

Title (en)  
THERMAL FUSE

Title (de)  
THERMISCHE SICHERUNG

Title (fr)  
FUSIBLE THERMIQUE

Publication  
**EP 4187568 A4 20240313 (EN)**

Application  
**EP 22857105 A 20220818**

Priority  
• CN 202122003888 U 20210818  
• CN 2022113371 W 20220818

Abstract (en)  
[origin: EP4187568A1] The present application relates to the field of protectors, particularly to a temperature fuse, which changes the traditional transmission manner of direct contact between a push rod and a temperature-sensing body. After improvements, a spring mechanism is added between the push rod and the temperature-sensing body to realize an indirect transmission between the push rod and the temperature-sensing body. Specifically, the spring mechanism includes springs and a spring column, the springs are sleeved at one end of the spring column, and when the temperature fuse is not triggered, the springs are in the state of compression. The temperature-sensing body abuts the other end of the spring column. One end of a push rod abuts a spring leaf, and the other end of the push rod abuts the end of the side wall of the spring column. The length of the temperature-sensing body in the expansion direction of the springs is greater than or equal to the length of the push rod abutting the spring column in the expansion direction of the springs. When the temperature-sensing body is triggered, a compression force of the springs is released, such that the other end of the push rod is separated from the spring column. Then the spring leaf is separated from the contact point under the action of its elastic force to cut off the circuit. The structure is used to overcome the problem of poor electrode contact caused by the aging of the temperature-sensing body.

IPC 8 full level  
**H01H 37/76** (2006.01); **H01H 85/02** (2006.01); **H01H 9/04** (2006.01)

CPC (source: EP KR)  
**H01H 37/76** (2013.01 - KR); **H01H 37/764** (2013.01 - EP); **H01H 85/02** (2013.01 - KR); **H01H 9/04** (2013.01 - EP); **H01H 37/766** (2013.01 - EP)

Citation (search report)  
• [A] US 2017345602 A1 20171130 - YOON SUNG WOONG [KR], et al  
• [A] KR 100514212 B1 20051130  
• See also references of WO 2023020584A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4187568 A1 20230531**; **EP 4187568 A4 20240313**; CN 215869131 U 20220218; JP 2023542373 A 20231006; JP 7522308 B2 20240724; KR 20230098149 A 20230703; WO 2023020584 A1 20230223

DOCDB simple family (application)  
**EP 22857105 A 20220818**; CN 202122003888 U 20210818; CN 2022113371 W 20220818; JP 2023518463 A 20220818; KR 20237011201 A 20220818