

This paper present a study on different input data types of ANN used to detect faults such as overvoltage in AC systems (AC network , induction motor). The input data of ANN are AC voltage and current. In no fault condition, voltage and current are sinusoidal. The input data of the ANN may be the instantaneous values of voltage and current, their RMS values or their average values after been rectified. In this paper we presented different characteristics of each one of these data. A digital software C++ simulation program was developed and simulation results were presented