

Title (en)  
SWITCHING ELEMENT PRODUCED IN THE FORM OF A FILM

Title (de)  
SCHALTELEMENT IN FOLIENBAUWEISE

Title (fr)  
ELEMENT DE COMMUTATION SOUS FORME DE FEUILLE

Publication  
**EP 1050057 A1 20001108 (DE)**

Application  
**EP 99906147 A 19990118**

Priority  
• EP 9900260 W 19990118  
• LU 90200 A 19980121

Abstract (en)  
[origin: WO9938179A1] The invention relates to a switching element produced in the form of a film having a tripping layer which is made of a first resistance material and which is deposited on a first support film. The switching element also has a sensor layer which is made of a second resistance material and which is deposited on a second support film. Both support films are arranged at a certain distance from one another by spacers such that the tripping layer and the sensor layer are opposite and do not contact one another when the switching element is not actuated. When the switching element is tripped, the tripping layer and the sensor layer first contact one another at a first point of the surfaces thereof, and the contact surface is enlarged when pressure on the switching element is increased. The first and second resistance materials are matched to one another such that the resistance of the limiting layer is essentially set between the tripping layer and the sensor layer during contact of the tripping layer and of the sensor layer by expanding the contact surface. According to the invention, the sensor layer is formed such that the specific electrical resistance, starting from the first point, varies in a direction of the increasing contact surface with the distance from the first point so that a predetermined tripping behavior of the switching element results according to the pressure force acting on the switching element.

IPC 1-7  
**H01H 13/70**

IPC 8 full level  
**H01C 10/12** (2006.01); **H01H 13/00** (2006.01); **H01H 13/702** (2006.01)

CPC (source: EP US)  
**H01C 10/12** (2013.01 - EP US); **H01H 13/702** (2013.01 - EP US); **H01H 2239/078** (2013.01 - EP US)

Citation (search report)  
See references of WO 9938179A1

Cited by  
US6964205B2; US7362225B2; US8115648B2

Designated contracting state (EPC)  
DE ES FR GB IT SE

DOCDB simple family (publication)  
**WO 9938179 A1 19990729**; DE 59900979 D1 20020418; EP 1050057 A1 20001108; EP 1050057 B1 20020313; ES 2172305 T3 20020916; JP 2002502082 A 20020122; LU 90200 B1 19990722; US 6289747 B1 20010918; US 6429668 B1 20020806

DOCDB simple family (application)  
**EP 9900260 W 19990118**; DE 59900979 T 19990118; EP 99906147 A 19990118; ES 99906147 T 19990118; JP 2000528988 A 19990118; LU 90200 A 19980121; US 62413700 A 20000721; US 62917800 A 20000731