
Heat management system 101
Heating instruction
Electric vehicle electronic control unit 102
Adjust phase
Electric motor 103

FIG. 1

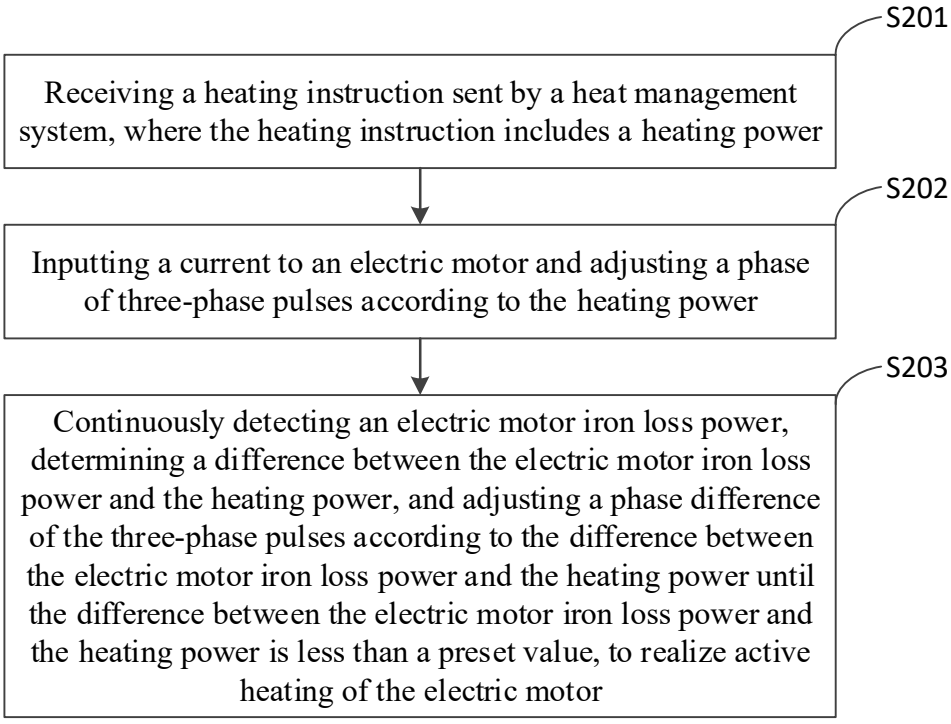

S201
Receiving a heating instruction sent by a heat management system, where the heating instruction includes a heating power
S202
Inputting a current to an electric motor and adjusting a phase of three-phase pulses according to the heating power
S203
Continuously detecting an electric motor iron loss power, determining a difference between the electric motor iron loss power and the heating power, and adjusting a phase difference of the three-phase pulses according to the difference between the electric motor iron loss power and the heating power until the difference between the electric motor iron loss power and the heating power is less than a preset value, to realize active heating of the electric motor

