



WEG Motion Fleet Management

Applied IoT Solution to leverage the industrial fleet management.



Why WEG Digital Solutions



- Maintenance resource limitations often result in adoption of a 'Run-to-Fail' approach to equipment reliability management
- Manufacturers with this approach to equipment reliability often experience significant reductions in production time and increased operating cost
- **WEG Digital Solutions** offer a cost effective and robust means of developing Predictive and Proactive equipment maintenance programs allowing manufacturers the ability to better prevent unplanned disruptions to production



82%

Had Unplanned
Downtime in
prior 3 years

4X

Increased
Maintenance Cost of
Run-to-Fail Model

10%

Potential Production
Time Reductions

\$50B

Cost of Unplanned
Downtime per Year

Source: [Forbes Technology Council, Unplanned Downtime Costs More Than You Think, February 22, 2022](#)

Why WEG Digital Solutions



Reduction of unscheduled
downtime



Optimization of the
maintenance routine



Efficiency in predictive
maintenance scheduling



Savings with replacement
of spare parts

- Cost Effective Single Platform enables Monitoring of multiple assets and plants
- Drive Fleet management view with reports and indicators
- Layout customization for multi-level navigation (geolocation, site, plant, device)
- Easy tracking and identification of Critical and High Priority assets
- Multi-platform alert and notification based on the Operating Thresholds you define
- Comprehensive array of Dashboards and Indicators to enable easy evaluation of operating data
- Statistical and Artificial Intelligence based Predictive capability
- Supports development and execution of Total Cost of Ownership programs

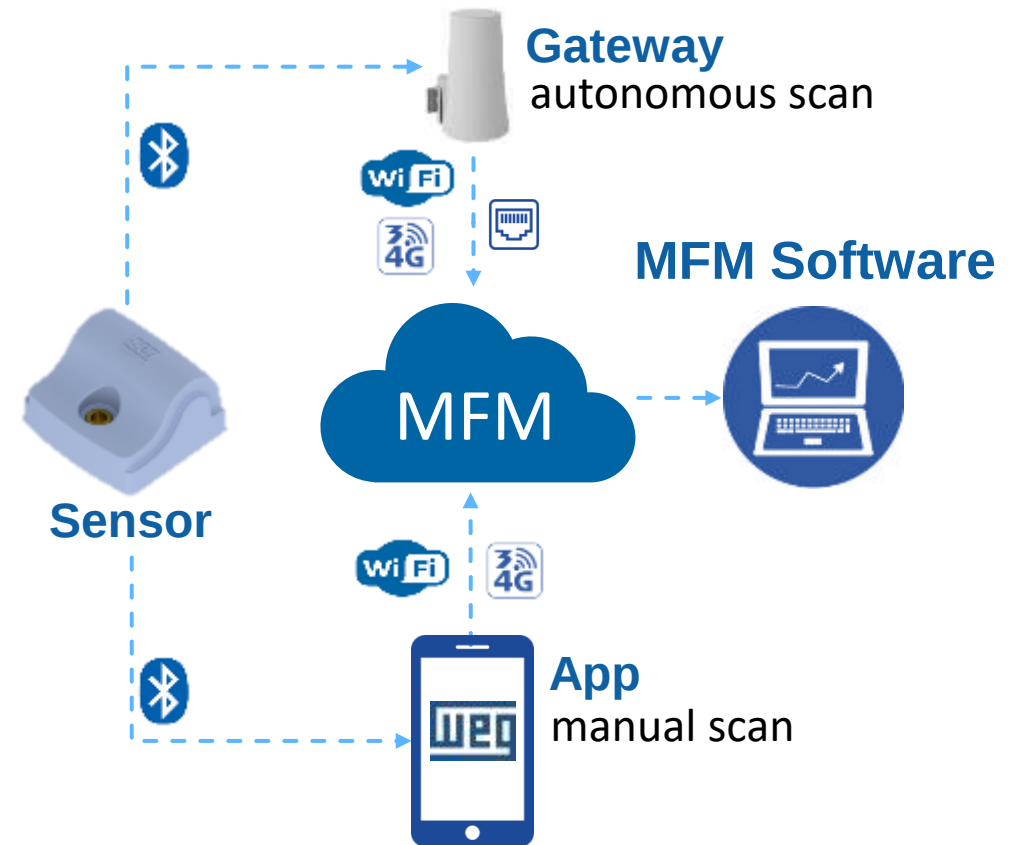


WEG Motion Fleet Management



System Overview

- WEG Sensor able to be mounted on electrotechnical and mechanical equipment – WEG and other manufacturers
- Two Methods to upload the sensor data to WEG's Motion Fleet Management Cloud:
 - Gateway – autonomous scan
 - WEGscan App – manual scan
- Sensor Data Storage – 30 days at the sensor, 1 year in MFM Cloud
- Advanced data visualization using WEGscan App and MFM Software
- Data Exchange and Analytic Solutions provided via WEG EXCHANGE and WEG SPECIALIST Solutions



