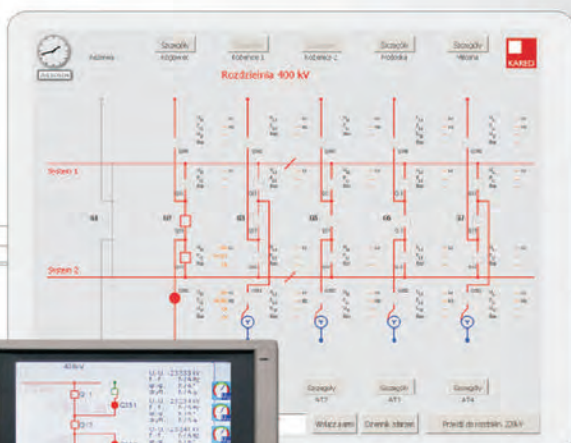




iKar-CSS – CENTRAL STATION SYNCHRONIZER



DESIGNED PURPOSE

The Central Station Synchronizer of the iKar-CSS type is an advisory instrument for an Operator of an electric power system, to be used in the process of making switching-related decisions. The essence and power of the offered solution consist in the fact that it provides the operator with information, whether the criteria of the synchronization process are met and does so before the switching sequence is even started. The information is supplemented with continuous visualization in real time of the current status of the switching station. The iKar-CSS system is prepared to simultaneously transfer data to multiple Operators present in a switching station or in remote supervisory centres that allow the facility, switching operations and the course of the synchronization process to be monitored, and to subsequently analyse the recorded phenomena.

BASIC FUNCTIONS OF THE iKar-CSS SYSTEM

- Visualization of the synchronization process, realized in real time (data refresh rate: 25 times per second) simultaneously on multiple operator's workstations in remote supervisory centres, such as KDM [National Power Distribution], ODM [Regional Power Distribution], CN [Supervisory Centre] and RCN [Regional Supervisory Centre], as well as locally, in the electric substation.
- On-line visualization of the current operation status of the switching station and/or the electric substation, which includes information concerning fulfilment of the criteria for each possible switching direction even before commencement of switching operations.
- Continuous acquisition of measurement data, data related to switching criteria and two-stage signals received from an electric power system, where network synchronizers of the SS-07 type are installed.
- Monitoring of correct operation of the supervised synchronizers in the context of the entire switching station and substation.
- Recording of synchronization process criterion values and events that are relevant for the assessment, whether the switching process is realized correctly.

ADVANTAGES OF THE iKar-CSS SYSTEM

- from the level of a single program that provides visualization functionality in KDM [National Power Distribution], ODM [Regional Power Distribution], RCN [Regional Supervisory Centre] or CN [Supervisory Centre] centres, we provide access to data acquired from any synchronizer, required for monitoring the synchronization process.
- Presentation in real time – data refresh rate: 25 times per second – of measurement data and values of criteria parameters of the synchronization process in the form of a virtual synchronization column.
- Mapping of current configurations of monitored switching stations on the circuit diagrams of the substation, realized through display of the position status of switches and cut-outs and display of voltage and frequency measurements at all points.
- Simultaneous operation of multiple operator's workstations, both remote and local, and of SS-07 synchronizers.
- Continuous supervision over proper operation of synchronizers, realized through the verification of measurements carried out in a multiple redundancy system at the level of both synchronizers and the iKar system.
- Maximized reliability and availability of the synchronization system, achieved through elimination of switching assemblies in measurement, inspection and control circuits.
- Modular construction that allows a defective element to be diagnosed fast and repaired without any need to switch off the entire circuit of the central synchronizer.
- Replaceability of system elements and openness of the system that allows the system to be gradually developed, as new needs arise.
- Ergonomic overview of the iKar-CSS system fitted with LCD touch panels.
- Automatic detection of potential irregularities in the operation of the iKar-CSS system.
- Reduced investment and service costs.