FIG. 2

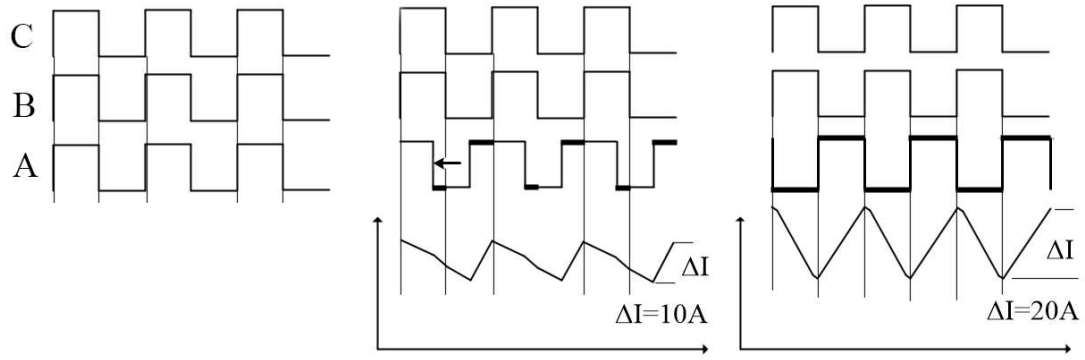

C
B
A
ΔI
ΔI=10A
ΔI
ΔI=20A

FIG. 3

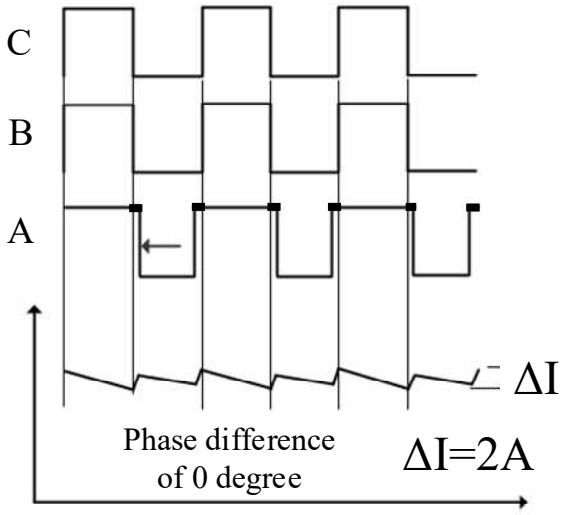

C
B
A
ΔI
Phase difference
of 0 degree
ΔI=2A

FIG. 4

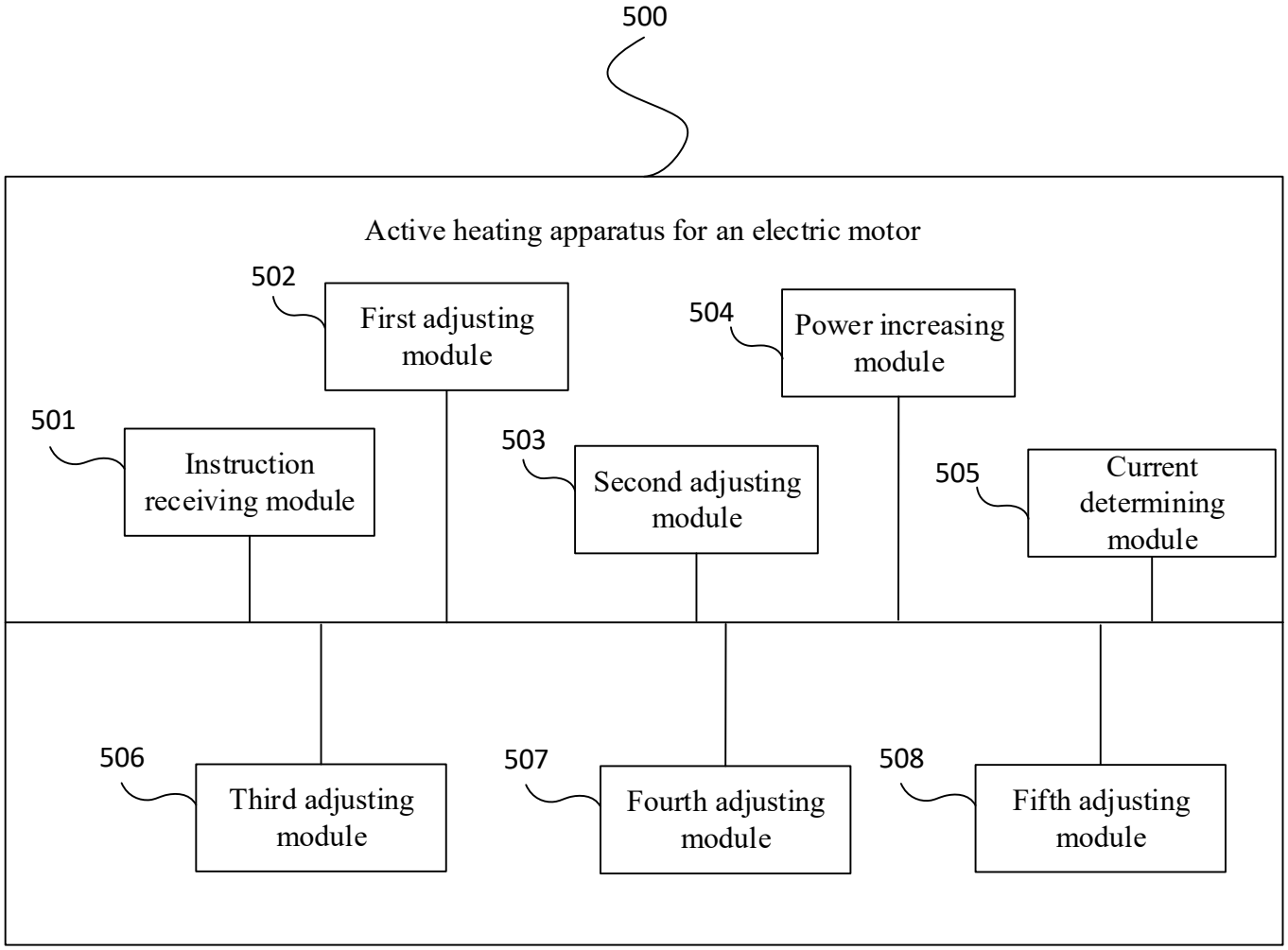

500
Active heating apparatus for an electric motor
502
First adjusting module
504
Power increasing module
501
Instruction receiving module
503
