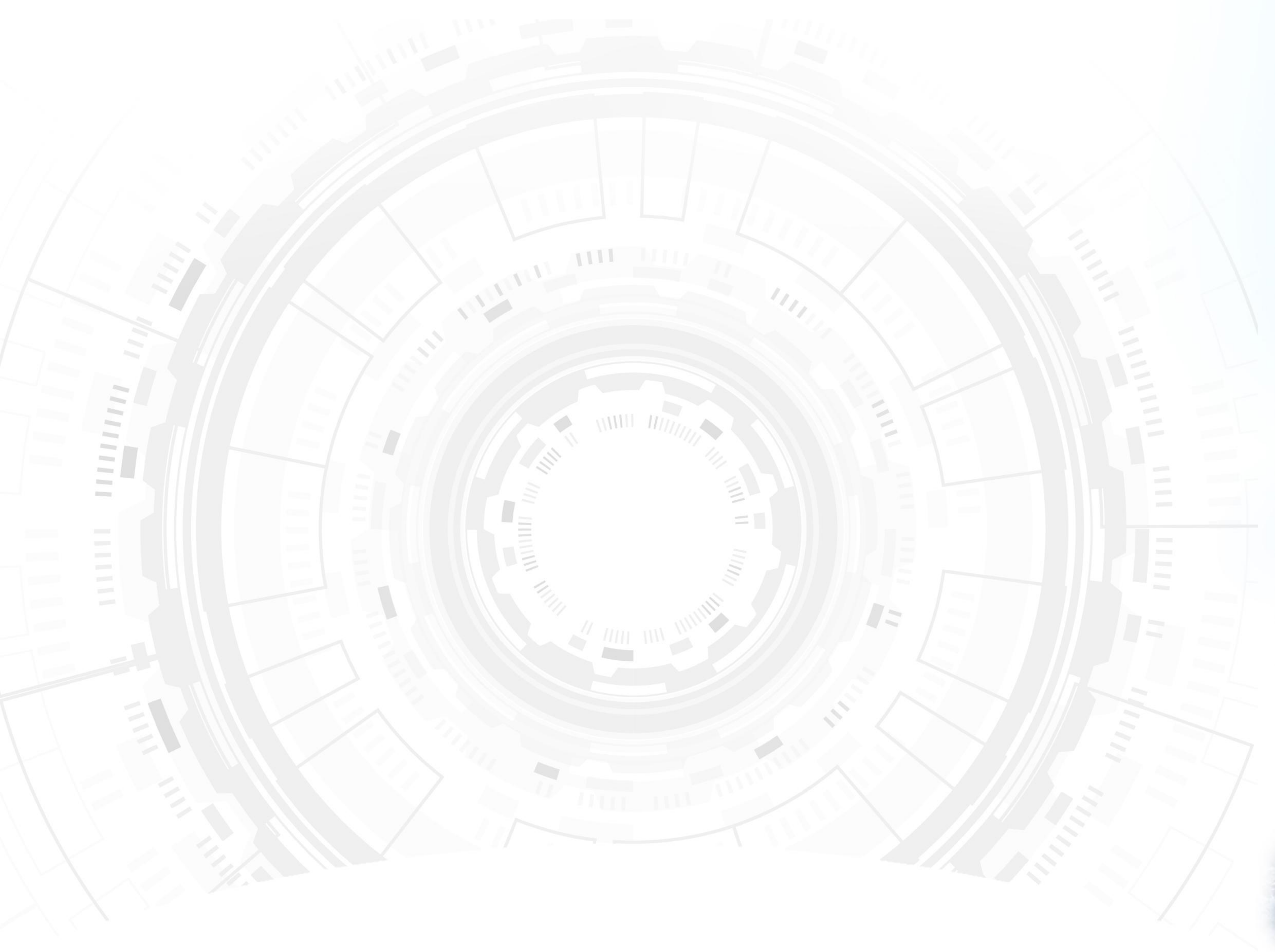


470
370
190

Detection Range

Particle Analysis Range	Applicable Viscosity	Particle Analysis Range
1-800 μm	1-500cSt	Particle classification for particles above 10 μm : auto-identifies cutting/sliding/fatigue wear particles, non-metallic matter, bubbles, fibers and contaminants.
Particle Counting Error	Particle Repeatability	Pollution Level Analysis
$\leq 10\%$	$\leq 3\%$	Contamination detection complies with GJB-420A/420B, NAS 4638 and GOST 17216 for graded particle counts.
Sampling Speed	Sampling Accuracy	Data Interface
5-80ml/min (Depends on viscosity)	$\leq 5\%$ (Depends on viscosity)	RS232/485/USB

Oil monitoring expert



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