

Title (en)
Starter having delay circuit

Title (de)
Anlasser mit Verzögerungsschaltung

Title (fr)
Démarreur doté d'un circuit de retard

Publication
EP 2128426 B1 20150513 (EN)

Application
EP 09007110 A 20090527

Priority
JP 2008140580 A 20080529

Abstract (en)
[origin: EP2128426A2] A starter includes an electromagnetic switch that opens and closes a main contact point provided on a motor circuit, a current suppressing resistor that is connected to the motor circuit in series with the main contact point, a short-circuit relay that is provided to allow short-circuiting of the current suppressing resistor, a timer circuit that delays operation of the short-circuit relay, and the like. The timer circuit sets a delay time from when the electromagnetic switch is energized until the short-circuit relay is energized. The delay time is set such that a maximum value of the current flowing to the motor when the short-circuit relay is energized is equal to or less than a maximum current value of current flowing to the motor when the electromagnetic switch is energized.

IPC 8 full level
F02N 11/08 (2006.01); **G05B 19/042** (2006.01); **H02P 1/20** (2006.01)

CPC (source: EP)
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Cited by
CN104847559A; CN103069154A; CN103348123A; FR2957386A1; CN102192068A; CN102828878A; CN104812656A; EP2918478A4; CN107479488A; CN102640251A; EP2472546A4; CN104319185A; WO2013014356A2; WO2013132173A1; US8487573B2; WO2012076777A1; WO2012076302A2; DE102015213218B4; US8513825B2; WO2011064013A3; WO2012104169A3; WO2015001246A2; US10132285B2; WO2013014352A1; EP2579282A1; EP2578869A1; US9562508B2; US9657704B2; WO2012025298A1; WO2012076302A3

Designated contracting state (EPC)
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EP 2128426 A2 20091202; **EP 2128426 A3 20120307**; **EP 2128426 B1 20150513**; **EP 2128426 B8 20150708**; JP 2009287459 A 20091210; JP 5136214 B2 20130206

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