

Title (en)
Vacuum interrupter assembly

Title (de)
Vakuumschalteranordnung

Title (fr)
Ensemble interrupteur à vide

Publication
EP 2736061 A1 20140528 (EN)

Application
EP 12275184 A 20121123

Priority
EP 12275184 A 20121123

Abstract (en)
A vacuum switch assembly is for switching a DC current. The vacuum switch assembly comprises at least one vacuum switch (10), the or each vacuum switch (10) including: first and second electrically conductive rods (26,28), each rod (26,28) being connectable at a first end to an electrical network (42,44) and extending at the second end into a vacuum tight enclosure; a first electrode (30) being mounted at the second end of the first rod (26), the first electrode (30) including at least one slot and defining a cathode; and a second electrode (32) being mounted at a second end of the second rod (28), the second electrode (32) including at least one slot and defining an anode, the second ends of the rods (26,28) extending into the vacuum tight enclosure such that the first and second electrodes (30,32) define opposed electrodes, at least one of the rods (26) being movable relative to the other rod (28) to open or close a gap between the first and second electrodes (30,32), wherein the diameter of the second electrode (32) is larger than the diameter of the first electrode (30), and the direction of the or each slot in each electrode (30,32) is arranged to allow magnetic fields respectively generated, in use, by the first and second electrodes (30,32) to interact and form a resultant magnetic field that is substantially perpendicular to an arc current drawn between the first and second electrodes (30,32) at a predetermined separation of the first and second electrodes (30,32).

IPC 8 full level
H01H 33/59 (2006.01); **H01H 33/664** (2006.01)

CPC (source: EP)
H01H 33/596 (2013.01); **H01H 33/6642** (2013.01); **H01H 33/6641** (2013.01); **H01H 33/6644** (2013.01)

Citation (applicant)
• K. H. SCHOENBACH: "A review of opening switch technology for inductive energy storage", PROCEEDINGS OF THE IEEE, vol. 72, no. 8, August 1984 (1984-08-01), pages 1019 - 1040, XP055098446, DOI: doi:10.1109/PROC.1984.12969
• K.H. SCHOENBACH; M. KRISTIANSEN: "Diffuse Discharges and Opening Switches - A Review of the Tamarow Workshops", PROCEEDING OF 4TH IEEE PULSED POWER CONFERENCE, ALBUQUERQUE, NEW MEXICO, 1983, pages 26 - 32
• K. H. SCHOENBACH; M. KRISTIANSEN; G. SCHAEFER: "A review of opening switch technology for inductive energy storage", PROCEEDINGS OF THE IEEE, vol. 72, no. 8, August 1984 (1984-08-01), pages 1019 - 1040, XP055098446, DOI: doi:10.1109/PROC.1984.12969

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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

DOCDB simple family (publication)
EP 2736061 A1 20140528; WO 2014079749 A1 20140530

DOCDB simple family (application)
EP 12275184 A 20121123; EP 2013073723 W 20131113