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RONDS Product Catalog : 2017
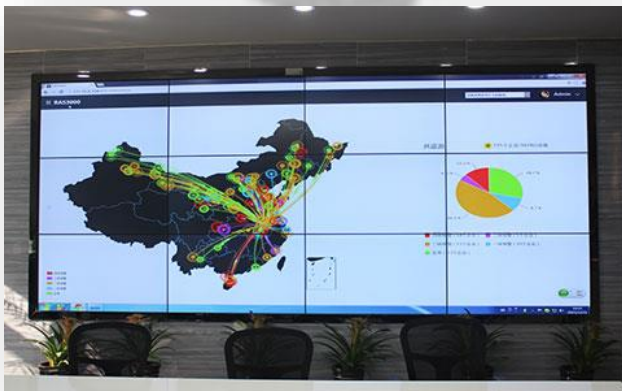
Leadership in the Fourth Industrial Revolution

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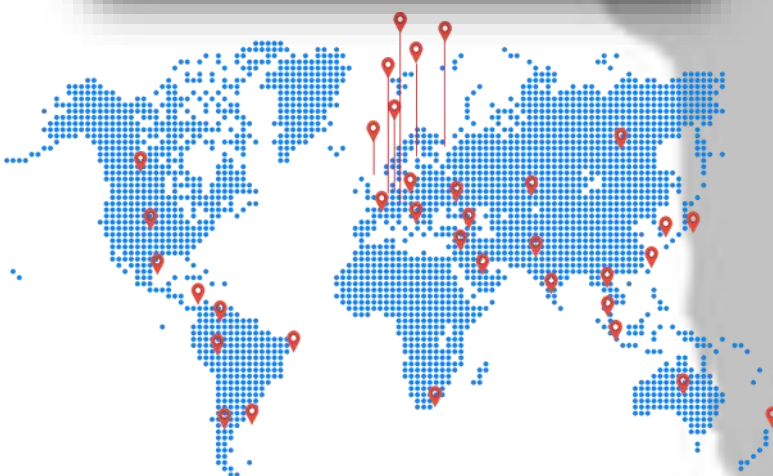Anhui Ronds Science & Technology Incorporated Company

About RONDS

RONDS is a high-tech enterprise which owns core technology and provides turnkey solutions for machinery Condition Monitoring in the predictive maintenance field. Our company was formed in 2007, the strength lies in Condition Monitoring instrumentation, software R&D, Intelligent diagnosis, Cloud service etc.

RONDS series of products and services have been widely applied and are in daily use in the fields of wind power, petrochemical, metallurgy, mining, thermal power, paper making, cement, water treatment plant etc. With a professional R&D team and leading scientific research ability, the RH series products from RONDS have a solid reputation for quality and excellent performance. Our company are holding almost 100 proprietary intellectual property rights, the authorized certification of DNV. GL and CE are available already.

Besides the "hand held Condition Monitoring", RONDS are market leaders in "Online solutions, utilizing intelligent, machinery remote monitoring". As the Equipment Intelligent Service Center under China Association of Plant Engineering, we have the ability to obtain a huge number of machinery vibration data by effective use of internet technology, through real time filtering and analysis via the cloud platform. This enables effective monitoring of machine assets condition, predicting potential failure and thereby extending component life time. RONDS are also able to provide machine overhaul proposals to customers, and maintenance management in various industrial fields. The RONDS series products have been exported to more than 30 countries, creating and developing close distributor relationships.

Due to continued expansion we are looking to establish distribution network with business partners across the globe.

Export to 🇺🇸 USA 🇬🇧 UK 🇩🇪 Germany 🇷🇺 Russia 🇦🇺 Australia
🇯🇵 Japan 🇸🇬 Singapore 🇹🇭 Thailand more than 35 countries.

