

Title (en)

CIRCUIT CONFIGURATION FOR THE STARTER OF AN AUTOMOTIVE INTERNAL COMBUSTION ENGINE

Title (de)

SCHALTUNGSANORDNUNG FÜR EINEN STARTER EINES KRAFTFAHRZEUG-VERBRENNUNGSMOTORS

Title (fr)

CIRCUIT DESTINE AU DEMARREUR D'UN MOTEUR A COMBUSTION INTERNE D'UN VEHICULE

Publication

**EP 1169569 B1 20050420 (DE)**

Application

**EP 01911355 A 20010117**

Priority

- DE 0100173 W 20010117
- DE 10005778 A 20000210

Abstract (en)

[origin: WO0159294A1] The invention relates to a circuit configuration for the starter of an automotive internal combustion engine, said circuit configuration allowing the starter relay (4) to remain activated in the event of a short-term voltage dip (undervoltage of the battery). An integrated circuit memory (2) with a interlocking circuit (1) is interposed between a computer (19) and an output stage (3) that controls the starter relay (2). Upon undervoltage of the battery (20), said integrated circuit memory (2) maintains the status at a control input STEN during the voltage dip. A computer (19) that has gone back to a reset mode during the voltage dip is reactivated after termination of the voltage dip and controls the interlocking circuit (1) in such a manner that the starter relay (4) is continued to be controlled via the control input STEN. The integrated circuit memory is provided with an RC element in order to maintain a defined initial status of the flip-flop (14, 15) when the battery is re-connected.

IPC 1-7

**F02N 11/08**

IPC 8 full level

**F02D 45/00** (2006.01); **F02N 11/08** (2006.01)

CPC (source: EP US)

**F02N 11/087** (2013.01 - EP US); **F02N 11/0862** (2013.01 - EP US); **F02N 2250/02** (2013.01 - EP US)

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

**WO 0159294 A1 20010816**; DE 10005778 A1 20010816; DE 50105936 D1 20050525; EP 1169569 A1 20020109; EP 1169569 B1 20050420; JP 2003522883 A 20030729; US 2002183918 A1 20021205; US 6795766 B2 20040921

DOCDB simple family (application)

**DE 0100173 W 20010117**; DE 10005778 A 20000210; DE 50105936 T 20010117; EP 01911355 A 20010117; JP 2001558605 A 20010117; US 93789401 A 20011002