Case Study

Laboratory Applications

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> - William E. Hodgson, Electrical Engineer Rosetta Inpharmatics



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Rosetta Inpharmatics Teams Up With Falcon Electric To Protect Its Microarray Generating Systems

Rosetta Inpharmatics is a leading provider of informational genomics solutions. By combining the power of informatics and genomics, Rosetta has created proprietary technology that accelerates and enhances the drug discovery process for pharmaceutical and biotechnology companies, and that can be used to improve agricultural products. Rosetta Inpharmatics' technology generates coherent gene expression data from DNA chips or microarrays, and applies powerful genomic analysis tools to provide comprehensive, simultaneous information about all relevant genes and targets within a cell. Information about Rosetta Inpharmatics can be found on the Web at www.rii.com.

Some of the DNA chips are fabricated at Rosetta Inpharmatics' Kirkland facility for R&D purposes. It is an exacting automated process that requires precise positioning and unfailing chemical control. Any disturbance during the fabricating process will result in a failed microarray and possible damage to the microarray generating production system. To protect against such an event, Rosetta Inpharmatics' designed the microarray generating system with line interactive (Off-Line) Uninterruptible Power Supplies (UPSs) from a leading manufacturer. Unfortunately, they had a line power disturbance which damaged two of the machines and disrupted the microarray generation process for a period of time. Their investigation of the failure found that, except during an

outage, the Off-Line UPS design allowed the line power anomalies to pass though to the equipment. They determined that they needed an On-Line type of UPS for total protection.

"After considerable research, we chose an On-Line unit from Falcon Electric, Inc, in Monrovia, CA, based on the performance specifications," commented Rosetta Inpharmatics' Electrical Engineer, William E. Hodgson.

"We then purchased several On-Line units and installed them in our production lab, between the line power source and our microarray production systems."

"Less than two weeks after the Falcon Electric UPSs were installed, we had another power disturbance. We were very pleased to find that the DNA chip fabricating process was not affected. No product was lost and no equipment was damaged," adds Hodgson.

Because the microarray fabricating systems were not affected by the power line anomaly, automated production functions were maintained which averted the need for the activation of their chemical and electrical monitoring safety equipment and associated alarms.

"We recommend to others who are considering the purchase of a UPS to protect sensitive equipment, to consider the On-Line design of the Falcon Electric units when total protection is more important than a slightly higher price," states Hodgson.