

Title (en)

Power driver and fail safe circuit for a gas valve

Title (de)

Leistungstreiber und ausfallsicherer Schaltkreis für ein Gasventil

Title (fr)

Circuit d'attaque électrique et circuit sécurisé intégré pour soupape de gaz

Publication

EP 2387046 A1 20111116 (EN)

Application

EP 10004949 A 20100511

Priority

EP 10004949 A 20100511

Abstract (en)

Power driver and fail safe circuit (10) for a gas valve in order to open or close the gas valve, comprising: input contacts (11, 12) to which a power source providing a defined DC input power is connectable; an inductance coil (16), a transistor (17) and a resistor (18) being connected in series in such a way that said inductance coil (16) is connected to the drain (19) and said resistor (18) is connected to the source (20) of the transistor; an input capacitor (27) being connected in parallel to the series connection of said inductance coil (16), said transistor (17) and said resistor (18); an output capacitor (28) being connected between output contacts (13, 14) to which a coil (15) of the gas valve is connectable; a first diode (29) being connected in series to the parallel connection of the output capacitor (28) and the coil (15) of the gas valve, wherein said series connection is connected in parallel to said inductance coil (16); a micro controller (30) and a peak current detector (31) both being connected to the gate (32) of said transistor so that the transistor can be turned on into a current conducting mode by a signal provided by the micro controller (30) and that the transistor can be turned off into a current blocking mode by a signal provided by the peak current detector (31).

IPC 8 full level

H01F 7/18 (2006.01); **F23N 5/24** (2006.01); **H01H 47/00** (2006.01)

CPC (source: EP)

F23N 5/242 (2013.01); **H01F 7/1844** (2013.01); **F23K 2900/05001** (2013.01); **F23N 2231/00** (2020.01); **F23N 2231/04** (2020.01); **F23N 2235/12** (2020.01); **H01H 47/002** (2013.01)

Citation (search report)

- [X] US 2005218838 A1 20051006 - LYS IHOR A [US]
- [A] US 4831313 A 19890516 - BEILFUSS ROBERT C [US]
- [A] US 6256185 B1 20010703 - MALLER DENNIS A [US]
- [A] US 3943386 A 19760309 - SIMEAU BERNARD JULES ALEXANDRE
- [A] EP 1868214 A1 20071219 - DELPHI TECH INC [US]

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 SE SI SK SM TR

Designated extension state (EPC)

BA ME RS

DOCDB simple family (publication)

EP 2387046 A1 20111116; EP 2387046 B1 20150121

DOCDB simple family (application)

EP 10004949 A 20100511