



GENERATOR SET PROTECTION WHEN IN PARALLEL WITH A UTILITY SUPPLY

LOSS OF MAINS RELAY

When a generator is running in parallel with a utility supply a “Loss of Mains Relay” is mandatory to decouple the generator from the mains in the event of a utility supply failure.

If the generator is not decoupled from the utility supply by the tripping of the utility circuit breaker the generator will back feed into the utility network, overload and shutdown.

An undervoltage relay will not do the job, as the generator voltage will keep the relay energised when the mains voltage disappears.

The standard relay used for detecting Loss of Mains works on the principle of Rate of Change of Frequency and Phase Angle Change.

However, neither the frequency nor the phase angle will change when the utility circuit breaker trips if the utility supply is not supplying load at the time. To ensure reliable activation of the relay a small load is kept on the utility supply at all times.