

## Title (en)

High-tension electrical switch installation.

## Title (de)

Elektrische Schalteinrichtung für hohe Schaltspannungen.

## Title (fr)

Installation d'interrupteur électrique pour haute tension.

## Publication

**EP 0239783 A2 19871007 (DE)**

## Application

**EP 87102568 A 19870224**

## Priority

DE 3611270 A 19860404

## Abstract (en)

[origin: US4814559A] An electrical switching device for switching high voltages in a network having a defined rated voltage. The device includes a series connection of at least first and second current interrupters having control elements across which a load voltage is distributed. Each interrupter operates according to different quenching principles and exhibits different dielectric behavior immediately after a zero passage of load current to be interrupted. The first interrupter comprises a first switch which has an operating voltage that is low relative to a mains voltage of the network and includes means for interrupting, at relatively low switching voltages without participation of the second interrupter, currents having inductive components. The second interrupter comprises a second switch having switching contacts and delay means for opening such switching contacts with a time delay of several milliseconds after the first interrupter is opened for interrupting load currents that are small relative to currents interrupted by the first interrupter. The series connection of the interrupters interrupts capacitive currents also under grounding conditions with comparatively large recovery voltages and without restriking, with a distribution of voltage across the interrupters, when both are open, being controlled solely by their own ground capacitances.

## Abstract (de)

Elektrische Schalteinrichtung für hohe Schaltspannungen. Die Erfindung betrifft einen Stromunterbrecher für Hochspannungsnetze mit mindestens 2 in Reihe geschalteten Schaltern (S 1) und (S 2) mit voneinander abweichenden Unterbrechungsprinzipien. Der Schalter (S 1) unterbricht bei hohen zulässigen Schaltzahlen alle ohmschen und induktiven Lastströme mit kurzen Lichtbogenzeiten allein, während der Schalter (S 2) eine Zeitspanne ( $\Delta t$ ) von einigen Millisekunden nach Schalter (S 1) öffnet und in Serie zu Schalter (S 1) die Unterbrechung von kapazitiven Strömen und Störströmen mit hohen Schaltspannungen bewirkt. Schalter (S 1) ist vorzugsweise ein Vakuum-Lastschalter mit vergleichsweise geringer Nennspannung, während Schalter (S 2) ein Gas- oder Flüssigkeits-Lastschalter geringer Schaltleistung sein kann, der gleichzeitig auch die Funktion eines Trennschalters erfüllt.

## IPC 1-7

**H01H 33/12**; **H01H 33/66**

## IPC 8 full level

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## CPC (source: EP US)

**H01H 33/122** (2013.01 - EP US); **H01H 33/143** (2013.01 - EP US); **H01H 33/6661** (2013.01 - EP US); **H01H 2033/6667** (2013.01 - EP US)

## Cited by

FR2711447A1; EP1870916A1; FR2902923A1; EP0532394A1; FR2681185A1; US9269514B2; US7718913B2; WO2015082306A1; WO2012146517A1; WO03058661A1; US9443666B2

## Designated contracting state (EPC)

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## DOCDB simple family (application)

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