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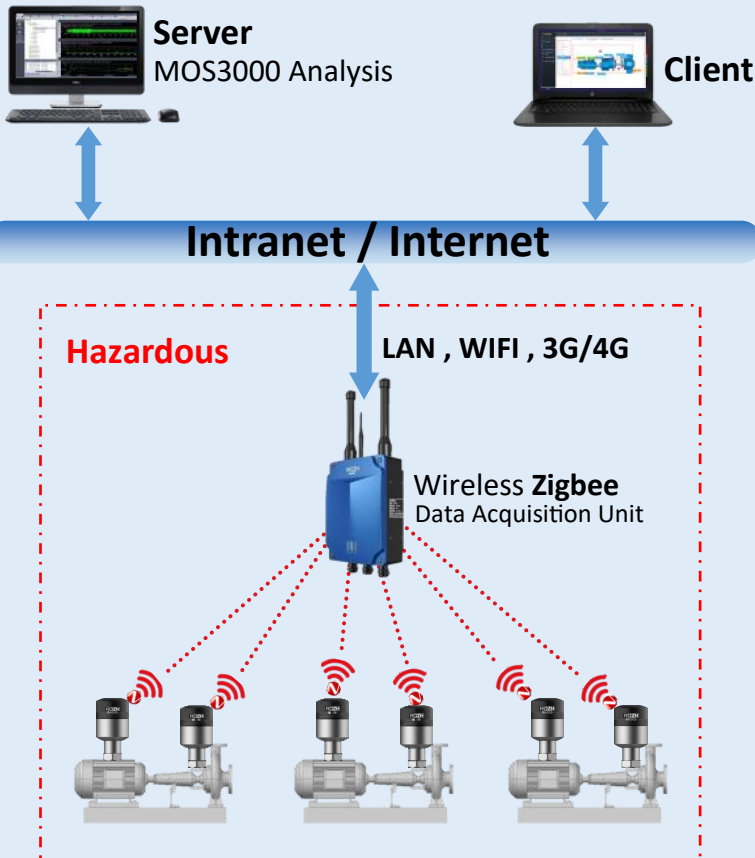# RONDS Wireless Machine Condition Monitoring System
RH560 + RH505

RH560 + RH505

System introduction

RH560 wireless monitoring system is specially designed for extremely hazardous site, or with scattered machines, inconvenient cable wiring. It can measure machine vibration and temperature synchronously, to fully monitor machine condition, this system includes three parts: sensors, data processing and remote diagnosis.
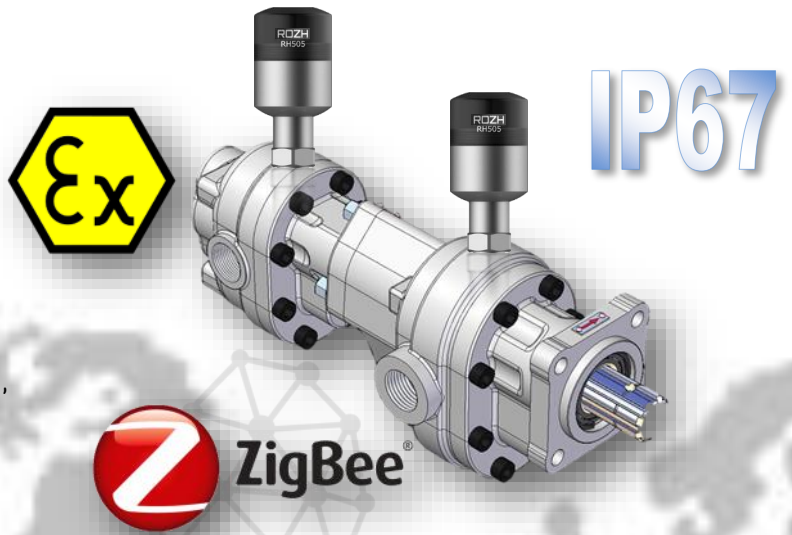

Server MOS3000 Analysis

Client

Intranet / Internet

Hazardous

LAN , WIFI , 3G/4G

Wireless **Zigbee** Data Acquisition Unit

System Feature

- Exia IIC T4 Zone 0
- Overall and dynamic vibration data
- Acceleration ,Velocity and Displacement measurements for detecting faults such as imbalance, misalignment, and looseness
- Temperature
- Up to 2 year battery life (collect data every 2hr.)
- Low power consumption radio operating on Zigbee protocol
- Free Software and No License
- Run on Web browser IE, Fire Fox, Chrome
- IP67