Second adjusting module
505
Current determining module
506
Third adjusting module
507
Fourth adjusting module
508
Fifth adjusting module

FIG. 5

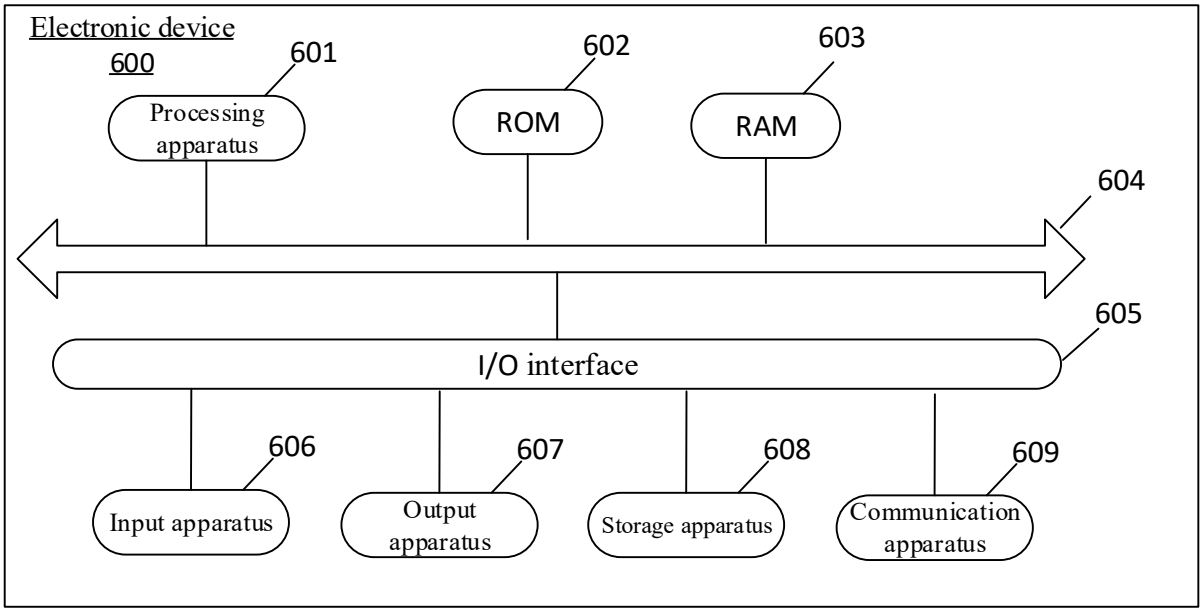

Electronic device
600
601
Processing apparatus
602
ROM
603
RAM
604
605
I/O interface
606
Input apparatus
607
Output apparatus
608
Storage apparatus
609
Communication apparatus

FIG. 6