

Title (en)

FUEL INJECTOR WITH VALVE POSITION DETECTION CIRCUIT

Title (de)

KRAFTSTOFFINJEKTOR MIT VENTILPOSITIONDETEKTIONSSCHALTUNG

Title (fr)

INJECTEUR DE CARBURANT AVEC CIRCUIT DE DÉTECTION DE POSITION DE SOUPAPE

Publication

EP 3521607 A1 20190807 (EN)

Application

EP 19153633 A 20190124

Priority

GB 201801593 A 20180131

Abstract (en)

A fuel injector for an internal combustion engine comprises a nozzle (12) with a body (16) and a needle (14), a control chamber (52) and a control valve (20). A detection circuit (64) is provided for detecting the position of both the needle (14) and the valve member (28) of the control valve (20), the detection circuit including first and second circuit branches (64.1, 64.2), both connected at one end to a common detection voltage terminal (66). The first circuit branch (64.1) includes a first electric link associated with the needle (14) and configured so that the needle forms a first switch member that closes the first circuit branch when the needle rests on its seat (42), the first circuit branch having a first predetermined resistance value (R). The second circuit branch (64.2) includes a second electric link associated with the control valve (20) and configured so that the valve member (28) forms a second switch member that closes the second circuit branch when said valve member rests on its seat (26), the second circuit branch having a predetermined resistance value (R) different from that of the first circuit branch.

IPC 8 full level

F02M 47/02 (2006.01); **F02D 41/20** (2006.01); **F02M 51/00** (2006.01); **F02M 65/00** (2006.01)

CPC (source: EP GB)

F02D 41/20 (2013.01 - EP); **F02M 47/027** (2013.01 - EP); **F02M 51/005** (2013.01 - EP GB); **F02M 65/005** (2013.01 - EP GB); **F02D 41/40** (2013.01 - GB); **F02D 2041/2055** (2013.01 - EP); **F02M 2200/245** (2013.01 - GB)

Citation (search report)

- [X] KR 20160083875 A 20160712 - DELPHI INT OPERATIONS LUXEMBOURG SARL [LU]
- [A] WO 2017167627 A1 20171005 - DELPHI INT OPERATIONS LUXEMBOURG SARL [LU]
- [A] WO 2004097210 A1 20041111 - SIEMENS AG [DE], et al

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)

EP 19153633 A 20190124; GB 201801593 A 20180131