RH505 Sensors

The RONDS Wireless Machine Condition Sensor combines a sensor, data collector and radio into one compact, battery operated device that measures both vibration and temperature data.
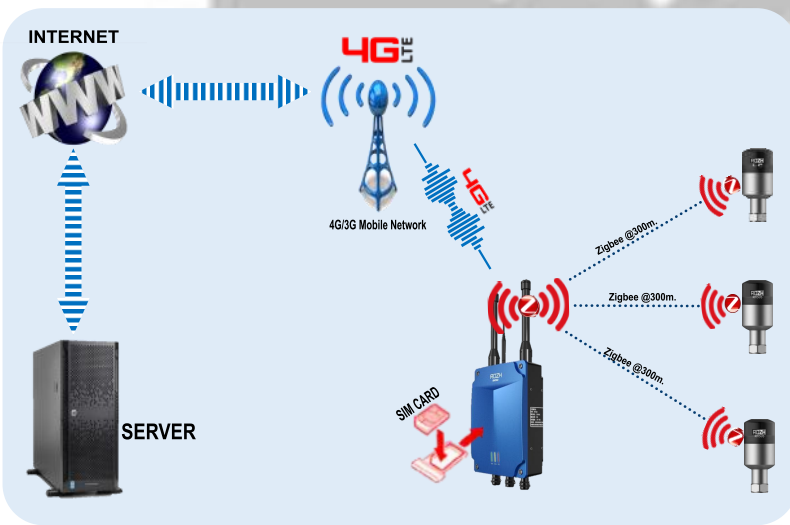
This unique system, which is approved for use in hazardous areas requiring Exia Zone 0 certification, provides a balance-of-plant monitor, wirelessly transmitting both static and dynamic data to the MOS3000 Monitoring Suite software.

RH560 Data Processing

Wireless data collection station transmits data to the server through wired network, WIFI or mobile network (3G/4G).

In the server, data backup program and intelligent analysis program filter out abnormal data accurately.
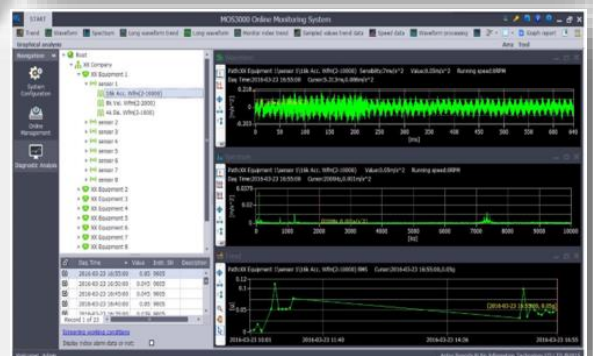
Remote Diagnosis

Transmit data through Internet to diagnose remotely. Diagnostic software provides B/S and C/S framework for two kinds of clients in the same enterprise.

B/S framework is WEB based management system; this part will display all machine condition and analysis conclusions.

C/S framework is application program installed in the server; this part is used to make professional diagnosis by vibration analysis. Transmit data through Internet to diagnose remotely. Diagnostic software provides B/S and C/S framework for two kinds of clients in the same enterprise.

B/S framework is WEB based management system; this part will display all machine condition and analysis conclusions.

C/S framework is application program installed in the server; this part is used to make professional diagnosis by vibration analysts.

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MOS3000 Software Analysis

MOS3000 Online Monitoring Software is B/S software specialized for RONDS condition monitoring products. After installing it in the enterprise server, client ends can visit through browser. The system adopts pgSQL and MS SQL Server database.
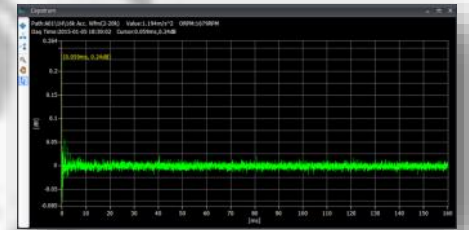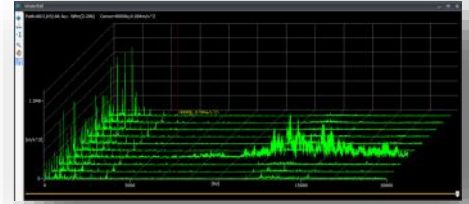
Easy operation

Tree structure, clearly display equipment, measuring point, DAQ definition and so on.

