Title (en)

ELECTROMAGNETIC OPERATING DEVICE

Title (de)

ELEKTROMAGNETISCHE BETRIEBSEINRICHTUNG

Title (fr)

DISPOSITIF A FONCTIONNEMENT ELECTROMAGNETIQUE

Publication

EP 1343180 B1 20110720 (EN)

Application

EP 00974984 A 20001114

Priority

JP 0008021 W 20001114

Abstract (en)

[origin: EP1343180A1] Disclosed is a solenoid type electromagnetic operating device which needs a relatively large current only for a limited short period at an excitation start initial stage and is adapted to achieve the speeding up at an excitation start stage and an improvement in responsiveness as well as power saving without increasing a power load on each of a drive circuit and power supply. The device is used for exerting a mechanical output on a valve element against a spring force, and comprises a solenoid coil composed of a plurality of split coils mutually electrically independent, an iron core structure including a fixed core, a movable core and a yoke and assembled with the solenoid coil so as to form a magnetic path loop through which magnetic fluxes from the split coils pass in common, an excitation controller for selectively switching/controlling the excitation current to each split coil, and a transmission mechanism for transmitting the mechanical output based on the displacement of the movable core magnetically attracted to the fixed core to the valve element when one or more of the split coils are excited. <IMAGE>

IPC 8 full level

H01F 7/16 (2006.01); **H01F 7/13** (2006.01); **H01F 7/18** (2006.01)

CPC (source: EP KR US)

H01F 7/06 (2013.01 - KR); **H01F 7/13** (2013.01 - EP); **H01F 7/1607** (2013.01 - EP US); **H01F 7/1827** (2013.01 - EP); **H01F 7/1833** (2013.01 - EP); Y10T 137/8242 (2015.04 - US)

Cited by

JP2017135180A; CN112562962A; EP2264723A1; US7271692B2; US8427268B2; WO2008022794A1; WO2005034160A1; WO2012002801A1

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