APPLICATION NOTE

CAS DATALOGGERS

Preserving The Magna Carta With Temperature And Humidity Monitoring

T&D Data Logger Provides Reliable Solutions for Museums

In 1215, England's King John created the Magna Carta, the charter of liberties granted to the King's Barons to halt their rebellion and restore their allegiance to his throne. When the Magna Carta was created, it secured only the rights of a privileged class of the king's subjects. However, after centuries of interpretation and controversy, the Magna Carta has become an enduring symbol of liberty and the rule of law.

In the Fall of 2014, the Lincoln Cathedral copy of the Magna Carta, one of four remaining copies of the manuscript created in 1215, was loaned to the U.S. Library of Congress as part of an exhibition: "Magna Carta: Muse and Mentor." The exhibit included the Lincoln Cathedral Magna Carta as well as other documents, books, letters, newspapers, judicial decisions, and images that provided an account of the initial drafting of the Magna Carta and the many confirmations by kings and parliament. To validate the conditions of the fragile document while on exhibit and provide assurance to the loaning institution, the Library of Congress required a reliable and accurate temperature and humidity monitoring solution.

Installation:

The Library of Congress selected the T&D TR-72NW-H high-precision data logger. The logger featured a high-accuracy temperature and humidity sensor,a local LCD,

a local LCD, and a wired Ethernet connection. The network connection allowed the logger to upload recorded data to an on-site server and send e-mail alert notifications if the environmental conditions exceeded the user-configured limits.

Since then, the TR-702 has been updated to a new model, the TR-72NW-S. It provides many of the same basic features of the TR-702 including:

- Local memory for 8,000 temperature and 8,000 humidity readings
- Accuracy of 3 °C and +/- 2.5 %RH
- Standard wired 10/100 BASE-T Ethernet connection
- 15 User selectable recording intervals

In addition, the TR-72-NW-S can automatically upload real-time and recorded data to the T&D Web Storage Service cloud. From there, data could be displayed via a standard web browser on a PC or mobile device, monitored in real-time, or downloaded and archived in several formats including Excel and CSV files.
The Web Storage Service also provides the ability to send email alerts to multiple recipients if any of the user-programmed limits are exceeded. With these features, the TR-72NW-S is positioned as the instrument of choice for a wide variety of environmental monitoring applications protecting sensitive materials and products.

Importance of Preservation:

According to the archivists, preservation of the document is critical during the exhibition. Humidity can cause parchment to attempt to revert back to its natural shape which would distort the print since the ink remains stable. Devices like the TR-702/TR-72NW are small, and unobtrusive making them ideal for use in exhibit cases like this. Having accurate

recording of the environment, and a reliable temperature and humidity monitoring system with alerting in the event of excursions provides both the document's owner and the exhibitor peace of mind.

CAS Dataloggers distributes the full line of T&D data logger products, including wired Ethernet and WiFi solutions and wireless monitoring systems that fill the needs of virtually any monitoring application.

For more information on T&D Data Loggers, temperature and humidity monitoring, or to find the ideal solution for your application-specific needs, contact a CAS DataLogger Application Specialist at **(800) 956-4437** or www.DataLoggerInc.com.