

IoT Lock in Power Grid Service Against Mis-operation and Maintenance in Proper Sequence

Management Requirement

The Power Grid switchgear rooms are secured by mechanical locks. The technicians should take a lot of keys to open different locks and doors, and keys are not easy to be well supervised.

---evox smart key system could open more than 60000 locks by different permission in real time.

Mechanical keys and locks cannot keep records who has operated the lock when the lock has been opened and where the lock is located.

---evox IoT lock offers tracking and location functions, someone has operated the lock keeping records who, when and where.

Power equipment should be maintained at regular intervals or in emergency cases, the basic requirement is to keep the maintainers safety and equipment at normal operation.

--evox elaborated management system operate with integrated work tickets and in-sequence lock system, this avoids mis-operation and allows maintenance in proper sequence.

The location of the power equipment is scattered in different locations within cite or countrysides. It is not easy to be supervised and display on the map.

---evox platform allows to show all equipment and switchgears on the map at computer or smartphone screen through our IoT lock system. All power grid assets are under control by the management platform.

Application Place



Switchgear and switchgear room



Distributor station



Sub-distributor station

System Composition



Server



Operator Mobile Phone

Permission Ticket



Event Audit

- One key can open 64000 locks
- Permission and Work Information as the core
- Set Permission by App



Padlock



- Wire-free & Maintenance Free Lock
- Different Lock Housing use the same plug
- Locks are suitable for different sites

Management Platform

Role	Area	Area Manager	ALL
Area Manager	Area	Area Manager	ALL
Area Operator	Area	Area Operator	ALL
Area User	Area	Area User	ALL
Area Admin	Area	Area Admin	ALL
Area Audit	Area	Area Audit	ALL
Area Ticket	Area	Area Ticket	ALL
Area Lock	Area	Area Lock	ALL
Area Key	Area	Area Key	ALL
Area Padlock	Area	Area Padlock	ALL
Area Station	Area	Area Station	ALL
Area Station A	Area	Area Station A	ALL
Area Station B	Area	Area Station B	ALL
Area Station C	Area	Area Station C	ALL
Area Station D	Area	Area Station D	ALL
Area Station E	Area	Area Station E	ALL
Area Station F	Area	Area Station F	ALL
Area Station G	Area	Area Station G	ALL
Area Station H	Area	Area Station H	ALL
Area Station I	Area	Area Station I	ALL
Area Station J	Area	Area Station J	ALL

Data Analysis

Role



App Layout



Map

- B/S structure software, visit the system according to permissions;
- Monitoring Software Platform; Real-time data shown to ensure system security;
- Lock Management; installation according to site latitude and longitude;
- Permission Management; set permission to locks by hours;
- Event Audit; lock records, electricity transfer, maintenance ticket, bulletin, photo inquiry;
- Open Interface: SDK provided;
- Ticket Management System: real time for ticket application.

- IOS App and Android App both existed;
- App connected with locks/keys by Bluetooth;
- App can prompt the lock location, latitude and longitude and other
- Push notifications to operator/maintainer;
- Real time feedback lock status and records.