WEG Digital Solutions Portfolio Overview



A single solution for the complete monitoring of the industrial fleet

Diagnostics & Integration

Specialist

Advanced diagnostics algorithms for failures and consumption analysis



Exchange

Integration with third party systems and platforms via REST API



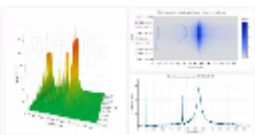
Main Application

Management

Asset monitoring and management. Data storage, maintenance notifications, reports, intuitive dashboard...



Vibration Analysis



Parameter Backup



Digital Notify APP

Data Acquisition for Troubleshooting



WEGscan & Gateways



Motion Assets



Electric Motor, Gearbox, Pump, Compressor, etc.

VFD, Soft-Starter, Relays etc.

Motors and Generators

Core Digital Solutions Components



WEG Motor Scan



WEGscan App and Gateway X1000



WEG Motion Fleet Management V2.0



WEG Motor Scan Sensor



Sensor Characteristics

- Low Voltage Motor Applications
- Vibration Measurement (mm/s): 3 axes – 820 Hz $\pm$ 16g
- Temperature Measurement: -40 to 135°C (on motor surface)
- Estimate Lifetime (Battery): 3 years (depending on application);
- Communication: Bluetooth®
- Dimensions: 25 x 44 x 38 mm (HxWxD)
- Degree of Protection: IP66
- Storage Capacity: 30 days



WEG Gateway X1000



Motion Fleet Management

Gateway X1000 Features

- Automatically collects data from Motor Scan sensors
- Uploads data and selected FFT frequencies to MFM cloud in order to run **Specialist**
- Up to 30m radius and 100 Motor Scans per Gateway

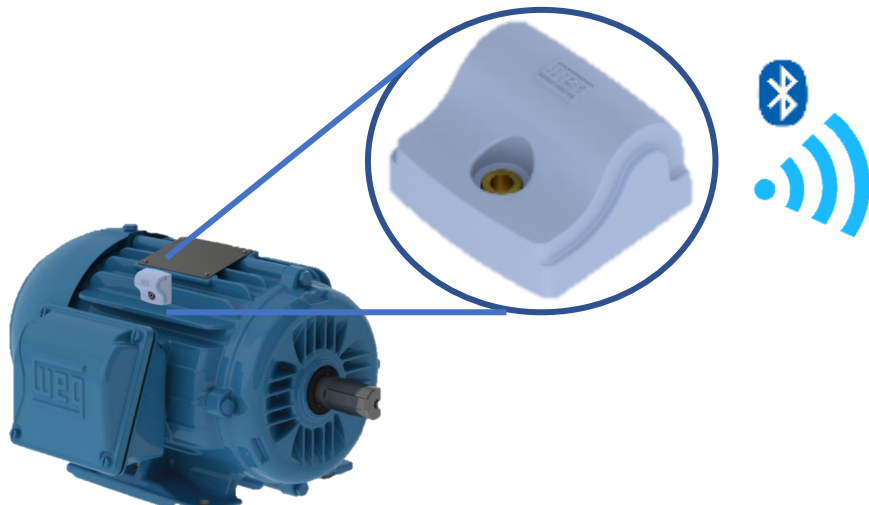


WEGscan Mobile App

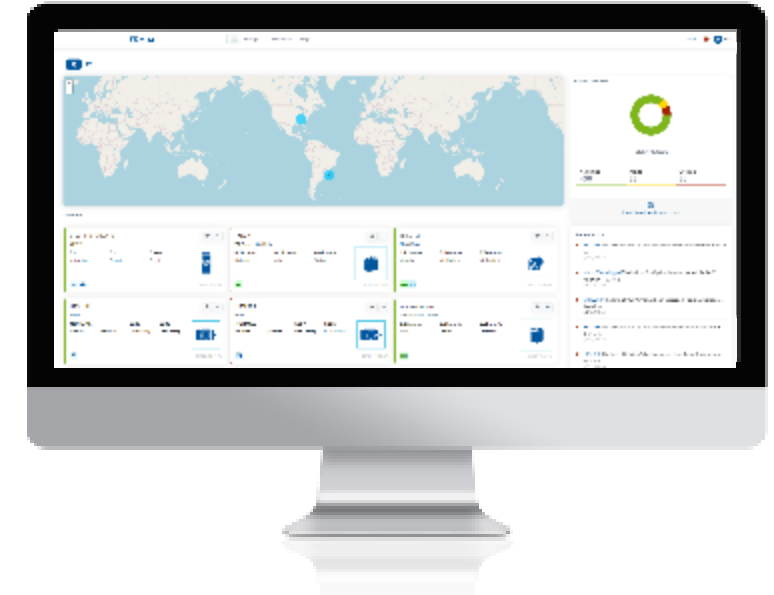


App Features

- Sensor and gateway configuration
- Data collection using Bluetooth® & Upload to MFM
- Performs the sensor reading (manual scan)
- Visualization of instantaneous data
- FFT measurement and visualization