Luxuriant analysis graphs

More than 20 kinds of graphs for vibration analysts: time waveform, multi time waveform, spectrum, multi spectrum, envelope demodulation, cepstrum and so on.

Easy to maintenance

C/S framework design make it easy to login, self-diagnostic function, record data transmission process, sensors working status and alarm setup.

Four levels alarm setup

Adopt four levels alarm setup, once exceeding the thresholds, the measuring point will give warning as well as SMS, email and alarm message push on APP.

Plenty of index monitoring

Kurtosis, crooked, margin, frequency band energy, failure frequency energy and other more than 400 index are used to monitor exception machines.

Audible waveform

Besides users' friendly analysis and management interface, the measured long time waveform is audible, through which experts' experience is used sufficiently.

RH560+RH505 Specification

RH505 Wireless Vibration and Temperature Integrated Sensor	
Vibration Measurement Parameter	
Vibration Range	±50 g
Linearity	1%
Frequency Range (±3dB)	2~15kHz
Temperature Measurement Parameter	
Temperature Range	-40~125 ℃
Temperature Accuracy	±1 ℃ (-40℃~125℃)
Electrical and Structure Parameter	
Power Supply	Lithium - thionyl chloride battery, 3.6V, 3.3Ah
Communication Method	2.4GHz IEEE 802.15.4
Dimension	46 mm × 94 mm (Diameter * Height)
Weight	188 g
Environment Parameter	
Working Temperature	-40~70 ℃
IP grade	IP67

RH560 Wireless data collector	
Input and output	
Communication with Sensor	2.4GHz IEEE 802.15.4
Indicator LED	Total 3 pieces (working, communication, abnormal status)
Number of RH505 connecting	30~60 units according to real application condition
Electrical and Structure Parameter	
Power Supply	220V AC or Lithium - thionyl chloride battery 3.6V 38Ah
Dimension	203 mm × 82 mm × 260 mm (Length * Width * Height)
Weight	3 kg
Mounting	Hanging or fixation through holder
Environmental Parameter	
Working Temperature	-40~70 ℃
IP grade	IP66

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RONDS Real Time Machine Condition Monitoring System
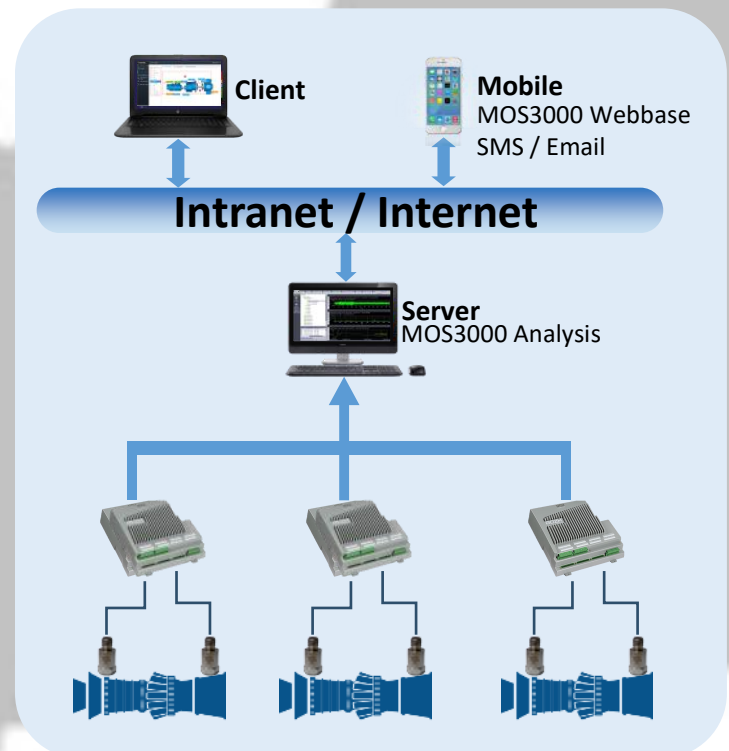## RH1000

RH1000

RH1000 System introduction

RH1000 online monitoring system is specially designed for the non-stable-status operating features in wind turbines, steel industry and so on, adopting patent measurement technology to fully monitor key machines. It includes three parts: sensors, data processing and remote diagnosis.

