

DEOS AG Case Study

Conversion during operation



PAI, Kuwait City

Die PAI headquarters in Kuwait City have been modernized with DEOS technology. The industry is one of the most important sources of national income. Founded in 1996, the PAI aims to develop and grow the industrial activities of the country in order to achieve the aims of the national economy. Since the energy is one of the most discussed topics at this time, the agency is using state-of-the-art technology from DEOS - Made in Germany - to meet the latest standards and thus save energy.

The office of PAI - Complete conversion without interruption of operation

There were two primary challenges to be tackled in this project. The system had to be completely modified in the existing plants and systems without interrupting operations. Parts of the systems and plants needed to be replaced and connected.

The compact DEOS OPEN system made it possible to retain large sections of the existing control cabinets. Furthermore the given IT cabling could be used for the IP communication of the controllers. OPENweb was installed as a building management system, now providing a centralized overview of all systems and plants. It controls and monitors the alarm and event management both in the main buildings as well as the subsidiaries throughout Kuwait.

OPENweb Android App allows users to conveniently access all plants according to their access rights and provides them with a quick overview of each site. Additional management functions, such as dimming functions of the lights in the meeting rooms could be easily implemented in the hand held tablets as well.



“Our goal was to create a cost-efficient solution with state-of-the-art technology. KCIT and DEOS did a great job here“,
Eng. Basem Mousa Aldarwish, Head of Electrical Dept.

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During the first phase of the project, all old HVAC systems, the light management system, the elevators and the access control as well as the CO monitoring system in the two basement parking floors were connected. Two OPEN 3100 EMS controllers and 78 IO modules were installed in the spacious building to do this. For cost and time saving reasons almost all sensors of the previous system are used and connected to the new installed DEOS IO modules. All other systems are also directly connected to the IO modules, which are communicating fast and secure via the CAN bus technology. The seven subsidiaries were connected to the overall system through state-of-the-art network technologies and DEOS compact controllers (OPEN 500/600) in the subsidiaries.

Phase 2 focused on retrofitting the old HVAC and chiller systems by implementing a VAV system. The various zones are now controlled by DEOS BACnet VAV controllers. The feedback of the controllers to the main system allow to drive the AHU's based on the current demand and help to save more energy. By implementing a new chiller control system which is communicating via BACnet IP to the OPEN DDC controllers, the full control and overview via the OPENweb BMS Software is ensured.

All information, alarms and the full event control center is centrally managed in the headquarter's building. The maintenance employees each have a tablet and can walk throughout the building with an overview and control of all essential data and functionality.

Technical data

Year	2015/16
Size	7F+G+2B
Usage	office
Application	BMS
Physical DP	1500
BACnet objects	1000
Controller	OPEN 3100 EMS, OPEN 810 EMS, OPEN 500 EMS, VAV
Features	IBMS

Our system partner



Kuwaiti Canadian Integrated Trading (KCIT) take the step from one of the best IT solutions provider to a full BMS solutions provider in the Kuwait market and combines this two disciplines successfully.