Nine simple steps to mitigate the risk of unwanted machine stops.

ReSES.net technology

HW-SES-KIT01: SES logger data acquisition device

- Sensor: ICP® accelerometer 100 mV/g, ± 50 g
- Data: 24-bit signal of 3 seconds, 132 300 samples
- 12 colour LEDs and ONE button
- Measuring time: less than 10s
- Storage capacity: up to 10 000 measurements without connection to network
- Battery capacity: up to 1 000 CM Points measurements
- Communication: Wi-Fi 2.4 GHz band
- Size: 70x130x25 mm, Weight 154 g

ICP® is a trademark of PCB PIEZOTRONICS, INC.

CM Points UIDs

- RQ-CS-x: stainless steel stud with smart caps
  x: B: blue cap; P: purple cap; O: orange cap

Data transfer

ReSES Communicator App

Download on the App Store

GET IT ON Google Play

ReSES.net cloud platform

Why choose ReSES.net?

To create ReSES.net, we combined state of the art technologies with the accumulated knowledge of experts with decades of experience in CM program implementation, data collection, and analyses. The platform provides its users with:

- Simple CM program implementation.
- Easy data collection process.
- Smart transformation of data into actions.
- Machine Information in under 72 hours after receiving data.
- Affordable CM programs with costs that are transparent and easy to calculate.

ReSES.net platform environmental footprint

- CO_2: 432 g per machine per one year
- Disposal waste per machine (from CM Points):
  – RQ studs: 125g recyclable or reusable steel
  – RQ caps: 25g recyclable plastic

For more information, contact us at

info@relianeering.com

www.relianeering.com

ReSES.net platform

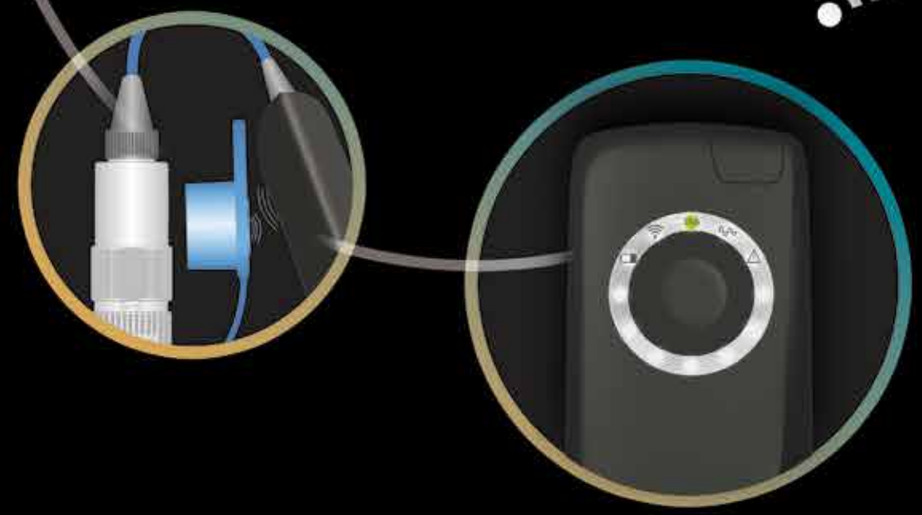
INFORMATION

ABOUT WHAT TO DO

AND WHEN

BASED ON MACHINE

CONDITION



RELIANEERING

Simple. Easy. Smart.

ReSES.net provides CBM* information and action recommendations to the maintenance team. This simplifies the decision process and mitigates the risk of unwanted production stops.

The users of the platform receive:

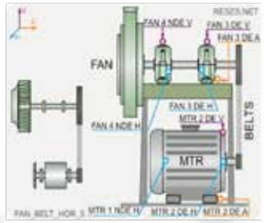
- Action oriented recommendations, based on
- Machine vibration condition, defined from
- Discovered fault patterns.

The ReSES.net design combines modern IoT* and ML* technologies with traditional on-site data collection and data analysis by certified condition monitoring specialists.