Motion Fleet Management



WEGscan  
Motor monitoring
WEG Equipamentos Elétricos S/A
★★★★★ 4.6 • 11 Ratings
Free



Motion Fleet Management Software Overview



Motion Fleet Management Overview



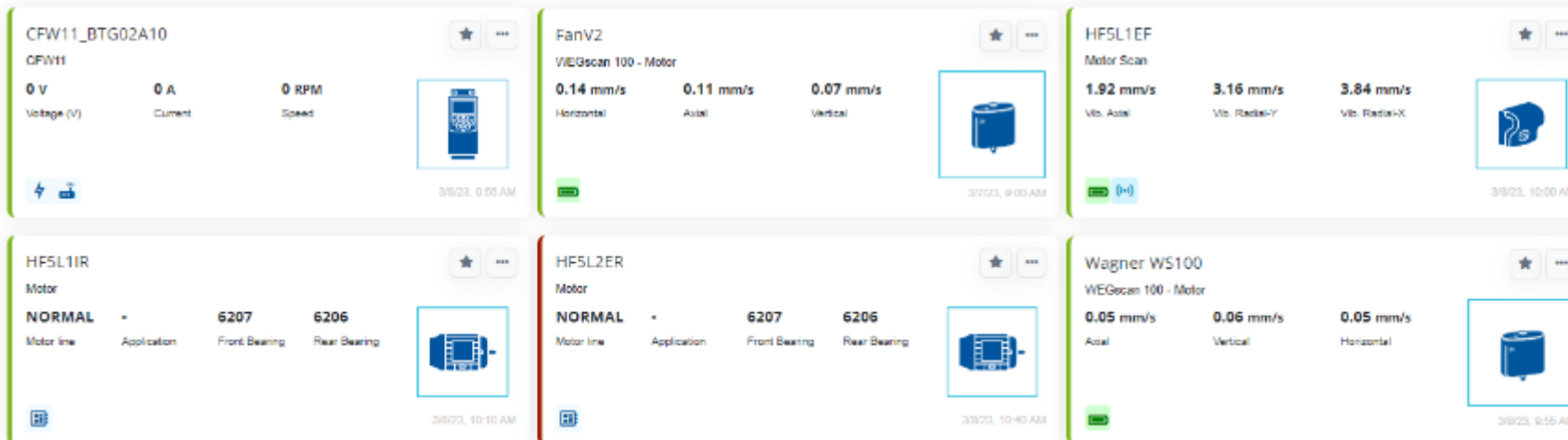
WEG MFM

Manage Modules Help

EN Will



Favorites



Assets overview



Total: 478 Assets

Healthies
409

Alerts
33

Criticals
36

Plant health and status data

Recent tasks

- HF7L1EF The limit of 0.343 in/s has been exceeded: Axial vibration = 0.346 in/s
3/8/23, 9:00 AM
- Motor Teste Digital The limit of 0.100 g has been exceeded: Radial-X vibration = 0.339 g
3/8/23, 7:11 AM
- SM1L2IRP The limit of 0.350 in/s has been exceeded: Radial-X vibration = 0.443 in/s
3/8/23, 7:00 AM
- HF7L1EF The limit of 0.409 in/s has been exceeded: Radial-Y vibration = 0.421 in/s
3/8/23, 2:00 AM
- HF5L3RF The limit of 0.346 in/s has been exceeded: Radial-X vibration = 0.351 in/s
3/8/23, 1:00 AM

Motion Fleet Management Overview



Asset Status & Condition (On/Off, Healthy, Alert and Critical)

