Title (en)

OVERVOLTAGE PROTECTION DEVICE, BASED ON SPARK GAPS, COMPRISING AT LEAST TWO MAIN ELECTRODES ARRANGED IN AN ENCLOSED HOUSING

Title (de)

ÜBERSPANNUNGSSCHUTZEINRICHTUNG AUF FUNKENSTRECKENBASIS, UMFASSEND MINDESTENS ZWEI IN EINEM DRUCKDICHTEN GEHÄUSE BEFINDLICHE HAUPTELEKTRODEN

Title (fr)

DISPOSITIF DE PROTECTION CONTRE LES SURTENSIONS, UTILISANT UN ÉCLATEUR, COMPRENANT AU MOINS DEUX ÉLECTRODES PRINCIPALES ENFERMÉES DANS UN BOÎTIER ÉTANCHE

Publication

EP 2937956 B1 20180509 (DE)

Application

EP 15172222 A 20040915

Priority

- DE 10355628 A 20031128
- DE 102004006988 A 20040212
- EP 04021959 A 20040915

Abstract (en)

[origin: EP1542323A2] The device has at least two main electrodes in a pressure-tight housing and at least one auxiliary ignition electrode and a unit for reducing the spark gap response voltage connected to a main electrode and the auxiliary ignition electrode. The unit for reducing the spark gap response voltage consists of a series circuit of a voltage switching element, an impedance and an isolation section fully integrated into the pressure-tight housing and arranged outside the spark gap combustion chamber.

IPC 8 full level

H01T 4/12 (2006.01); **H01T 2/02** (2006.01); **H01T 4/20** (2006.01)

CPC (source: EP)

H01T 2/02 (2013.01); **H01T 4/12** (2013.01); **H01T 4/20** (2013.01)

Citation (opposition)

Opponent : Phoenix Contact GmbH & Co. KG

- DE 19952004 A1 20010308 - DEHN & SOEHNE [DE]
- DE 19655119 C2 20010125 - DEHN & SOEHNE [DE]
- DE 19803636 A1 19990805 - PHOENIX CONTACT GMBH & CO [DE]
- DE 1902214 A1 19690904 - GEN ELECTRIC
- DE 174502 C 19060907 - SIEMENS SCHUCKERTWERKE GMBH [DE]
- EP 0600222 A1 19940608 - DEHN & SOEHNE [DE]
- DE 10212697 A1 20030710 - PHOENIX CONTACT GMBH & CO [DE]
- DE 19717802 A1 19981105 - DEHN & SOEHNE [DE]
- DE 10146728 A1 20030403 - PHOENIX CONTACT GMBH & CO [DE]
- DE 19510181 C1 19960605 - DEHN & SOEHNE [DE]

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

DE 102004006988 A1 20050630; **DE 102004006988 B4 20140206**; EP 1542323 A2 20050615; EP 1542323 A3 20130619; EP 1542323 B1 20180110; EP 2937956 A1 20151028; EP 2937956 B1 20180509; EP 3331111 A1 20180606; EP 3331111 B1 20200527; ES 2665694 T3 20180426; PL 1542323 T3 20180831; PL 2937956 T3 20181031; SI 2937956 T1 20180928

DOCDB simple family (application)

DE 102004006988 A 20040212; EP 04021959 A 20040915; EP 15172222 A 20040915; EP 18150578 A 20040915; ES 04021959 T 20040915; PL 04021959 T 20040915; PL 15172222 T 20040915; SI 200432446 T 20040915