

Title (en)

Method and apparatus for reducing the noise of electromagnetically operated devices

Title (de)

Verfahren und Vorrichtung zum Vermindern der Geräuschentwicklung bei elektromagnetisch betätigten Vorrichtungen

Title (fr)

Procédé et appareil de réduction du bruit des dispositifs à commande électro-magnétique

Publication

EP 1014395 B1 20060412 (DE)

Application

EP 99123805 A 19991201

Priority

DE 19860272 A 19981224

Abstract (en)

[origin: EP1014395A2] The noise prevention method has the gradient of the current characteristic of the operating current supplied to the electromagnet (3) controlled so that the current rises rapidly from a minimum value before the transition function and rises rapidly to a maximum value after the transition function, with a lower current gradient over the transition function. An Independent claim for an operating noise prevention device is also included.

IPC 8 full level

H01F 7/18 (2006.01); **F01L 9/20** (2021.01)

CPC (source: EP US)

F01L 9/20 (2021.01 - EP US); **H01F 7/18** (2013.01 - EP US); **F01L 2201/00** (2013.01 - EP US); **H01F 2007/1894** (2013.01 - EP US)

Cited by

CN103153731A; US9043109B2; WO2012052206A1; WO2007141294A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 1014395 A2 20000628; **EP 1014395 A3 20011114**; **EP 1014395 B1 20060412**; DE 19860272 A1 20000706; DE 19860272 B4 20050310; DE 59913326 D1 20060524; US 6560088 B1 20030506

DOCDB simple family (application)

EP 99123805 A 19991201; DE 19860272 A 19981224; DE 59913326 T 19991201; US 47270799 A 19991224