MO

Asset (Motor):
Healthy and ON

MO

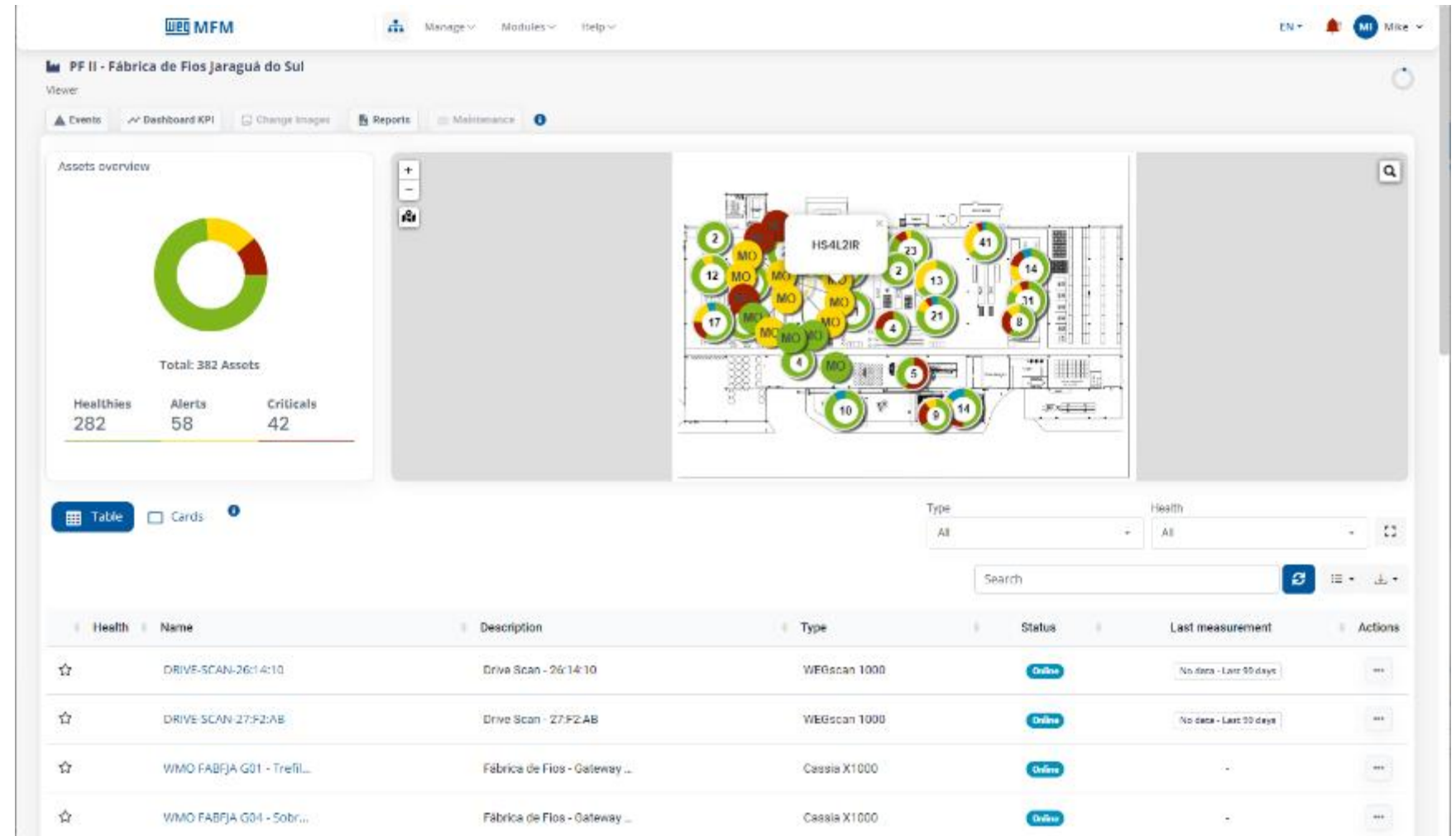
Asset (Motor):
Healthy and OFF

MO

Asset (Motor):
ALERT and ON

MO

Asset (Motor):
CRITICAL and ON

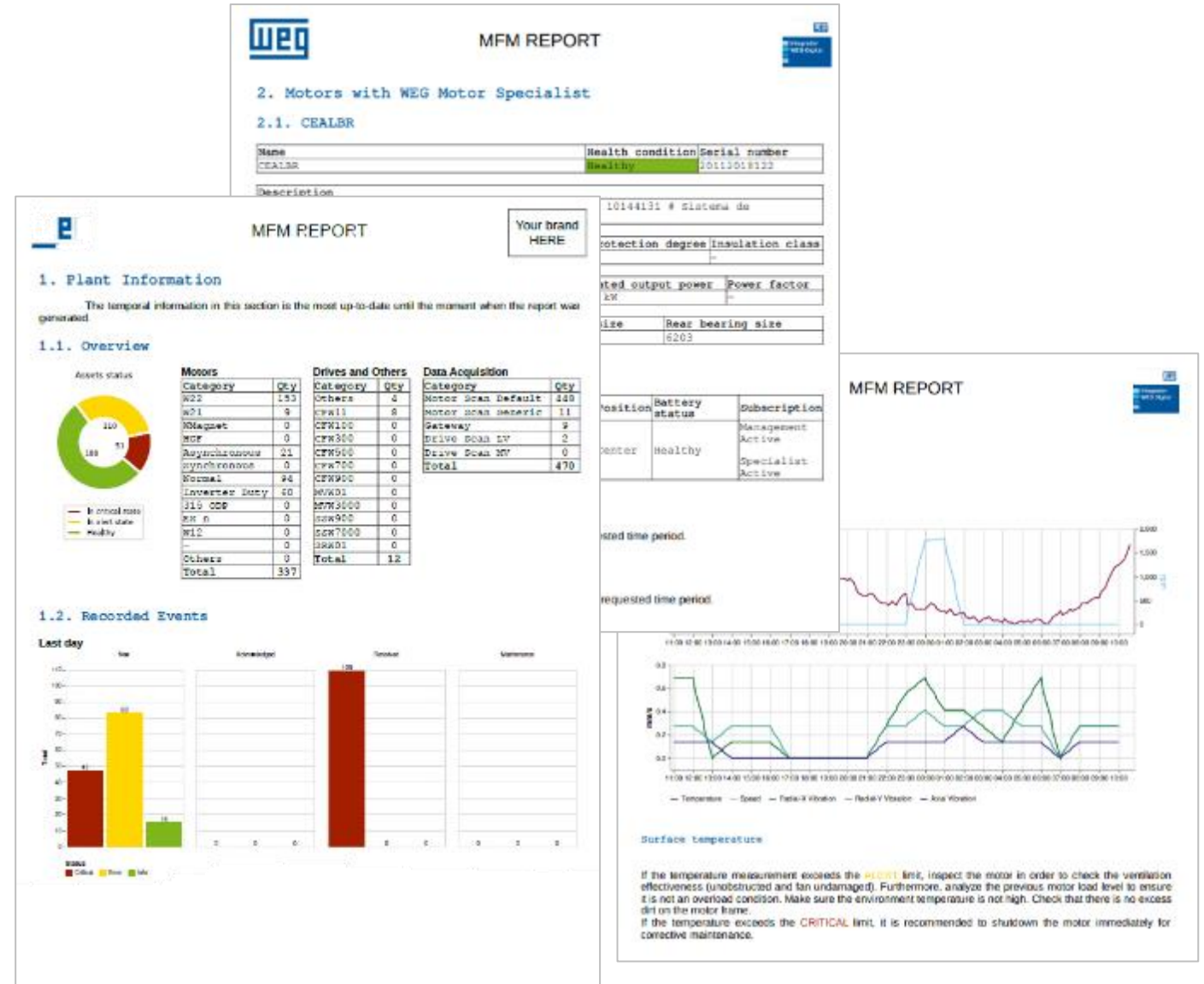
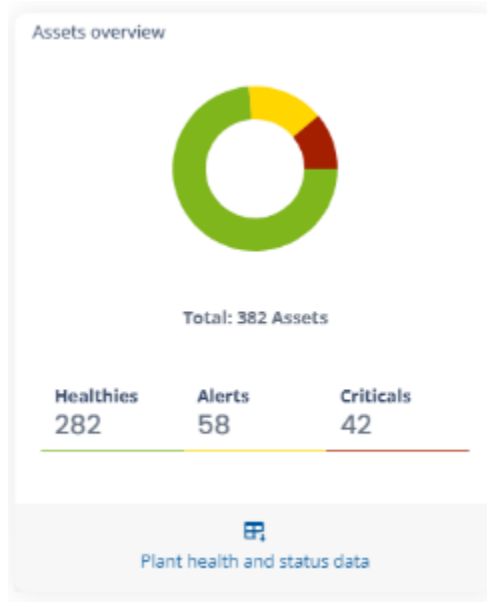


Motion Fleet Management Overview



Reporting and Dashboards

- Extensive range of Dashboard and Reporting Options
- Varies by asset and based on user selections
- Customer specific branding is available



Motion Fleet Management Overview



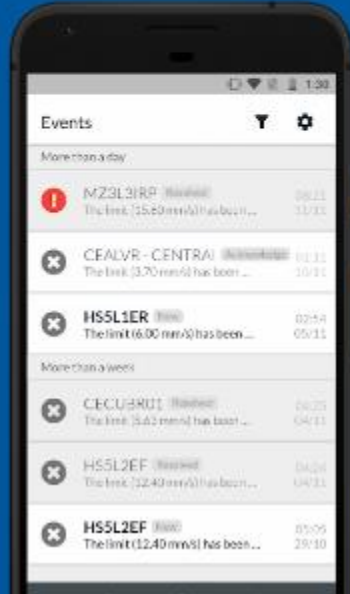
WEG Digital Notify App - Available for iOS and Android



