

## Remote Monitoring & Diagnostics (RM&D) – for Motors

# fact sheet

### Remote motor monitoring: why and how

GE's comprehensive motor monitoring strategy enhances the ability of industrial customers to reduce downtime and identify motor failure before it happens. Elements of GE's solution include:

- Continuous technical support through the GE Monitoring & Diagnostic Center (M&D)
- GE engineers analyze your motor's condition data to identify potential failures
- Advanced technology products that retrofit easily into existing equipment and provide the highest levels of protection and reliability
- Prompt installation and commissioning services built on GE's years of field engineering experience and OEM product knowledge

### Background

Industrial customers who use motor equipment can lose time and money from periodic maintenance and equipment removal efforts. RM&D provides them with the engineering and service expertise of GE Energy.

RM&D is a complete industrial machine-monitoring package that samples voltage, current, temperature and vibration data and transmits the values via a secure, cellular network connection to the GE Energy M&D Center. At the M&D Center, experienced industrial engineers identify and report erratic machine behavior, which allows for preventive maintenance, condition-based service or halting dangerous operation. RM&D also enables customers to analyze motor operating trends through our secure web connection, which displays all condition data in real time.

GE surveys industrial machine health through the remote monitoring of the following key process indicators:

- Stator voltage
- Stator current
- Stator temperature
- Bearing temperature
- Bearing vibration
- Calculation of torque, speed and efficiency, and energy usage
- Current signature analysis
- Harmonics analysis (current and voltage)



GE Remote Monitoring Unit Hardware



GE Monitoring and Diagnostic Center



## Applications

RM&D is applicable to all industrial motors that are attached to a control device that outputs data via Modbus; e.g., GE Multilin 369, 469, M60 or various other manufacturers' relays.

## Features

GE Energy can provide a complete motor monitoring solution:

- Comprehensive motor condition monitoring
- Text message/email alerts
- 24-hour monitoring support
- 24-hour engineering support
- Warehoused condition data
- Web-based access for customer visualization of data
- Wireless transmission of data

In addition, GE Energy offers several options; the communications and data management methods shown here can be configured to your specific applications and needs. We are committed to your complete satisfaction and will work to ensure the monitoring package chosen will meet your individual needs.



## Benefits

- Wireless network reduces installation (cabling) costs
- Predictive maintenance intervals streamline maintenance schedules based on actual operating conditions
- Reduced maintenance costs
- Increased machine productivity
- Increased operating efficiency
- Minimize risk of catastrophic damage to equipment
- Quick installation with minimal disruption to operations
- Minimal footprint - installs on any accessible DIN rail



GE's Remote Monitoring & Diagnostics works on motors of all makes and designs. As of 2010, all new GE motors above 500HP are RM&D-enabled, with all sensors and leads pre-installed.



For more information, contact your local GE Energy office, call 1-888-GE4-SERV or 540-378-3280, or visit [www.ge-energy.com/industrial](http://www.ge-energy.com/industrial)