RH1000 System Feature

- Maximal 16 channels synchronous data acquisition

- Real-time Dynamic Display

- Automatic & Manual Data Acquisition

- DAQ Definition Group Management & Characteristic Parameter Group Management

- Configuration Information Tree

- Remote Data Viewing

- Plenty of Data Analysis Tools

- Automatic Calculation of Characteristic Frequency

Client

Mobile
MOS3000 Webbase
SMS / Email

Intranet / Internet
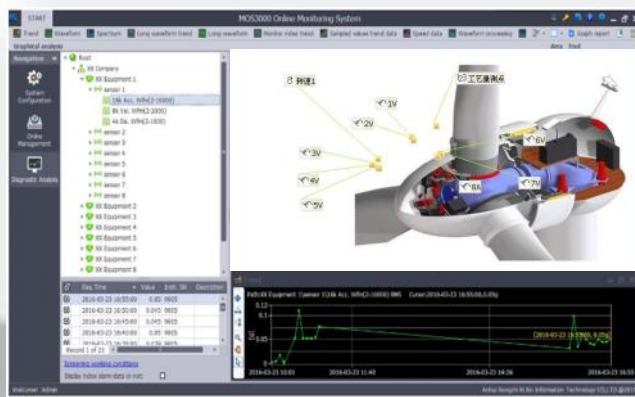
Server
MOS3000 Analysis

RH1000 Multi Channel Measurement

RH1000 online monitoring station consists of 8 or 16 vibration and temperature optional channels, 4 process information channels, and 2 tacho channels. Taking advantage of the patent of RONDS, it can realize synchronous data acquisition for all channels.

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Real-time Dynamic Display

It uploads the collected data automatically through the network. With the help of software MOS3000, it provides real-time dynamic display of collected data bar charts and trend of overall value.

MOS3000 Software Analysis

MOS3000 Online Monitoring Software is B/S software specialized for RONDS condition monitoring products. After installing it in the enterprise server, client ends can visit through browser. The system adopts pgSQL and MS SQL Server database.

Specification

Vibration input		
Channels	1 to 16 channels optional	Maximal 16-channel synchronous acquisition
Signal acquisition	Acceleration, velocity, displacement can be acquired synchronously	
Input impedance	220K	
Accelerometer maximal value	80g，200mm/s，10mm，100mV/g sensor	
Sensor drive current	4mA@24V	Constant current supply for IEPE type accelerometer
A/D conversion	24bit delta-sigma ADC	
Frequency range	0Hz – 40kHz	
Dynamic signal range	110dB	
input range	±10V	
Precision	1%（0.1dB）	
Frequency response	0.2dB，10Hz – 5kHz；0.5dB，3Hz – 20kHz	
Rotating speed		
Channels	2 speed channels, isolation input	
Compatible type	TTL，Eddy current, Hall	
Triggering level	4V～30Vpp	
Process information		
Channels	4 channels，isolation input	
Signal range	±12V or 4～20mA	
Output		
Channels	1	
Type	SPST，Normally open or close	
Signal processing		
Window	Hanning, Rectangle window	
Continuous acquisition	4M bytes/CH	
Lines	400，800，1600，3200，6400，12800	
Time waveform acquisition	1024，2048，4096，8192，16384，32768	
Averaging type	Linearity, peak hold	
Averaging times	1，2，4，8，16，32，64	
Dynamic alarm display	Can set several alarm parameters	
Self-inspection for sensors and cables		
Watch dog		