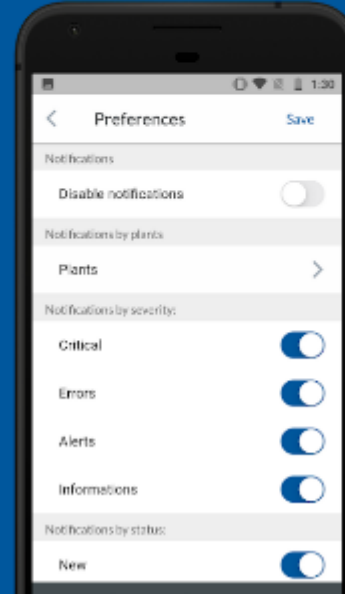
WEG Digital Notify 4+
WEG Equipamentos Elétricos S/A
Designed for iPhone
Free

WEG “Digital Notify”
App allows you to get
notifications for
assets registered in
MFM

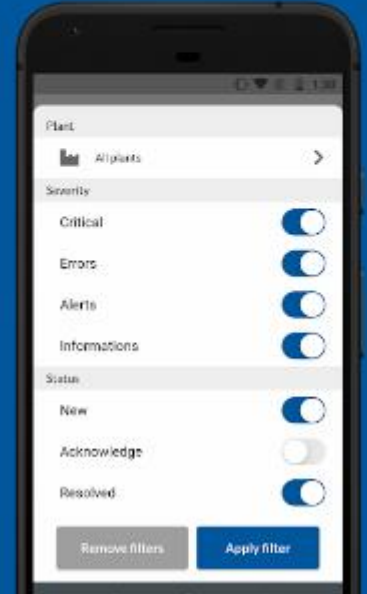
Manage your
WEG Digital
events



Receive the most
important
notifications



Filter your
plant events





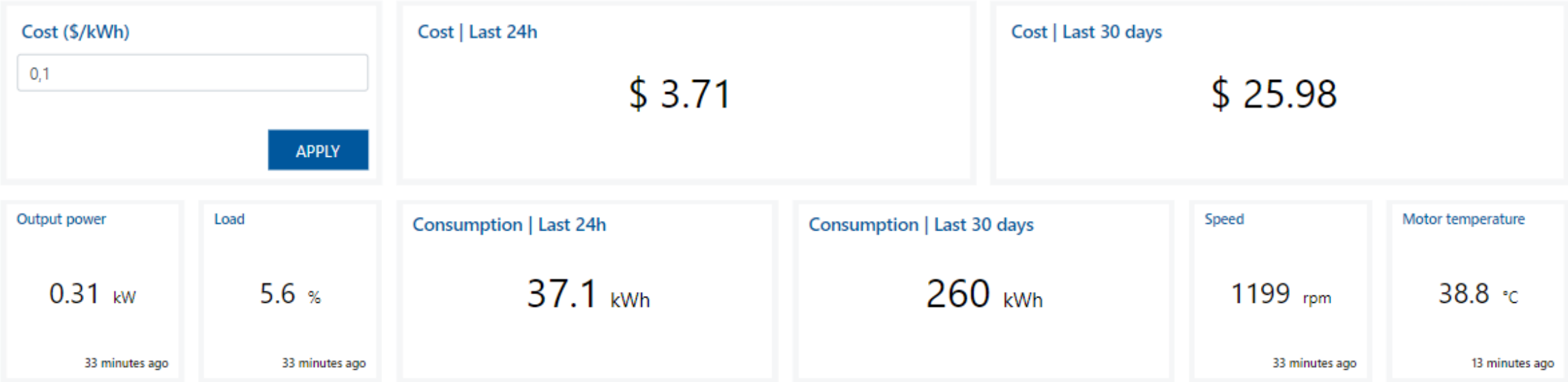
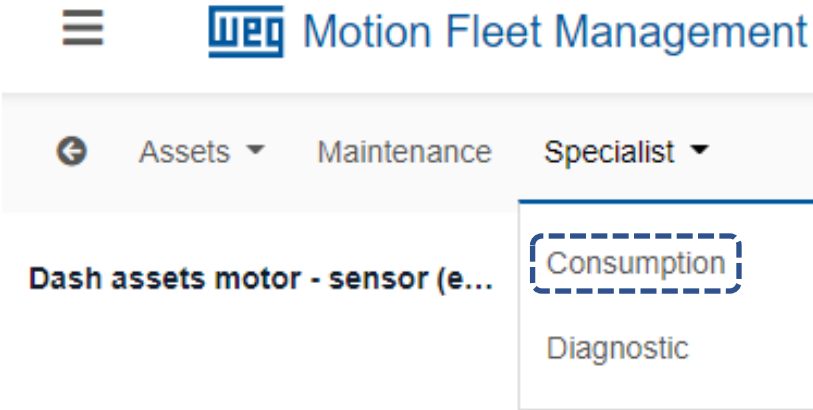
Specialist Software Overview





