

Title (en)
Multipolar current-limiting circuit breaker.

Title (de)
Mehrpoliger Strombegrenzender Selbstschalter.

Title (fr)
Disjoncteur limiteur de courant multipolaire.

Publication
EP 0006637 A1 19800109 (DE)

Application
EP 79102226 A 19790702

Priority
JP 8159978 A 19780705

Abstract (en)
[origin: US4278958A] A circuit breaker having stationary contactors provided for all of the poles thereof. Movable contactors are provided for all of the poles in correspondence to the stationary contactors. Stationary contacts are provided on the end portions of stationary contactors and movable contacts are disposed on the end portions of the movable contactors. The movable contactors are movable from the stationary contactors by electromagnetic force to open respective circuits before the circuit breaker is opened by an overcurrent tripping device when large current such as short-circuit current flows. Holders adapted to hold the movable contactors of all of the poles are mounted on a common rotatable insulating rod, one of the holders being provided with a latch which is turnable around a rod provided on the holder. A slot is normally engaged with the latch, and when disengaged from the latch, a rod can be turned by the holder. A spring operates to engage the latch with the rod until an electromagnetic moment acting on the latch generated in any of the poles or the sum of electromagnetic forces generated in all of the poles reaches a predetermined value. When a predetermined value is exceeded, the movable contactors of all of the poles are simultaneously moved from the stationary contactors to open the respective circuits with the aid of the insulating rod and the holders.

Abstract (de)
Die Erfindung bezieht sich auf einen Selbstschalter mit durch Stromkräfte offenbarem Kontaktsystem. Einem derartigen Strombegrenzenden Selbstschalter sind den beweglichen Kontaktteilen (4) der einzelnen Phasen eines mehrpoligen Selbstschalters auf einer drehbar gelagerten Schaltwelle aus Isolierstoff (Isolierwelle 25) befestigte Halterungen (Halter 6, 6') zugeordnet, von denen eine mit dem Öffnungssystem versehen ist. Hierdurch wird erreicht, daß alle Kontaktglieder (1, 4) des mehrpoligen Schalters gleichzeitig auseinandergezogen werden, wenn die Gesamtheit aller Kräfte, die auf alle Kontaktglieder (1, 4) einwirken, einen vorbestimmbaren Wert überschreitet oder wenn ein derart großer Überstrom in einer Phase auftritt, daß die vorbestimmbare Grenze überschritten wird.

IPC 1-7
H01H 77/10; **H01H 71/43**

IPC 8 full level
H01H 71/43 (2006.01); **H01H 77/10** (2006.01); **H01H 71/10** (2006.01); **H01H 71/52** (2006.01)

CPC (source: EP US)
H01H 77/101 (2013.01 - EP US); **H01H 71/1009** (2013.01 - EP US); **H01H 71/525** (2013.01 - EP US)

Citation (search report)
• US 3500266 A 19700310 - TORRE JOHN DE
• [AD] DE 1286185 B 19690102 - LICENTIA GMBH
• [A] US 3182157 A 19650504 - BRUMFIELD JOHN C

Cited by
EP0072972A3; EP1376640A3; DE3411275A1; EP2346062A3; US7102471B2

Designated contracting state (EPC)
AT BE CH FR GB IT NL

DOCDB simple family (publication)
EP 0006637 A1 19800109; **EP 0006637 B1 19811014**; AT E309 T1 19811015; DE 2926166 A1 19800117; DE 2926166 C2 19880601; JP S559346 A 19800123; JP S5942935 B2 19841018; PH 16637 A 19831205; US 4278958 A 19810714

DOCDB simple family (application)
EP 79102226 A 19790702; AT 79102226 T 19790702; DE 2926166 A 19790628; JP 8159978 A 19780705; PH 22742 A 19790705; US 5474479 A 19790705