Analysed on	CM Status	Analysed by
2021-11-29 08:37:14	ATTENTION	N.Nikolov

Equipment	CM Status	CMMS ID
EL MOTOR (1)	ACCEPTABLE	
TRANSMISSION - BELT (2)	ACCEPTABLE	
FAN - CENTRIFUGAL (3)	ATTENTION	

Equipment	Component	Fault	Sev	Recommended Action	Pri
FAN - CENTRIFUGAL (3)	FAN CENTR	UNDEFINED FAULT - NDE: Ski-slope in Vel spectra.	High	Collect new data - Collect new data.	Med
FAN - CENTRIFUGAL (3)	FAN CENTR	Broken component - NDE: Peak at 6,82X in Acceleration spectra.	Med	Provide information - Provide information for support bearings.	Med



DATA COLLECTION

*It is **quick** and **easy***

- Go to the machine
- Attach the sensor to the CM point
- Scan the CM Point UID** with the SES logger
- Press the button, and you are done!

ReSES Communicator app will automatically transfer all data to the cloud.

The ReSES.net platform eliminates the traditional “routes” and the need to look on the device screen and scroll through long hierarchy trees.

The platform recognizes data sources and you no longer have to worry about the order of machine’s CM Points data collection.

The users are automatically notified by email about the machines due or overdue in the coming week.

IMPORTANT: The user does not need an Internet connection to collect data or receive any “routes with settings”. Once the data are collected, the user must connect to the Internet to send data to the cloud.

ANALYSIS

*Do it **smart***

The following ReSES.net tools support the art of transforming Data to Information:

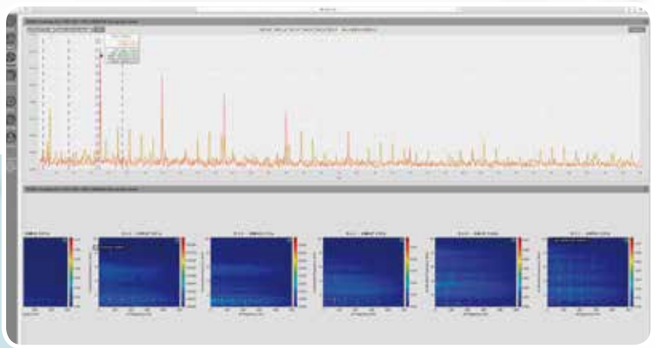
- Multi-parametric table and trend overview with traditional and ML alarms
- Spectra: Velocity, Acceleration with sE (smart Enveloping) with machine components frequencies
- Time waveform signal with options to play and listen to it
- rE Graph – a single colour-map plot that provides a detailed picture of low-frequency modulations in the acceleration signal at a glance
- sH Graph – an intelligent graph to compare spectra and time signals
- Quick access to all findings for any particular machine
- Easy way to compare machines using browser multi tabs
- Simple documentation of findings and recommendations

IMPLEMENTATION

*Designed to be **simple***

The implementation process is crucial for the effectiveness of the CM* program. With the ReSES.net platform, this process can be done in a few simple steps:

- Select machines and define the scope of the CM program.
- Map each Functional Location to a ReSES.net CM model.
- Provide required data about the equipment: speed, power, etc.
- Relianeering’s team of experts build the CM hierarchy and delivers machine CM Points package (RQ-CS-x** with CM Point location label).
- Install CM points on the machine.



INFORMATION

*Available **anytime, anywhere***

The ReSES.net platform focuses on the needs of the maintenance team to run data-driven maintenance. The users have 24/7 access from any location with an Internet connection. The users automatically receive emails after completing the analyses. The maintenance team can find the necessary information about the machines easily and make smart decisions based on:

- Machine CM recommendations and findings
- Machine CM history
- CM status comparison between Company Sites
- Site(s) current and past status at any specific date and CM Site status trends

The user can provide quick and simple feedback about given recommendations and findings. The ReSES.net platform allows the export of data and information in CSV*** format for further analyses in CMMS*** or other digital systems. The user can always download the Functional Location CM status report in PDF***.

* **IoT**: Internet of Things; **ML**: Machine Learning; **CM**: Condition Monitoring; **CBM**: Condition-based maintenance

** **RQ-CS-x** = CM Point UID with fix stud to attach sensor’s adaptor
UID: unique identifier

*** **CSV**: comma-separated values file format; **CMMS**: computerized maintenance management system; **PDF**: portable document file format.