



# AMS Asset Monitor: *The edge analytics device that will change the way you monitor assets.*

Installation costs and complexity have historically kept continuous online monitoring reserved for the most critical assets in the plant and understanding the vibration data from those systems require a certain level of expertise. Combining that vibration data with process data was something reserved for the control room.

The AMS Asset Monitor is an edge analytics device designed to deliver prediction and basic protection alongside process monitoring capabilities to the balance of assets in the plant. CHARMs-based technology collects both vibration and process variables and applies embedded auto analytics to alert personnel to the most common faults associated with a wide range of assets.

Personnel from operations, process and reliability can all assist in the monitoring of plant assets without extensive experience in vibration or process diagnostics.

## CHARMs-Based Monitoring

With the introduction of electronic marshalling via distributed CHARMs, Emerson reinvented how the industry thinks about IO. With the new AMS Asset Monitor, Emerson is using that same technology to reinvent how operations and maintenance receive information on asset health. The monitor accommodates up to 12 vibration or process input charms, and monitors can be daisy-chained together to extend asset coverage.



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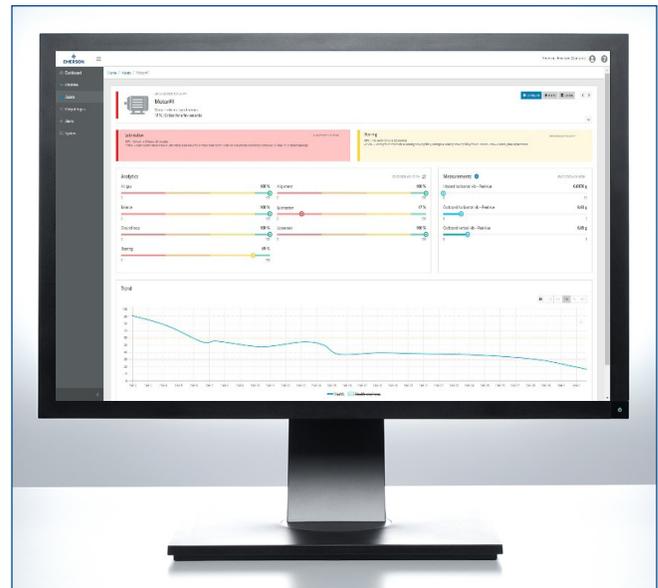
## Embedded Auto Analytics

The AMS Asset Monitor currently features the following asset health applications, with more under development:

- Balance – detects imbalance
- Alignment – detects misalignment
- Looseness – detects mechanical looseness
- Vane/Blade Pass – detects bladed component issues
- Flow Turbulence – turbulence/cavitation in pumps and rotating stall in fans
- Gear Faults – detects gear misalignment & cracked or broken tooth
- Tooth wear – detects a worn tooth issue
- Bearing – detects mechanical bearing defects
- Lubrication – detects antifriction bearing lubrication issues
- Oil whirl – detects bearing instability caused by oil whirls
- Uneven air gap – detects inductive motor air gap problems
- Duty – detects instrumentation problems (Heat Exchanger)
- Fouling – detects a decreased heat transfer coefficient (Heat Exchanger)

## Analysis and Reporting Software

Unlike monitors that require an additional software package to access data back in the office, the AMS Asset Monitor features internal functionality available via browser for analysis, reporting, and alerting capabilities. The monitor features an internal Logic Studio with pre-programmed application solutions for easy-to-understand analysis and alert reporting. Overall asset health status and alerts can be routed to Emerson's Plantweb Optics asset performance management platform, and detailed asset data to the control system by OPC UA and Modbus TCP.



Another optional Interface the AMS Asset Monitor provides is exclusively designed and used for communication to and with AMS Machine Works. Data provided to AMS Machine Works on demand, on alert or on schedule can include waveform data as well as status information for detailed analysis using the vibration analyzer tool from AMS Machine Works.

The internal web-based Asset Studio interface delivers asset information to the user's mobile device or desktop thin client.

## Easy and Cost-Effective Installation

The AMS Asset Monitor weighs less than 20 pounds, making it easy for a single person to mount near the asset being monitored. In this location, the device requires far fewer cables and installation time than a traditional monitoring system.

Take the next step in your digital transformation journey by introducing online monitoring to the typically route-monitored assets in your plant. Contact your local Emerson representative today, or learn more at [emerson.com/AMSAssetMonitor](http://emerson.com/AMSAssetMonitor).

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