

AUTOMATED REMOTELY CONTROLLED COMPONENTS ON MEDIUM-VOLTAGE LEVEL

Objective

To increase the operational controlling capability of the distribution grid thanks to higher penetration of remotely controlled components (DOP) and to reduce SAIDI and SAIFI indicators through the application of DOP including measurements and protective functions.

Description

Line switch (recloser) is useful when used in locations where the damaged section of the power grid must be immediately disconnected without compromising the distribution of electric power to other clients. Installation of two reclosers with gradual configuration of protection IEDs may be used, for example in the main line or on long lines. The benefit of using reclosers rather than remotely control switches is the ability to turn off fault current and to reconnect the network again. In certain cases this function will immediately restore supply of electric power. Remotely controlled switches may be used to disconnect nominal current, however, they are not designed to turn on fault currents.



Recloser on a high-voltage pole



Remotely controlled switch – detail

Evaluation

DOP installation speeds up the control of the distribution system in real time, reduces the number of clients affected by the fault, shortens the power supply interruption times, and allows utilization of other means of automation within the distribution system.