DISTECH CONTROLS™

Innovative Solutions for Greener Buildings™

Colleges & Universities

MELBOURNE UNIVERSITY

Melbourne, Australia

This new high-tech building, located in the Western Precinct of the University of Melbourne, promotes the development and research of biotechnology. The tenants are the University's Bio21 Institute's (www.bio21.org), cutting-edge biology research facilities. Bio21 draws together Victoria's leading universities, research institutes, hospitals, and industry to capitalize on the state's world-class research and development capabilities.

The Challenge

This high-tech building required a high-tech and very efficient building automation system (BAS) would have to control the building's complete HVAC operation. Air handling units, chillers, hot water plant, fan coil units, VAV boxes, fume cupboard exhausts, and atrium ventilation would be just some of the components controlled and monitored through the BAS. The new BAS had to be accessible via a front-end computer and remotely via the University Intranet.

The Solution

The BAS installed by TAC Australasia Pty Ltd is comprised of one operator unit (Personal Computer) connected to Distech Controls Free Programmable Controllers and their associated control devices mounted within the building to maintain comfort conditions as specified.

For the AHUs, chillers and boilers, the EC-8 Series (16-point) and the EC-12 Series (24-point) controllers were selected. These controllers offer different Input/Output type configurations. The VAV boxes are controlled

Highlights

- Office space, training facilities, and laboratories
- Two 6-story buildings co-joined by a common atrium, plus basement car park, and roof level plant rooms
- 55,000 square meters

Distech Controls Products:

- LONMARK Certified Free Programmable Controllers

System Integrator:
Datacom Australia

For more information,
contact Distech Controls:
1-450-444-9898
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with the Free Programmable VAV Controller, the EC-VAV-C.

The Fan Coil Controllers (EC-FCc) are employed to control individual fan coil units, which maintain conditions by modulating heating and cooling valves in sequence. In each office, the fan coil units are not controlled by the BAS and can only be enabled or disabled by an operator via the stand-alone controller and LCD display within each office.

Along with the controllers, a large variety of actuators, valves, and sensors have been installed. Room temperature sensors, differential pressure sensors, CO_2 sensors, and air flow switches are linked to controllers throughout the building and help to ensure

optimal air quality and energy efficiency.

The operator has a complete overview of the BAS and can control operations directly through the color graphic displays. These displays are generated by the Intellution Proficy™ iFix HMI software. This software has been selected to comply with the University's existing system on the campus. Using an available driver, Distech Controls' products have been integrated with the system and can now be easily managed. With this software, the University of Melbourne operator unit includes functions such as alarm handling, trend logging, and time scheduling management. Access to the system can be achieved by the operator unit or via modem link from a remote monitoring station.

To facilitate access to the BAS from remote premises, the "PC Anywhere" software package is installed in the BAS operator unit (Personal Computer) located in the Security Control Room on the ground floor. The software allows authorized remote personnel to interrogate the BAS via a laptop computer connected to any standard remote telephone outlet. This access is password protected and also allows Datacom Australia personnel to interrogate and assist University personnel from their Melbourne office, and via their after-hours service technicians.

The Free Programmable Controllers Series were undoubtedly the best devices for this project. This full line of controllers covers a wide range of equipment, including chiller and boiler plants, built-up AHU, VAV, fan coils, and rooftop units.

Based on the LONWORKS® system technology, these controllers suit any new or existing LON® based network. Moreover, they can be easily and quickly programmed with Distech Controls Free Programmable LNS Plug-in through our LonWatcher HMI software or any LNS tools.

The Benefits

As expected by Datacom Australia, the Distech Controls products conformed and operate to the project's requirements. The system provides excellent comfort to building occupants. Air quality and conditions can be maintained at optimum comfort levels throughout the facility's labs, offices, atrium, theatre, and conference rooms.

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The University will be able to monitor its system with the new HMI computer supplied as part of the project, and additionally via the existing HMI computer connected to the University Intranet. Finally, the University will benefit from great HVAC system performance and good control of energy costs.

"Distech Controls products provided us with the flexibility and capabilities needed to meet this project's requirements. With these high quality products, we are confident our customer will be satisfied."

Chris Harris
Datacom Australia