

SOLUTION BRIEF

Medium voltage (MV) switchgear and control E-house

Meet AI-driven power demands with Flex's prefabricated MV solutions

KEY BENEFITS

- Reduce commissioning time up to 25% with prefabricated, pretested modules
- Lower capital expenses 10%-15% with standardized designs and factory integration
- Meet AI growth goals with flexible production schedules and modular designs
- Integrate seamlessly with custom solutions tailored to unique specifications

Demand for data center power is rising exponentially

AI-driven workloads are redefining data center power requirements. Traditional racks consuming ~30 kW now can exceed 100 kW, and hyperscale operators are exploring 1 MW configurations translating to multi-megawatts or even gigawatts of additional power infrastructure needed to fuel the demand. This surge in demand stresses grid interconnections and medium-voltage (MV) infrastructure. Delays in MV infrastructure deployment directly limit data center expansion, impacting competitiveness. Flex provides prefabricated, fully engineered MV switchgear and control E-houses designed for rapid deployment, scalability, and resilience, helping operators meet power demands with industry-leading timelines.

Parallel construction accelerates AI deployment

AI-driven data centers are pushing grid interconnections to their limits, with hyperscale requests reaching gigawatts of power. Interconnection queues often exceed 24 months, and traditional stick-built substations require sequential civil and electrical work, adding complexity and cost. AI workloads amplify this challenge, driving rack densities far beyond historical norms. Our prefabricated, factory-tested MV E-houses allow power systems to be built in parallel with site and utility upgrades, arriving as plug-and-play solutions that compress time to compute and reduce project risk. Parallel construction of power systems while civil works progress:

- Reduces on-site labor and commissioning via pre-integrated solution and FAT/SAT testing
- Simplifies project management with turnkey, engineered-to-spec solutions
- Accelerates power delivery to support high-density AI racks and rapid scaling



ABOUT FLEX

Flex delivers advanced manufacturing capabilities, innovative power solutions, and services that address the evolving demands of grid modernization, electrification, and renewable integration, accelerating utility infrastructure deployment worldwide.

Power the world
seamlessly with Flex,
your one-stop data
center power solution

Integrated MV E-houses reduce site work and speed energization

MV E-houses are engineered as turnkey solutions, integrating all essential power and control systems required for modern data centers. Each E-house is custom-engineered, factory-tested, and delivered turnkey to minimize on-site work and accelerate energization, with reliability supported by ISO 9001:2015 standards and multiphase inspection.

Flex MV E-Houses feature:

- Medium voltage switchgear with metal-clad and arc-resistant designs, supporting up to 38kVA, 4000 A operating current and 50 kA interrupting capacity
- Relay and control panels for protection, HMI, RTU, metering, and communications
- Substation controls and auxiliary systems, including AC/DC panelboards, battery banks, HVAC, cable management, and emergency power.

Vertically integrated solutions minimize delays

Flex's vertically integrated manufacturing and flexible production enables rapid response to evolving project requirements and timelines. By controlling every stage—from design to assembly and testing—resources are efficiently coordinated, delays minimized, and delivery adapted to customer needs. This integration streamlines procurement, reduces risk, and supports consistent quality across all components of the MV E-house solution.

Learn more:

[Crown MV Switchgear and E-House](#)
[Data Center Solutions](#)

For more information, visit [**flex.com/connect**](https://flex.com/connect)

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