Consumption Module

- Energy consumption in kWh
- Estimated operational energy cost
- Calculates estimated load (w/o VFD)



WEG Specialist



Diagnostic Module

- Diagnostic Analysis (vibration analysis)
 - Rotor unbalance
 - Misalignment
 - Bearing failure
 - External vibration



WEG Motion Fleet Management



Assets ▾

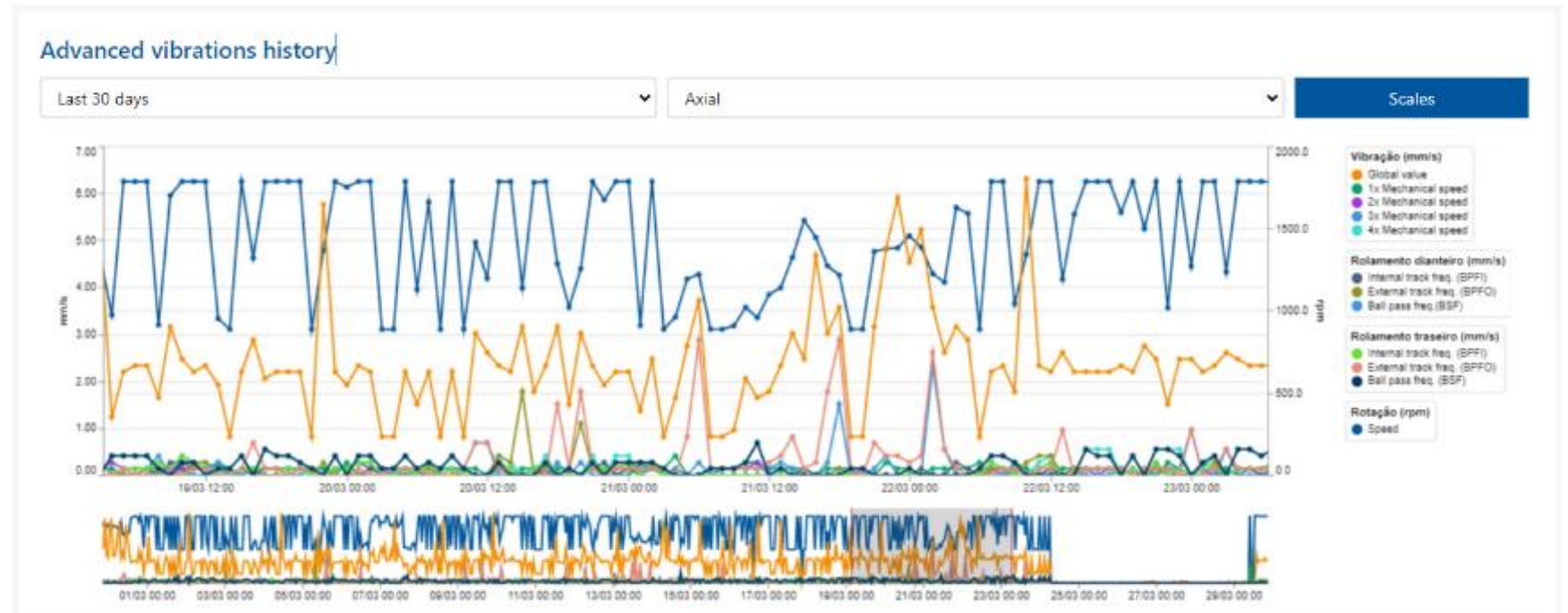
Maintenance

Specialist ▾

Dash assets motor - sensor (e...

Consumption

Diagnostic

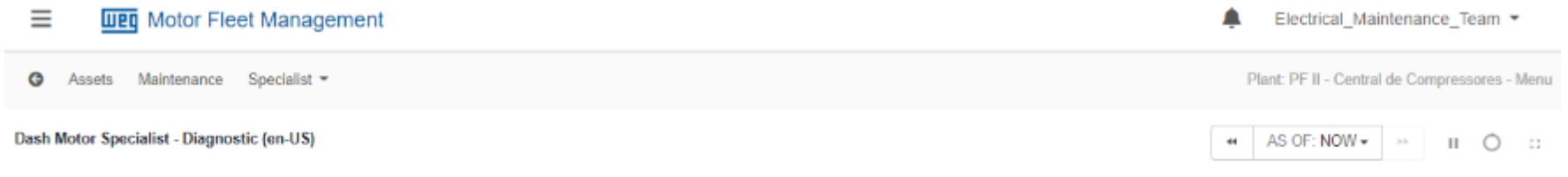


WEG Specialist



Diagnostic Module

- Diagnostic Analysis under learning process and operational
- Learning process for first 15 days after activation





