

Title (en)

PIEZOELECTRIC ACTUATOR TYPE CONTROL DEVICE FOR CAPACITIVE LOADS

Title (de)

PIEZOELEKTRISCHER AKTUATORSTEUERUNGSVORRICHTUNG FÜR KAPAZITIVE LASTEN

Title (fr)

DISPOSITIF DE COMMANDE POUR CHARGES CAPACITIVES DE TYPE ACTIONNEURS PIÉZOÉLECTRIQUES

Publication

EP 3556006 A1 20191023 (FR)

Application

EP 17822413 A 20171213

Priority

- FR 1662550 A 20161215
- FR 2017053554 W 20171213

Abstract (en)

[origin: WO2018109387A1] The invention concerns a piezoelectric actuator control device comprising a first voltage converter (20) supplying a DC voltage on a DC power supply bus (40) to which is connected a second voltage converter (10) capable of generating a variable excitation voltage under the control of a control computer (50), said second voltage converter comprising two switch half-bridges (11, 12) mounted in parallel with the terminals of a bus capacitor (Cdc), the control computer being suitable for controlling the two switch half-bridges according to a first control configuration, in which they are controlled independently in order to each supply a voltage in a range between zero and a maximum positive value (Umax) and according to a second control configuration, in which they are jointly controlled as a full-bridge for supplying a voltage between a minimum negative value and said maximum positive value.

IPC 8 full level

H02N 2/06 (2006.01); **H10N 30/80** (2023.01); **H02M 7/5387** (2007.01); **H02M 11/00** (2006.01)

CPC (source: EP US)

H02M 7/5387 (2013.01 - EP US); **H02M 11/00** (2013.01 - EP US); **H02N 2/065** (2013.01 - EP US); **H10N 30/802** (2023.02 - EP US)

Citation (examination)

- LOK MARIO ET AL: "A power electronics unit to drive piezoelectric actuators for flying microrobots", 2015 IEEE CUSTOM INTEGRATED CIRCUITS CONFERENCE (CICC), IEEE, 28 September 2015 (2015-09-28), pages 1 - 4, XP032816958, DOI: 10.1109/CICC.2015.7338392
- PIEZO ACTUATOR DRIVER: "- Dual Half-Bridge Piezoelectric Driver with Step-up DC-DC Converter FAN8841 Dual Half-Bridge Piezoelectric Driver with Step-up DC-DC Converter Features Step-up DC-DC Converter ? Integrated Step-up Power Switch up to 36 V ? Wide Operating Voltage Range of 2.7 to 5.5 V ? Adjustable Step-up Output Vol", 1 January 2015 (2015-01-01), XP055392135, Retrieved from the Internet <URL:http://www.mouser.com/ds/2/149/FAN8841-737810.pdf> [retrieved on 20170719]
- See also references of WO 2018109387A1

Designated contracting state (EPC)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

FR 2017053554 W 20171213; CA 3046902 A 20171213; EP 17822413 A 20171213; FR 1662550 A 20161215; US 201716470363 A 20171213