Gettysburg Fire Department

Gettysburg, Pennsylvania, United States

Introduction

The town of Gettysburg and its surrounding farmland have a rich history as the site of the Battle of Gettysburg, a pivotal turning point in the American Civil War. Fire protection in Gettysburg dates back to 1806, when the borough purchased a hand-powered fire engine that was maintained by the citizens. Today the volunteer fire department is far better equipped, with a state-of-the-art facility that also serves as a museum to keep the department's impressive history on display.

Project Details

Reliable Controls Authorized Dealer Nexgen Automation installed a building automation system during a retrofit of the Gettysburg Fire Department building.

A MACH-ProWebCom controller allows facility operators to easily access and control the system at any time using the internet. Its unique three-in-one design combines a BACnet Building Controller with a BACnet Operator Workstation and a powerful web server that eliminates the need for client license renewals or cloud services, saving the building owner time and money. The multiprotocol support inherent in the MACH-ProWebCom also enabled integration of an NTI condensing boiler via Modbus, allowing precision control of the boiler without any gateways or additional hardware.

Nexgen Automation installed a MACH-Pro1 to monitor and control the rest of the building's hot-water system, which supplies hot water to a radiant slab in the garage and numerous other heating coils in the air-handling system using two pumps and multiple sensors to accurately control supply temperature. The MACH-Pro1 is a flexible, fully programmable BACnet Building Controller ideal for midsize rooftop equipment or small mechanical-room applications.

To control single-zone air-handling, variable volume and temperature, and variable air volume rooftop units, Nexgen installed nine MACH-ProZone controllers that provide highly scalable inputs and outputs in a compact footprint. Each variable air volume box is networked with a MACH-ProAir controller that includes an airflow sensor and onboard damper motor, eliminating the need for separate sensors and actuators. Cooling is provided by a DX coil in each air-handling and rooftop unit.

The Reliable Controls system also controls outdoor lighting and is interfaced with the fire alarm and commercial kitchen equipment.

"The new system interface makes it much easier to manage the building than the previous one, and the manageability allows us to achieve noticeably better comfort and energy savings as well," said the building's system operator.

With its notable history, the Gettysburg Fire Department retrofit was a unique project for Nexgen Automation. The new Reliable Controls system means the facility can operate at peak efficiency while allowing flexible scheduling and overall ease of use for operators. Visitors who tour the fire museum to see the Silsby—the original 1806 hand-powered steam fire engine, local residents who hold functions in the building's community room, and members of the Gettysburg volunteer fire department will enjoy a comfortable, healthy environment for years to come.

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Market segment
Mixed use

Project type
Retrofit

Installation type
HVAC, lighting

Total area
2,508 m² (27,000 ft²)

Protocol
BACnet, Modbus

Installed equipment
1 MACH-Pro1™ controller
5 MACH-ProAir™ controllers
1 MACH-ProWebCom™ controller
9 MACH-ProZone™ controllers

Integrated equipment
NTI boiler

Total system objects
160

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 . 120 Hallowell Road, Victoria, BC, Canada, V9A 7K2
Toll Free 1-877-475-9301 . Tel 1-250-475-2036 . Fax 1-250-475-2096