

AN INDUSTRIAL CONTROL SYSTEM FOR THE SUPERVISION OF THE CERN ELECTRICAL DISTRIBUTION NETWORK

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CERN is operating a large distribution network for the supply of electricity to the particle accelerators, experiments and the associated infrastructure. The distribution network operates on voltage levels from 400V to 400KV with a total yearly consumption of near to 1000 GWh. In the past, the laboratory has developed an in-house control system for this electricity distribution network, using the technologies applied to the accelerator control system. CERN is now working on a project to purchase, configure and install a state-of-the-art industrial control system completely developed and supported by an external system provider. This control system, which is based on a scalable and distributed architecture, will allow for the installation to be performed gradually, and it will be tested and verified while the existing system is fully operational. Ultimately, the complete electrical distribution network will be supervised with this new industrial control system, for which the maintenance and further development will be under the complete responsibility of the system provider.