

Title (en)
PIEZO-ACTUATOR FOR ACTUATING A MECHANICAL COMPONENT

Title (de)
PIEZOAKTOR ZUR BETÄTIGUNG EINES MECHANISCHEN BAUTEILS

Title (fr)
PIEZO-ACTEUR POUR ACTIONNER UN ELEMENT MECANIQUE

Publication
EP 1110251 A1 20010627 (DE)

Application
EP 00949081 A 20000610

Priority
• DE 0001915 W 20000610
• DE 19928186 A 19990619

Abstract (en)
[origin: DE19928186A1] The invention relates to a piezo-actuator for actuating a mechanical component, especially provided for an injector which serves to measure the quantity of fuel in an internal combustion engine. The inventive piezo-actuator comprises a housing (3) in which a piezo-element (2) is mounted in a manner that permits it to be axially displaced. The piezo-actuator is also provided with at least one spring element (10, 11; 17), preferably an undulated spring, which is pretensioned by traction. A clamping system (8; 18) which mechanically connects a pressure pin (5), said pin being joined to the piezo-element (2), to the spring element (10, 11; 17) enables an actuation of the piezo-actuator (1) to induce an axial extension of the piezo-element (2) and thus an axial displacement of the pressure pin (5) against the force of the spring element (10, 11; 17).

IPC 1-7
H01L 41/053; **H01L 41/083**; **F02M 59/46**

IPC 8 full level
F02M 51/00 (2006.01); **F02M 51/06** (2006.01); **F02M 59/46** (2006.01); **F02M 61/16** (2006.01); **F03G 7/00** (2006.01); **H02N 2/04** (2006.01); **H10N 30/50** (2023.01); **H10N 30/88** (2023.01)

CPC (source: EP KR)
H10N 30/00 (2023.02 - KR); **H10N 30/50** (2023.02 - EP); **H10N 30/886** (2023.02 - EP); **F02M 47/027** (2013.01 - EP); **F02M 63/0026** (2013.01 - EP)

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
DE 19928186 A1 20010104; **DE 19928186 B4 20050804**; CZ 2001577 A3 20011114; EP 1110251 A1 20010627; JP 2003502565 A 20030121; KR 20010072696 A 20010731; WO 0079609 A1 20001228

DOCDB simple family (application)
DE 19928186 A 19990619; CZ 2001577 A 20000610; DE 0001915 W 20000610; EP 00949081 A 20000610; JP 2001505074 A 20000610; KR 20017001995 A 20010216