

CASE STUDY



Common bus network system

Design power distribution system with high reliability



01 High rise building utilizing ABB's 8,000 amp common bus network system

Customer
 One of the nation's largest investor-owned utilities needed to develop a power distribution system for a very large high-rise commercial building with a high demand for reliable electrical power.

Challenge
 To meet the building's demand for power, this utility's internal resources produced a common bus network system to serve as the connection point between the multiple transformers and all cabling. Common bus network system projects of this nature are not needed every day and maintaining that capability internally was cost prohibitive. In reviewing options, the utility asked Homac®, a brand of ABB, to consider taking over this effort, knowing that each project would be slightly different, based on the different needs and physical space available for each project.

Solution
 A team of ABB engineers affiliated with the Homac brand developed a custom system that linked the building's cabling needs to multiple, redundant commercial transformers. Planning began with a few critical design parameters:

- Safety — Maximum weight limit for handling and installation on each copper bus section
- Flexibility
 - Modular system design meets various project requirements and space constraints
 - Wall and ceiling bracket mount options
 - Common bus sections with in-line and 90-degree joints for efficient use of available space
- Capacity requirement — 8,000 amps

The 8,000 amp common bus network system was built in sections at the Homac plant in Ormond Beach, Florida, and shipped to the site for assembly. The bus system included brackets with phase-isolating insulation spacers and silver-plated copper coupling plates. The bus system came in at approximately 80 feet in length once installed on site.

Homac's new modular design concept will simplify the design-and-build process for new systems and system upgrades. It has already paved the way for a second project that will house a large casino.

The new custom common bus network system provides reliability, which will reduce the need for system maintenance going forward. It will also ease future upgrades.

For more information about ABB's Homac custom solutions, contact your ABB sales representative. For technical questions, call 1-888-862-3289.



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01 Network transformers feeding the common bus network system

02 8,000 amp common bus network system feeding the electrical needs of the building



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Additional products from ABB

Homac connectors

- With a complete line of network, underground and substation connectors, the Homac brand is an industry leader in providing products that integrate transformers with power distribution systems.

Homac substation connectors

- With weldment and bolted products up to 500 kV, the Homac brand's wide product offering includes a full line of couplers, taps, bus supports, terminals and expansion connectors.

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