

Title (en)  
CONTROL DEVICE FOR STEPPING MOTOR

Publication  
**EP 0057663 B1 19910508 (FR)**

Application  
**EP 82810023 A 19820121**

Priority  
CH 72581 A 19810204

Abstract (en)  
[origin: US4439717A] A control device for a stepping motor provided with a coil and a rotor performing a rotary movement when a current passes through the coil, comprising means for producing a plurality of time base signals, means for producing pulses for controlling the motor in response to said time base signals, means responsive to the control pulses for supplying the motor while maintaining the current in the coil at a substantially constant and given value. The device also comprises means for analyzing the voltage signal present on the coil or a signal which is representative thereof, and for supplying data concerning the voltage induced in the coil by the rotor movement. The motor supply means may include switching means for connecting the coil to a supply voltage source and for short-circuiting the coil, and means for periodically comparing the coil current to a reference value, during each control pulse, and supplying a control signal for controlling the switching means to short-circuit the coil when a comparison indicates the current exceeds the reference value, and to apply voltage to the coil in the opposite case, until the following comparison operation. This maintains the mean value of the current at a reference value during the control pulses to provide a high-efficiency power supply system. At the coil terminals logic information is derived concerning the induced voltage which can be easily analyzed and used by logic circuits.

IPC 1-7  
**G04C 3/14**

IPC 8 full level  
**H02P 8/02** (2006.01); **G04C 3/14** (2006.01); **H02P 8/12** (2006.01)

CPC (source: EP US)  
**G04C 3/143** (2013.01 - EP US)

Citation (examination)  
• EP 0021320 A1 19810107 - SUISSE HORLOGERIE [CH]  
• EP 0022270 A1 19810114 - SUISSE HORLOGERIE [CH]

Cited by  
EP0135104A1; EP0341582A1; US5028857A; EP0140089A1; CH653206GA3; EP0171635A1; CH656776GA3; EP0484770A1; FR2668866A1; US5280226A; EP0241403B1

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