Basic parameters		
Storage	1G Bytes	
Wired Ethernet	TCP/IP，10/100baseT，Optical（Optional）	
Communication	RS232，RS485，CANbus	
Regular index		
Dimension	300 x 400 x167mm	
Weight	9.8Kg	
IP grade	IP65	
Working temperature	(-40 – 70)℃	
Working humidity	95% RH without condensate	
Storage temperature	(-50 – 85)℃	
Atmospheric pressure	70kPa - 110kPa	
Power supply		
Selectable input voltage	100-240VAC，50 - 60Hz，<20W	
	24VDC，1.5A	
Certification		
Certification	GL, CE certification，China General Certification(CGC)	
Immunity to electromagnetic interference		
Electrostatic discharge immunity	En61000-4-2, ±8kV contact，±15kV air	
Electrical fast transient burst immunity	En61000-4-4, ±4kV	
Surge Protection lightning protection	EN61000-4-5：±4kV	
	20KA	

Acceleration Sensor

RH103 Standard accelerometer
RH113 Low frequency accelerometer

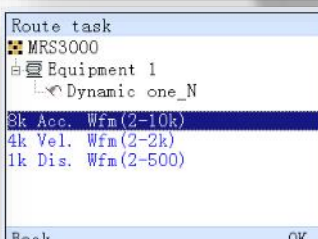| Parameter	RH103	RH113
Sensitivity	100mv/g	500mv/g
Frequency range	0.5Hz-15KHz	0.1Hz-10KHz
Range	±80g	±10g
Protection grade	IP68	
Working temperature	-55-125℃	
Certification	CE	

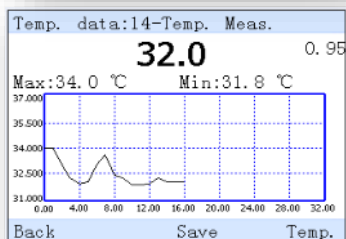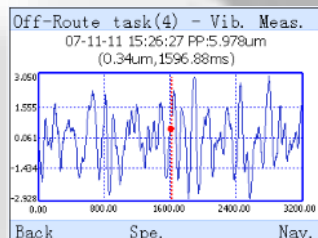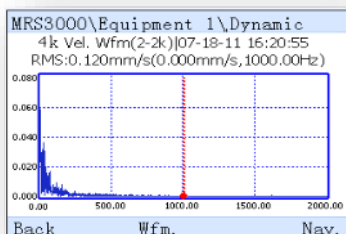# ROND Single Chanel Analyzer
RH711

RH711

Unmatched versatility, reliability and functionality have made the RONDS Analyzer series of data collectors the premier choice for portable, handheld condition monitoring units. Designed to help users establish or upgrade an existing condition monitoring program, RONDS Analyzers handle the tasks required to perform predictive maintenance on rotating machinery in countless industries.

RONDS RH711 is developed to meet the increasing demand of networked machine condition monitoring and faults diagnosis. It is the ideal tool for periodical machinery condition monitoring, suitable for route measurement.

RH711 Key Feature

◊ Route measurements downloaded from PC software

◊ Real-time display of vibration waveform or spectrum

◊ Waveform/spectrum analysis

◊ Manual input function

◊ Integrated 30:1 infrared temperature measurement

◊ Balancing

◊ Electronic navigation

◊ Output to computer

◊ Set equipment status

◊ Explosion proof version is available and optional

◊ CE marking available

◊ RFID card compatible

◊ Multi-communication available: Wi-Fi or USB

MRS3000 Software Analysis

MRS3000 Software is B/S software specialized for RONDS condition monitoring products. The system adopts pgSQL , MS SQL Server database and Access.

Easy operation

Tree structure, clearly display equipment, measuring point and so on.

Luxuriant analysis graphs

More than 20 kinds of graphs for vibration analysts: time waveform, multi time waveform, spectrum, multi spectrum, envelope demodulation, cepstrum and so on.

