

Title (en)  
DEVICE FOR DETECTING CONTACT WEAR IN SWITCHING APPLIANCES

Title (de)  
VORRICHTUNG ZUM ERFASSEN VON KONTAKTABBRAND IN SCHALTGERÄTEN

Title (fr)  
DISPOSITIF POUR DETECTER L'USURE DE CONTACTS DANS DES APPAREILS DE COMMUTATION

Publication  
**EP 1678729 A1 20060712 (DE)**

Application  
**EP 04786837 A 20040917**

Priority  
• DE 2004002121 W 20040917  
• DE 10345183 A 20030929

Abstract (en)  
[origin: WO2005031774A1] The invention concerns a device for detecting wear of switching contacts (K1,K1') in an electric switch appliance (S), the wear of the contacts being caused at least at a pair of switching contacts appliances (K1,K1') which open and close in the switching appliance (S). The inventive device comprises a lightwave guide (LWL) and a detector (D), a light exiting from at least one light source (Q) being capable of being injected into the lightwave guide (LWL) and guided by said lightwave guide (LWL) up to the detector (D). The lightwave guide (LWL) is arranged relative to the pair(s) of switching contacts (K1,K1'), such that the intensity of the light injected in the lightwave guide (LWL), which is measured by the detector, decreases in the switching appliance (S) as the number of wear particles of contacts generated by the wear of the contacts increases.

IPC 1-7  
**H01H 1/00**

IPC 8 full level  
**H01H 1/00** (2006.01); **H01H 9/50** (2006.01); **H01H 33/26** (2006.01)

CPC (source: EP US)  
**H01H 1/0015** (2013.01 - EP US); **H01H 9/50** (2013.01 - EP US); **H01H 33/26** (2013.01 - EP US); **H01H 2001/0026** (2013.01 - EP US)

Citation (search report)  
See references of WO 2005031774A1

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**WO 2005031774 A1 20050407**; CN 100477043 C 20090408; CN 1860570 A 20061108; DE 10345183 A1 20050428; DE 10345183 B4 20051013; DE 502004004315 D1 20070823; EP 1678729 A1 20060712; EP 1678729 B1 20070711; HK 1095201 A1 20070427; RU 2006114764 A 20071120; RU 2339111 C2 20081120; US 2007001677 A1 20070104; US 7408357 B2 20080805

DOCDB simple family (application)  
**DE 2004002121 W 20040917**; CN 200480028215 A 20040917; DE 10345183 A 20030929; DE 502004004315 T 20040917; EP 04786837 A 20040917; HK 07101142 A 20070201; RU 2006114764 A 20040917; US 57381806 A 20060328