

ABSTRACT

A discharge detector 1 of the present invention includes: at least one filter section 21 electrically connected between two phases out of an R phase, an S phase, and a T phase of a power circuit of a three-phase alternating current and configured to extract a noise from the alternating current power source; an amplification section 22 configured to amplify an output of the filter section 21; a smoothing section 25 configured to smooth an output of the amplification section 22; a phase angle setting section 23 configured to set a starting point of noise measurement for each connection between the R phase - the S phase, between the S phase - the T phase, and between the T phase - the R phase; a phase division section 24 configured to define a plurality of domains by dividing one cycle of a voltage waveform or a current waveform of each connection between the R phase - the S phase, between the S phase - the T phase, and between the T phase - the R phase based on the starting point of noise measurement; and a determination section 26 configured to detect a noise included in an output of the smoothing section 25, configured to specify at least one domain coincident with a timing of detecting the noise out of the plurality of domains defined by the phase division section 24, and configured to specify which connection between the R phase - the S phase, between the S phase - the T phase, or between the T phase - the R phase is a source of the noise.