Protective relays

Protective relays

Protective relays are devices that protect the power system components and devices from damage and short-circuiting by breaking the circuit and opening the power switches (such as CB). For the power switch to open, its operating coil (bobbin) must be energized. Relays do this feeding. A relay is a device that is stimulated by changing electrical quantities such as voltage and current or physical quantities such as temperature and oil displacement (in Buchholz relay) and causes other devices to operate and, as a result, break the circuit from the power switch.

Relay manufacturing technology

In terms of manufacturing technology, relays are divided into three types: electro-mechanical relays, static relays, and digital relays. Electromechanical relays are the oldest types that are limited in use and have been replaced by digital relays. Static devices are based on analog electronic devices and, therefore, cannot be programmed. In digital relays, the processor analyzes the error current and sends the appropriate command. These relays can be programmed and have several different performance characteristics. In these types of relays, several different functions that were performed using separate relays can be integrated into one relay. Of course, this can reduce the reliability of the protective system. However, the use of digital relays is currently the main protective option.

Application of protective relays

- Overcurrent protection
- Engine protection
- Transformer protection
- Capacitor bank protection
- Feeder protection
- Spark protection
- Earth error protection
- Voltage and frequency protection
- Reconnect relay
- Differential protective relays
- And so on

Having several years of experience in the field of the electricity industry, IRUS Energy Group has the honor of supplying, installing, and after-sales services of protective relays of all kinds of brands in the world, including Schneider, Siemens, ABB, and Hyundai brands.