RH711 Specification

Items	Description
Input	CH1：Vibration（ICP accelerometer）、voltage（±5V AC）
Collection parameter	Frequency span:2～10kHz, Precision:±2%
	Sampling frequency:Maximal 25.6KHz
	Hardware Integral:integration, double integration
	A/D conversion:16 bit, Harmonic distortion:<-70dB
	Parameters:Sampling frequency、high pass filter、low pass filter、Sampling length
	Waveform length:1024、2048、4096、8192
	Lines: 400、800、1600、3200Lines, Averaging:linearity、peak hold
	Window function type: Rectangle, Hanning
Internal infrared temperature detector	Temperature range：0～300（℃），Precision：±2%, ±2℃ Maximal
	Emission rate：0～1 adjustable, Distance coefficient：30：1
Single-Plane Dynamic Balancing	Balance method：method of influence coefficient
	Phase: use external techometer
Dimension	height×width×depth：156×80×46（mm）
	grip size（width×depth）：52×28（mm）
LCD	2.8 inches, 320×240 pixels, 260K true color
Weight	275g
Key board	21 keys, 1 million times lifespan
RPM measurement range	60~10,000RPM
Working environment	temperature：-10～50℃, humidity：< 95%（without condensate）
	protection grade IP54, dustproof, waterproof
Charging time	About 4 hours
Working time	working Time (Continuous) >10 Hours
Communication	USB2.0
Storage capacity	1 GB
iButton	iButton 1990A

Option

Radio Frequency Indentification	RFID， Frequency13.56MHz，Detection distance: within 3cm（not standard configuration, optional）.
Anti-explosion	ExibIIBT3

A complete unit of RH711 contains

1 pc Instrument incl. Battery

1 pc Accelerometer with magnet base

1 pc Laser techometer   1 pc screw and verification card

1 pc Reflective tape 1 pc user manual   1 pc adapter

1 pc carry bag and neck strap for instrument

1 pc USB cable 1 pc carry case for the complete unit

1 pc cable adapter for balancing version instrument

1 pc transfer cable for laser techometer

1 disk with software, user manual etc.

 RONDS

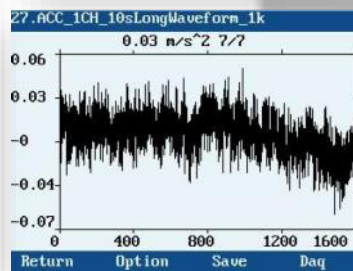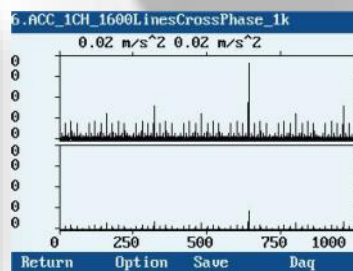# RONDS Dual Chanel Analyzer

RH802

RH802

The RONDS dual-channel vibration analyzer RH802 is developed specially for industrial field environment. It has easy operation system, the function modules of Route plan, Off-route plan, Dynamic balance, Coast up/down and Bump test are displayed in less than 10 interfaces. The software is operated on ARM directly, without the operation system, it runs more stable and avoided the situation of slow boot. Both starting up and shutdown can be finished in one second, which greatly saved user's time on site.

RH802 Key Feature

◊ Simultaneous two channel measurements for data collection, the maximum analysis frequency can reach to 40 KHz.

◊ ARM processor, the 12800 lines FFT can be finished in one second.

◊ Support for long waveform data collection of 40K dual channel analysis frequency

◊ Provide high precision 24 bit AD converter.

◊ Use 1GB high-capacity Flash.

◊ IP65 design, water and dust proof.

◊ Rechargeable Li-ion battery supports eight hours of continuous data collection.

◊ iButton used to identify the measuring points automatically.

◊ Explosion proof version is available and optional.

