

Title (en)

APPARATUS AND METHOD FOR SUPPLYING POWER TO A VOLTAGE- OR CURRENT-RELEASING SWITCHING DEVICE

Title (de)

VORRICHTUNG UND VERFAHREN ZUR SPANNUNGSVERSORGUNG EINES SPANNUNGS- ODER STROMAUSLÖSENDEN SCHALTGERÄTS

Title (fr)

DISPOSITIF ET PROCÉDÉ D'ALIMENTATION ÉLECTRIQUE D'UN COMMUTATEUR À DÉCLENCHEMENT DE TENSION OU D'INTENSITÉ

Publication

**EP 2193534 A1 20100609 (DE)**

Application

**EP 08801657 A 20080821**

Priority

- EP 2008006881 W 20080821
- DE 102007046634 A 20070927

Abstract (en)

[origin: WO2009043412A1] In order to be able to dispense with an expensive switched-mode power supply for supplying power primarily to a control unit of a voltage- or current-releasing switching device with a coil for operating the voltage or current release, the invention proposes an apparatus (1) for supplying power to the voltage- or current-releasing switching device with a first supply voltage (U1), the value of which is determined by a predefinable comparison value, a rectifier diode (11) and also a storage capacitor (12) for providing a DC voltage and a voltage regulation device (13) for providing at least one further supply voltage (U2), which apparatus is provided with a device (7) for pulse-width modulation for maintaining a pull-in current and/or a holding current of the coil (6) which operates the voltage or current release, and the coil (6) serves as an impedance of the apparatus (1) which acts as a power supply, wherein power is regulated without a measurement resistor. In a method for supplying power to a voltage- or current-releasing switching device of this type with at least one voltage or current release with at least one coil (6), wherein a first supply voltage (U1) is determined by comparison with a predefinable comparison value and at least one further supply voltage (U2) is set by a voltage regulation device (13), the coil (6) is used as an impedance of a power supply apparatus (1) which acts as a power supply and the current flowing through the coil (6) is used to build up the supply voltage of the switching device and is maintained over the range of the supply input voltage (U) by pulse-width modulation.

IPC 8 full level

**H01H 47/32** (2006.01); **H01H 1/06** (2006.01)

CPC (source: EP US)

**H01H 47/325** (2013.01 - EP US)

Citation (search report)

See references of WO 2009043412A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

**WO 2009043412 A1 20090409**; BR PI0817246 A2 20150616; CA 2700275 A1 20090409; CA 2700275 C 20140603; CN 101849273 A 20100929; CN 101849273 B 20140924; DE 102007046634 B3 20090528; EP 2193534 A1 20100609; JP 2010541523 A 20101224; US 2011038092 A1 20110217; US 8498090 B2 20130730

DOCDB simple family (application)

**EP 2008006881 W 20080821**; BR PI0817246 A 20080821; CA 2700275 A 20080821; CN 200880108864 A 20080821; DE 102007046634 A 20070927; EP 08801657 A 20080821; JP 2010526177 A 20080821; US 67812108 A 20080821