

# Got Pumps?



- Do you have a bank of motor-driven pumps?
- Have you considered online condition monitoring in the past but it was too expensive?
- Do you want a real time mechanical condition on the motor and pump?
- Do you want a low cost early warning system that notifies of an impending pump failure?



*If you answered yes to any of these, the AnomAlert is your simple, cost-effective solution for improved productivity and energy efficiency.*



*Now available in a single kit for all of your pumps  
**Everything you need to get the job done.***

## The AnomAlert product:

- Connects to your motor-driven pump sets using standard current transformers (CTs) and voltage leads.
- Learns the normal running condition of your machine.
- Detects changes in the condition of the pump using the motor as a sensor.
- Analyzes changes and compares them to the learned model for your particular motor, pump and process
- Detects pre-existing faults using a comprehensive onboard library of motor characteristics
- Generates increasing severity alarms for faults and reports the fault type.
- Captures machine data and stores the data on a local PC or server for trending and further analysis.



## Pump/Motor Faults Detected:

- Vibration from pump cavitation
- Bearing faults
- Impeller problems
- Low efficiency
- Belt/transmission problems
- Unbalance/misalignment
- Valve problems
- Rotor/stator faults like cracked rotor
- Electrical supply problems
- Current imbalance
- Loose windings
- Loose foundation
- Loose connections/contactors

## The AnomAlert kit includes:

- (2-12) AnomAlert units
- (2-12) Sets of current transformers
- (20) Meters of CT cabling
- (20) Meters of voltage cabling
- (20) Meters of communications cable
- (1) Ethernet cable
- (1) User manual
- (1) Serial to Ethernet converter
- (1) Software CD
- 24/7 Technical Support
- Remote Monitoring Services

## Additional options:

- NEMA Enclosure for multiple AnomAlert monitors
- PC with AnomAlert software
- System 1\* Software import licenses
- AnomAlert Installation
- Commissioning services

## AnomAlert also provides the following motor parameters:

3-phase Voltage (V)	The supply voltage of all three phases. Used to identify supply problems such as "single-phased" condition.
3-phase current (A)	The current measurement from all three phases. Used to identify load problems such as an overloaded motor.
Frequency (Hz)	The frequency of the supply voltage and current. Usually 50Hz or 60Hz. Spot problems with supply frequency coming from the utility with this parameter.
Power Factor (%)	Power factor is the ratio of real power to apparent power flowing to the load. Low power factor (which can be common at facilities with numerous motors) can result in additional utility charges.
Phase Angle (Deg)	The angular difference between the current and voltage waveform peaks and is another indicator of power factor.
Efficiency (%)	The efficiency of the motor. Compare this parameter to the motor nameplate to see how your motor is performing and to determine if replacement with a more efficient motor would pay off. Inefficient operation can result in additional utility charges.
Active Power (kW or horsepower)	The actual power used by the motor. Use this parameter to identify the actual energy used by your machines real-time. Use power to help determine correct pump and motor sizing.
Reactive Power (VAR)	Reactive power is the power that flows back and forth between the inductive windings of motors and is not available to perform any useful work in the system.
Admittance (A/V)	A measure of electrical conduction, numerically equal to the reciprocal of the impedance.
Power Spectral Density (PSD) Plot	Power Spectral Density (PSD) Plot A specialized plot for motor diagnostics that is derived from a spectrum plot. This plot depicts the power consumption of the motor at frequencies other than the line frequency. Similar to a spectrum plot in vibration analysis this plot allows for diagnostic differentiation between the fault zones (rotor, stator, foundation, etc.)
Total Harmonic Distortion (THD)	The amount of frequency content in the power spectrum that is not line frequency. This is useful for detecting if other devices in the power bus are distorting the power available to the motor, causing it to operate under deteriorating conditions.



For additional information, please contact your local GE Representative, visit [www.ge-mcs.com/bently](http://www.ge-mcs.com/bently)

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