

# DEOS AG case study – Shopping Centre Darmstadt

## Conversion of system from K&P to DEOS including expansion with DEOS Connect Portal for remote services

The „Carree“ in Darmstadt’s city centre offers visitors a wide range of gastronomy, event and shopping facilities. More than 40 shops are spread over around 27,000 m<sup>2</sup>. The Carree originally opened in 1997 as the City Carree.



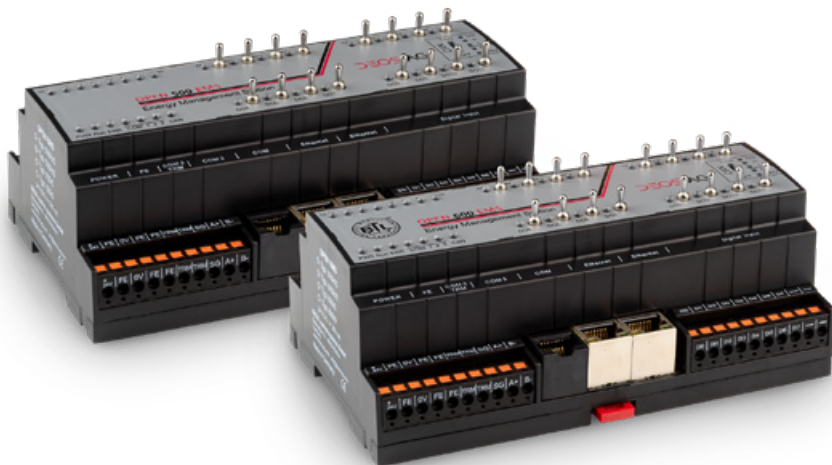
carree

The core of the project is the upgrading of the shopping centre’s existing building automation system from Kieback&Peter (K&P) to a more modern DEOS system. The approximately 20 MCR control cabinets in the building were replaced step by step.

Our long-standing, **certified DEOS system partner EMSR GmbH** from Echzell (north of Frankfurt) was commissioned by „MVGM Property Management“ with the conversion of the facility. With 1,500 employees in 39 branches, MVGM also relies on the experience of our system partner EMSR-Technik GmbH and the solutions of DEOS AG.

## An intelligent solution: the conversion from K&P to DEOS

Around **1,000 data points** of the K&P DDC controllers to be replaced were migrated to the new DEOS controllers of the type OPEN.WRX, EMS 4000 and EMS 710/810. The newer K&P controllers (DDC 4000 series) remained in the building for economic reasons. This requires the new DEOS system to operate in parallel with the existing system. Over 180 DEOS CAN IO modules were also installed in the Carree.



DEOS DDC controller – OPEN EMS 500 and 600 with hand control on-board as local override device (LOR)

EMSR found an intelligent technical solution for the special feature that the IO modules from K&P switch to 0 volts, while the DEOS IO modules switch to 24 volts. The polarity of the 24-volt transformer was reversed and relays were used.

**Another advantage of the upgrade using DEOS products:** the previously installed local override device (LOR) from K&P was replaced in a space-saving way by the onboard manual operation on the compact DEOS DDC controllers of the OPEN EMS 500/600 series and the DEOS IO modules.

## System monitoring via the DEOS BMS OPENweb

The existing building automation was converted entirely to **BACnet**. As a result, all data points from the remaining K&P system and the new DEOS installation are now visualised in a uniform, vendor-neutral manner via the **BACnet BMS OPENweb** from **DEOS AG**.



Übersichtsseite der Gebäudeleittechnik  
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## Remote access and error messages via DEOS Connect Box

The remote solution that is used consists of the **hardware box (DEOS Connect Box)** and the **Connect operating/admin portal**. This establishes a maximum-security IT remote connection to the MCR/TBE system. EMSR-Technik GmbH uses this connection for system optimisation and troubleshooting via remote access.

The building technicians, by contrast, use the same remote solution to uniformly operate all relevant system parts of the different manufacturers via the Connect Portal.

This remote solution saves travel costs and enables fast fault clearance of the system through remote access. The highlight: in tricky service cases, the building technician can simply call in the EMSR expert remotely. Together, the problem can be solved quickly and competently.

In the next step, the energy meters are connected to the DEOS IoT/cloud platform via M-Bus. The meter data reaches the Molline billing system via the API interface. Synergy effects and the lower costs argue in favour of using the already established DEOS infrastructure.

## Would you like more detailed information?

Please contact us directly!

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## Technology at a glance

- **DEOS BACnet controllers**  
OPEN.WRX as well as  
OPEN EMS 710/810,  
EMS 4000 and EMS 500/600
- **DEOS IO modules**  
Over 180 CAN bus modules newly  
installed in this system conversion
- **DEOS OPENweb BMS**  
DEOS BACnet BMS installed on site
- **DEOS Connect Box**  
For system maintenance and error  
messages
- **Kieback & Peter DDC controllers**  
The 4000 series DDC controllers,  
which were retained for economic  
reasons, are operated in parallel  
with the DEOS DDC controllers

