

Title (en)
Fault-current interruption switch

Title (de)
Schaltvorrichtung zur Unterbrechung von Fehlerströmen

Title (fr)
Interrupteur des courants de défaut

Publication
EP 0466048 B1 19961009 (DE)

Application
EP 91111229 A 19910705

Priority
DE 4021945 A 19900710

Abstract (en)
[origin: EP0466048A2] The fault-current interruption switch is preferably provided for transformer branches in ring cable switching installations. It represents a self-sufficient device, accommodated in a closed housing, having a vacuum switching chamber (1), a converter (4), a magnetic trip device (5), a switch-off spring (9) and an interlock (10) which can be released in the event of a disturbance. After each disturbance interruption, the vacuum switching chamber (1) can be switched on again via a screw spindle (18), and the switch-off spring (9) interlocked again. An extension (25) of the shaft of the moving switch contact (1b) transmits the switching movement to the exterior where it enables a switch position indicator or, via connecting means, the tripping of an associated isolating or load switch (32a). The secondary coil (4b) of the converter (4) and the ring coil (5a) of the magnetic trip device (5) are connected in series without using an external energy source. When a lower disturbance current level is reached, the induced secondary current is used to operate the magnetic trip device (5) and hence unlocks the interlock (10). The switch-off spring (9) then switches the vacuum switching chamber off. Once the disturbance has been remedied, the vacuum switching chamber (1) is switched on again via the screw spindle (18). Because the switching device according to the invention contains a vacuum switching chamber (1), it is able to interrupt an unlimited number of disturbances without having to gain access to the interior of the switching device. It can thus be installed inside the encapsulation of gas-insulated switching installations and is thus at the same high insulation level as the means of operation which are in the gas atmosphere. On the other hand, the housing of the switching device according to the invention can be designed in a gas-proof manner so that its internal functions are not affected by environment influences such as corrosion or humidity etc. when used in air-insulated installations. <IMAGE>

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IPC 8 full level
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CPC (source: EP US)
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Cited by
CN113241267A; CN101986407A; CN107293988A; EP1942514A1; CN110429489A; EP2256774A3; EP2256775A3; WO2008082303A1; EP1402548B1

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