◊ Route measurements downloaded from MRS3000 software

◊ Real-time display of vibration waveform or spectrum

◊ Waveform/spectrum analysis

◊ Manual input function

◊ 2 Planes Balancing

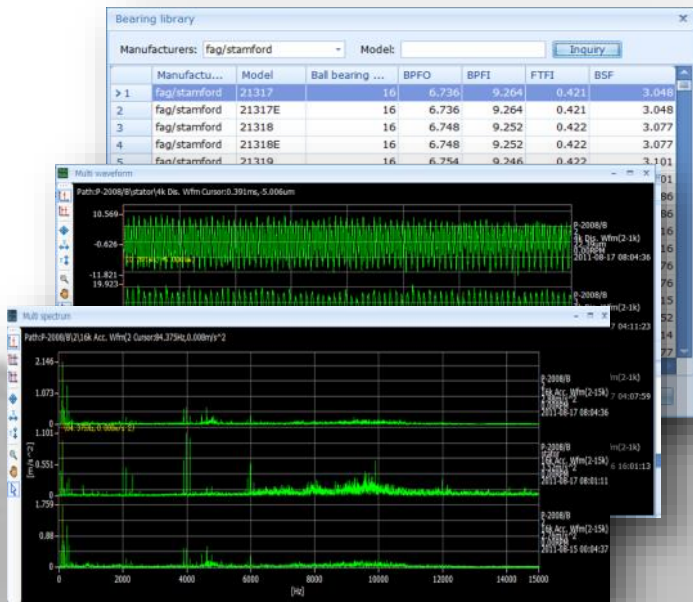◊ Coast up/down and Bump test

MRS3000 Software Analysis

MRS3000 Software is B/S software specialized for RONDS condition monitoring products. The system adopts pgSQL , MS SQL Server database and Access.

Easy operation

Tree structure, clearly display equipment, measuring point and so on.

Luxuriant analysis graphs

More than 20 kinds of graphs for vibration analysts: time waveform, multi time waveform, spectrum, multi spectrum, envelope demodulation, cepstrum and so on.

RH802 Specification

Items	Specification
Analog input	
Channels	Channel 1：vibration(ICP accelerometer),Voltage(±21V AC or DC) Channel 2: vibration（ICP accelerometer), Voltage（±21V AC or DC), tacho channel
Transducer	Accelerometer, Velocity, Displacement, voltage transducer
Signal range	±21V
A/D conversion	24 bit
Analog measurement	
Integration	once、twice integration
Maximal analysis frequency	40kHz（dual channel Maximal: 20kHz）
Sampling frequency	256Hz – 102.4kHz
Dynamic signal range	96dB
Precision	1%（0.1dB）
Signal processing	
Configuration	Sampling frequency, low band pass filter, Sampling length，users can set any value as needed.
Lines	400, 800, 1600, 3200, 6400, 12800
Time domain Sampling	1024, 2048, 4096, 8192, 16384, 32768
Window function type	Hanning, Rectangle window
Averaging	Linearity, peak hold
Averages	1,2,4,8,16,32,64,128
Analysis	
Long time domain waveform	Maximal waveform is 10M, maximal analysis frequency of Dual-channel is 10KHz, maximal analysis frequency of single channel is 20K.
Overall value	Minimum interval: 0.1 sec

Items	Specification
Analog input	
XPM measurement	view XPM and phase difference spectrum simultaneously
Dynamic balance	On site 1 or 2 plane dynamic balance by Influence coefficient method
Coast up/down testing	Equal time intervals, Equal RPM intervals
Basic index	
LCD	True color LCD, 320×240pixles, contrast adjustable
Keys	22 keys
Communication	USB, 900KB/s
Storage capacity	1G
iButton	DS1990A
Communication	USB 2.0
Battery	Rechargeable Li-ion battery, charging time around 4 hours; working Time (Continuous) >10 Hours; two channel working time >8 Hours
Temperature	(-10～50)℃
Humidity	95% RH without condensate
Protection grade	IP65
Dimension	190 X110 X50mm
Weight	660g

A complete unit of RH802 contains:

1 pc Instrument incl. Battery   2 pc Vibration Transducers with magnet base   1 pc Optical RPM transducer

2 pc connecting column and verification card   1 pc Reflective tape   1 pc quick start manual

1 disk with software, user manual and relative study files   1 pc adapter   1 pc USB cable

1 pc carrying case for instrument   1 pc techometer holder   1 pc transfer cable for RPM transducer

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RONDS products have been sold to different countries. Share wisdom with the world. Export to 🇺🇸 USA 🇬🇧 UK 🇩🇪 Germany 🇷🇺 Russia 🇦🇺 Australia 🇯🇵 Japan 🇸🇬 Singapore 🇹🇭 Thailand And more than 35 countries.

C-TECH We are Authorized Dealers.

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