Remote Monitoring - Air-conditioning and Refrigeration (AC&R) Application Note

The challenge – keeping costs down and performance under control

Air-conditioning, refrigeration or climate controlled environments are part of our daily lives in the workplace, recreational and public domains. In many commercial or public places these facilities can constitute the single biggest user of energy. At a time when energy tariffs are ever increasing, this can represent a substantial cost.

Your challenge will be to keep systems running and costs under control. Inefficient or malfunctioning AC&R equipment may result in expensive bills, discomfort and inconvenience to customers. In the case of climate controlled environments it may result in a serious loss of assets or even danger to health and wellbeing

The solution – total management of your operational AC/R assets

Visualisation of your AC/R operational

Just some of the Benefits of having a Dexdyne Remote Monitoring System

- See a reduction in your operational costs
- Prolong the life of your assets
- Improve fault response times
- Maximise plant uptime
- Schedule effective preventative maintenance
- Increase customer satisfaction & confidence
- Chart energy efficiency
- No licensing fees
- Many ways to connect to our smart technology – GPRS/GSM/3G/4G/ADSL
- Futureproof your company

processes 'live' wherever they are situated and have the ability to control and interact with it can be a powerful tool in helping to manage your AC/R assets effectively.

Dexdyne's DX3 RCT (remote communications terminal) will capture critical process data in real-time. Monitoring your process constantly in real time can enable you to be aware of an impending problem sooner rather than later and thus help to avert expensive repairs (such as compressor or motor burn out) or help to reduce energy consumption by detecting unusual increase in the consumption and taking preventative measures.

Our Cloud technology can be easily configured to send SMS messages when user configurable alarm thresholds for energy consumption, temperature and compression are reached. Our system is custom built to meet each client's requirements. You will not need to change any of our existing equipment; there are no licensing fees, and no limit to the number of users. Your critical data can be accessed in real-time from any device, anywhere, PC, laptop, iPad or smartphone.

Application

Each RCT keeps a time-stamped event log that records when any state change occurs, such as run status, pump status, various temperatures, pressures and the energy consumption in the system. Enabling valuable data for correlation, analysis, and insight into the behavior of the AC&R plant.

If you need a report in Excel showing statistics from each site (or from multiple sites on a consolidated basis) it can be **automatically** emailed to you each day, week, month etc. showing usage and allowing you to fully manage your energy and performance.

Try our <u>LIVE</u> demonstration Username: demoUser Password: visitor

Key Features

- Real-time AC&R status information displayed via Cloud. To any device.
- SMS alerts sent to engineer(s) when a plant needs service or attention.
- Fully interactive graphing capability can display long term trends.
- Pre-emptive maintenance due to trend monitoring resulting in reduction in expensive downtime.
- Ability to instantly see status of multiple sites from a single login to any device.
- Can be retrofitted to existing AC&R installations with Modbus interface no need to change existing equipment

ACR Controller SMS Alert

Cloud

Internet Comms Link Via GPRS/ADSL

Secure Server

Internet

Modbus TCP/RTU

DX3 RCT

Internet

PC Dashboard

<u>Typical Configuration</u>