

7SG163 Ohmega 300 Series

7SG163 Protection Relay

Document Release History

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Contents

1 Sensitive Earth Fault (SEF).....	3
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1 Sensitive Earth Fault (SEF)

In power systems where the path to earth has a very high resistivity, the fault current flowing can be very low, sometimes lower than that required to operate most Protective relays.

The sensitive earth fault protection is therefore set with the lowest practical setting and a long time delay. For SEF protection, grading is carried out by time rather than by current. Two concurrent timers are available in the relay, the SEF alarm timer, and the SEF trip timer.

Once the SEF element operates, the SEF alarm timer is started. After the alarm time delay, if the SEF is still present, the relay will energise the SEF Alarm output. The SEF trip timer will then start. Once the SEF trip timer has expired the relay will energise the SEF trip output. This mode of operation ensures that the alarm time cannot be set shorter than the trip time in error. The logic is shown in figure 1 below.

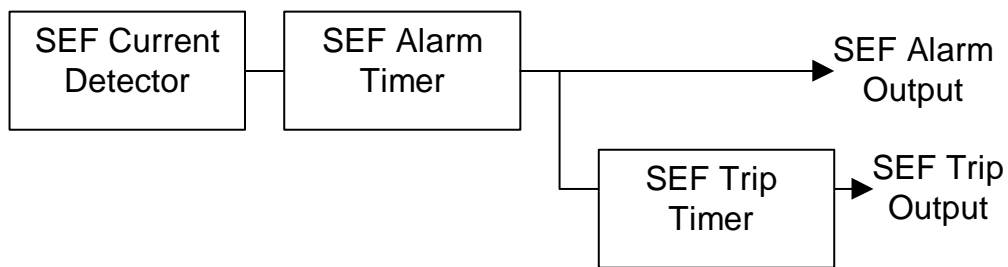


Figure 1. Logic Diagram for SEF Protection