Exchange Software Overview



WEG Exchange

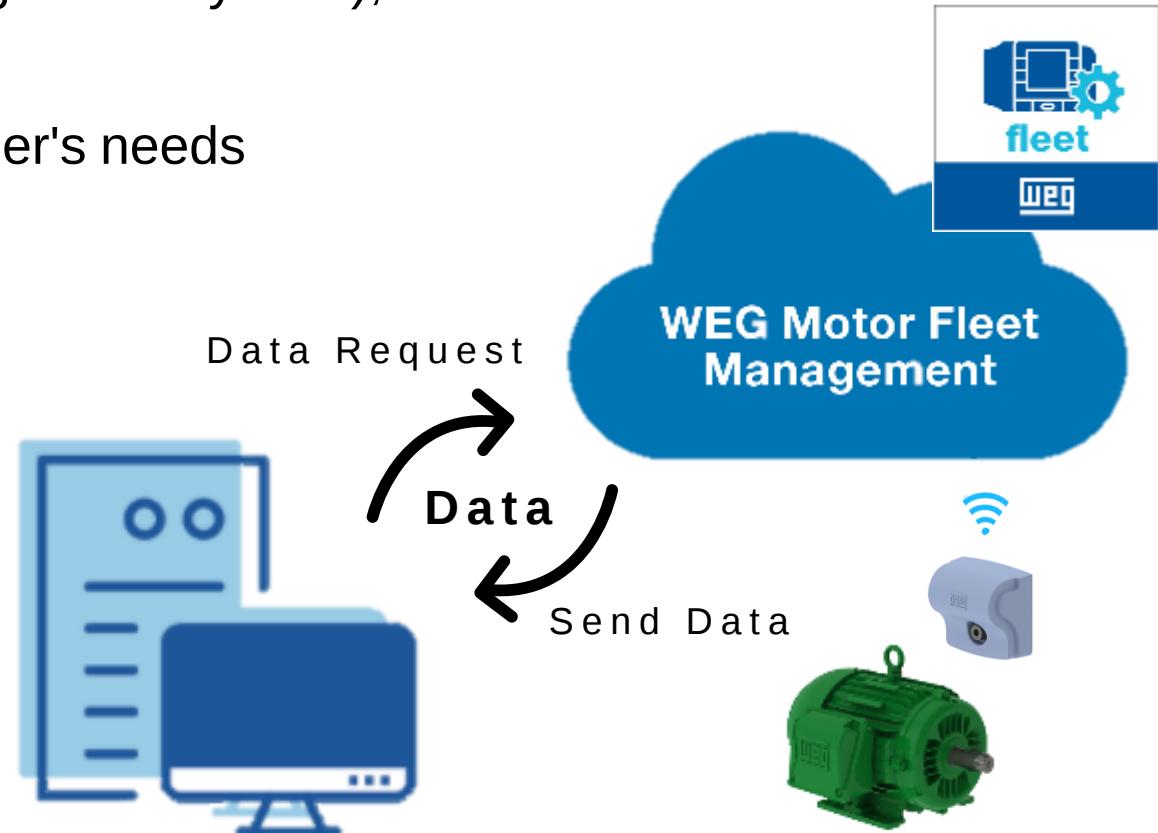


Data exchange between MFM and Third Party using REST API

- Making possible the data storage at customer's database
- Integration with third-party systems and applications such as SCADA, CMMS (Computerized Maintenance management System), ERP (Enterprise resource Planning), and others
- Subscription plans according to the customer's needs



Customer system
or Third-party system



WEG Digital Solutions Software Summary



Complete Solution to Enable Predictive and Proactive equipment maintenance programs

- ***Motion Fleet Management*** – Foundational Asset Monitoring and Management
 - First year included with WEG Sensor purchase, Subsequent years require paid subscription
- ***Specialist*** – Advanced Diagnostic and Consumption Analysis
 - Option solution, available with paid annually or through multi-year subscription, per sensor
- ***Exchange*** – Complete Information Sharing Solution
 - Option solution that enables information transfer across variety of non-WEG plant and infrastructure platforms via REST API
 - Available with paid annually or through multi-year subscription





Thank you for your time and attention.

Transforming energy in solutions. www.weg.net

WEG Electric Corp

1 800 ASK 4WEG (275-4934)

info@weg.net

