



Dialogue between two numerical distance protections ABB and siemens for the dispersed groups of productions connected in HVB network

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Abstract

In this article one considers a numerical distance protection based on the dialogue of two protections using the numerical technology of relay 7SA612 and REL316*4: Which constitutes a powerful means, in terms of speed and of selectivity, for the elimination of the lines and bars faults in connecting stations, it can also ensure a "distant" help under good conditions. This will make it possible to have two permanent protections of numerical distance to supervise the dispersed production connected through a HVB line.

Key words: *Dispersed production, Connection with the network HVB, Distance protection, Dialogue between two protections, Numerical distance relay of, SIPROTEC 7SA612, ABB REL316*4.*

1. Introduction

The distance protection is the type of protection generally used on networks HVB (High Voltage class B) of the aerial type (Labeled, 2006; Gurevish, 2006; Liu *et al.*, 2006). Requiring only local measurements (current and phase tension), and having a device of anti pumping (so as not to be sensitive to the situations of oscillations of power), it constitutes a powerful means in terms of speed and selectivity for the elimination of the lines and bars faults in connection stations. Its operating time is, in theory, compatible with times of elimination (time of

opening circuit breakers included) pertaining to intervals 250-500 ms (in 225 kV) and 250-850 ms (in 63-90 kV), which are usually necessary. Finally it can ensure a 'distant' help under good conditions. Current numerical technology enables them to have interesting complementary functions (not very active source, perturbography...)

2. The problematic of HVB network protection

The groups of decentralized production connected in HVB (networks 63 - 90 and 225 kV) take part, when they are started, in fending the faults affecting the connection