Building Automation System

Quantum Photonics®

Control System Details:
Johnson Metasys
- 2 Network Control Module, Arc/Ethernet
- 6 Digital Controller
- 5 Digital Controller, Lonworks
- 11 VAV Modular Controller
- 1 Unity digital Controller

Multiple Extension and Expansion Modules
Multiple Sensors and Transducers
Workstation PMI
M5 Workstation
M-Graphics
Metapage

In 2000, Quantum Photonics, Inc. was started to produce high tech semiconductors. There were three phases in the construction of their production facility: General Office, Fabrication, and Warehousing. When IPS, the design-build consulting firm, got IAE involved, the facility was complete with Phase 1—General Office construction, and starting Phase 2—Fabrication. The office Building Automation System (BAS) was installed as part of phase 1 and based around Johnson Controls—Facilitator with an M3 workstation interface. The Facilitator system had limited features and not very user friendly, leaving the owners unsatisfied.

IAE's control concept design for the Phase 2—Fabrication identified network control modules, digital controllers, and requirements for a user-friendly M5 workstation interface. The Johnson Controls—Facilitator to Metasys change required a minor upgrade of existing equipment installed in Phase 1 as well as an operator workstation upgrade. The result would be a substantially more user friendly and flexible system.

The Johnson controls—Metasys system uses PID, Echelon communication, and M-graphics to control and monitor Auto Gas Shutdown, forty air handlers, nine exhaust fans, eleven VAV boxes, two chillers, a rooftop unit, and miscellaneous support equipment. In addition, the system has a designed spare capacity to complete Phase 3—Warehouse and future expansions and changes.

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