



\*162162\*

## Abstract

The phase current detection apparatus comprises an output time detection section 6a for receiving a voltage vector command as input, and for detecting a voltage vector which should be enlarged its output time, output time enlargement section 6b for receiving the voltage vector command and the voltage vector detected by the output time detection section 6a as input, and for carrying out enlargement processing for output time (enlarge the output time up to a length allowing the current detector 5 to detect the voltage vector), subtraction section 6c for subtracting the length of actually output voltage vector from the voltage vector command, and for outputting an error, output error integrating section 6d for integrating the error from the subtraction section 6c and for calculating an integrated error of an output with respect to the voltage vector command, reverse vector generation section 6e for outputting a vector (reverse vector) which is obtained by replacing the ON/OFF in Table 1 for the enlarged voltage vector, and selection section 6f for carrying out the replacing operation depending upon the sign of the integrated error from the output error integrating section 6d so as to select the output from the output time enlargement section 6b and the output from the reverse vector generation section 6e. Therefore, decrease in cost, detection of a phase current with stability at a desired timing, and great decrease in distortion in voltage waveform are realized.

\*G00002\*

