

MOTOR DRIVING APPARATUS**ABSTRACT**

A motor driving apparatus enabling direct pulse width modulation driving (direct PWM driving) in a so-called sensorless motor. The motor driving apparatus includes a comparison unit for comparing back-electromotive voltages appearing in respective phases of a multi-motor, a pulse width modulating unit for outputting pulse width modulated signals for rotationally driving the motor based upon a rotational error signal of the motor, a minimum pulse width detection unit for detecting the minimum pulse width position of the pulse width modulated signal from the pulse width modulation means, a sample-holding unit for sample-holding comparison outputs of the comparison means at a timing of detection of the minimum pulse width of the pulse width modulated signal from the minimum pulse width detection unit, and a motor driving unit for rotationally driving the motor based upon each sample-and-hold output from the sample-and hold unit.

FIGURE 7