

Title (en)  
SOLENOID SWITCH FOR STARTERS

Title (de)  
EINRÜCKRELAIS FÜR STARTER

Title (fr)  
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Publication  
**EP 0953200 B1 20060524 (DE)**

Application  
**EP 98958193 A 19981009**

Priority  
• DE 9802986 W 19981009  
• DE 19750889 A 19971118  
• DE 19814504 A 19980401

Abstract (en)  
[origin: US6360707B1] An engagement relay for starters of internal combustion engines as proposed, with which a starter pinion is first shifted into the gear ring of the engine and then the starter motor is turned on. For gently rotating the starter pinion into the gear ring by means of the starter motor, it is proposed that the switch of the engagement relay be embodied as a switchover contact 54, which in the position of repose switches the starter motor via a resistor 39 and in the working position switches it directly to the electrical supply (plus 30), and then the resistor (3) is turned off.

IPC 8 full level  
**F02N 11/08** (2006.01); **H01H 51/06** (2006.01); **H01H 50/04** (2006.01)

CPC (source: EP US)  
**F02N 11/087** (2013.01 - EP US); **F02N 15/067** (2013.01 - EP US); **H01H 51/065** (2013.01 - EP US); **F02N 11/0851** (2013.01 - EP US); **F02N 2300/102** (2013.01 - EP US); **H01H 50/543** (2013.01 - EP US)

Cited by  
DE102008002114A1

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**US 6360707 B1 20020326**; CN 1139090 C 20040218; CN 1243598 A 20000202; DE 59813555 D1 20060629; EP 0953200 A1 19991103; EP 0953200 B1 20060524; JP 2001508855 A 20010703; JP 3998730 B2 20071031; WO 9926266 A1 19990527

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**US 34135599 A 19990709**; CN 98801862 A 19981009; DE 59813555 T 19981009; DE 9802986 W 19981009; EP 98958193 A 19981009; JP 52730299 A 19981009