DELTA BRAND NEWS

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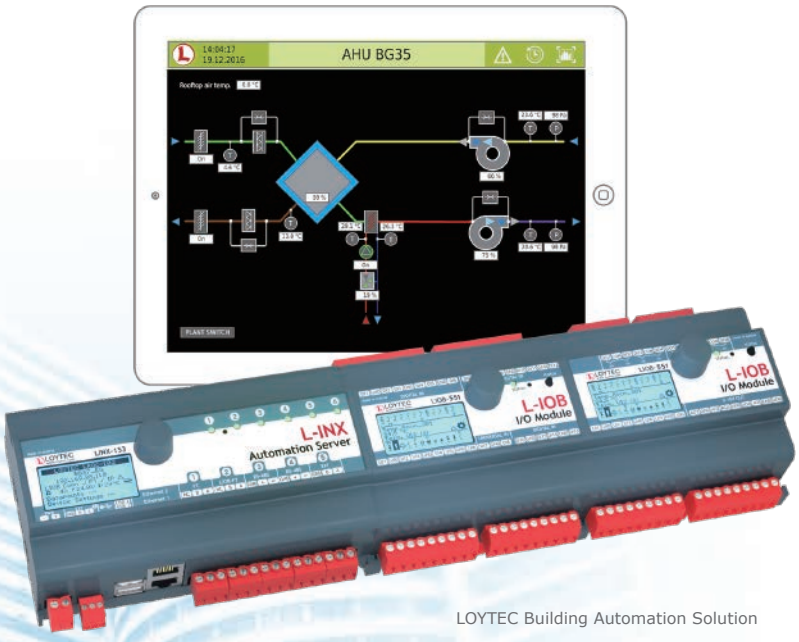
Text by BABG

Shanghai Oriental Hospital (affiliated East Hospital of Tongji University) is a large Class 3 Grade A general hospital that combines medical care, teaching, scientific research, emergency medicine, preventive care, rehabilitation, and healthcare in one. The new general building includes two basement floors and 24 stories above ground. As part of a remodeling effort, it was required to introduce the monitoring and control systems of collaborating contractors for the expansion/remodeling of elevators and building automation to the Building Information Modeling (BIM) maintenance and management platform of the Shanghai Oriental Hospital. This would achieve integration of six management aspects for the hospital, namely building information, space, maintenance and service, smart facility monitoring, safety protection, and comprehensive decision-making.

A 3D visualized BIM is currently in the mainstream for building construction among engineering teams. It provides efficiency with enhanced software and hardware and updated construction criteria and regulations. Combining operating data and parameters for all mechanical/electrical systems and facilities within the building control system, the BIM system analyzes operating information to enhance the service and maintenance efficiency of equipment by monitoring energy consumption and conserving energy of mechanical/electrical equipment.

The LOYTEC Building Automation Solution supports OPC communication to integrate with the BIM maintenance and operation platform seamlessly and provide information on the maintenance and operation parameters of mechanical and electrical facilities so that it is more intuitive and accurate for related staff while troubleshooting or performing maintenance and care, significantly improving the operational efficiency of the hospital.

The Shanghai Oriental Hospital adopts the LOYTEC Automation Servers LINX-220 and LINX-212 and I/O Modules LIOB-150, LIOB-151, and LIOB-152, cooling/heating source communication gateways, sensors, and actuators. The IOT-based Automation Servers L-INX, in particular, collect information about external collaborating contractors while at the same time integrating internal corporate OA systems. Facility managers can review equipment maintenance, operation, and alarm status in the new building anytime from anywhere and plan preventive maintenance to reduce failure of equipment according to operating conditions, periodic maintenance requirements, and the workload of the maintenance group.



LOYTEC Building Automation Solution

To fulfill the strict environmental control demands and address high energy consumption at the hospital, Delta took advantage of the feature of LOYTEC to support various open interfaces and achieve integrated monitoring across cooling/heating source systems and equipment. Ventilation systems are deployed throughout various prioritized regions in the hospital for monitoring purposes. They control pressure according to each medical care feature and process flow. Isolated ventilation for the equipment room, the laboratory, and each department/office ensures reasonable and orderly air flows to prevent the spread of bacteria.

All air systems of large spaces such as the lobby are designed with low-speed airways and fixed air flows. Small spaces such as general wards and doctor's offices adopt primary air fan coil systems. These two sets of customized air-conditioning and monitoring systems optimize the energy-saving central air-conditioning system based on external climate changes while at the same time maintaining a comfortable temperature and humidity and effectively controlling bacterial growth.

The LOYTEC Building Automation Solution integrates smart management of mechanical/electrical equipment and links the BIM platform inside the hospital so that the service staff can quickly repair and resolve problems. It helps optimize the overall operational efficiency and reduce the management cost and provides the Shanghai Oriental Hospital with operational management featuring 24/7 high-quality environmental control and highly-efficient energy conservation.