

Title (en)  
Single pole and neutral differential circuit breaker

Title (de)  
Einpol- und Nulleiter-Differentialschutzschalter

Title (fr)  
Disjoncteur différentiel unipolaire et neutre

Publication  
**EP 0196241 B2 19960904 (FR)**

Application  
**EP 86400333 A 19860218**

Priority  
FR 8503012 A 19850227

Abstract (en)  
[origin: EP0196241A1] 1. A single pole and neutral differential circuit breaker with a moulded case (10) comprising : - a phase circuit having a pair of phase contacts (42, 44) connected to phase input (16) and output terminals (20), respectively located on the two opposing narrow side faces of the case, - a neutral circuit having a pair of neutral contacts (26, 28) juxtaposed to the phase contacts (42, 44) with an interposed insulating separating partition (24), extending parallel to the large side faces of the case, and connected to neutral input (18) and output terminals (22) adjacent to said phase terminals (16, 20), - a manual and automatic operating mechanism (60), having an electromagnetic (52) and/or thermal (58) trip device opening said contacts (26, 28; 42, 44) on a fault, - a differential transformer (66) having a phase primary winding (70), a neutral primary winding (68), and a secondary winding (72), - an electromagnetic relay (74) supplied by said secondary winding (72) and mechanically connected to said mechanism (60), characterized by the fact that said differential transformer (66) and said electromagnetic relay (74) constitute a differential unit, that said phase and neutral circuits, and said manual and automatic operating mechanism (60) with electromagnetic (52) and/or thermal (58) trip device constitute a circuit breaker unit, that said units are housed either in separate cases said side faces of which are adjoined, or in a single case with a separating interface between the circuit breaker unit and the differential unit, that the neutral circuit is adjacent to the differential unit, that said comprises a lower part housing said phase (42, 44) and neutral contacts (26, 28) and that the connecting conductors of the neutral circuit (38, 40) and of the phase circuit (54, 56) to the differential unit extend transversely to said interface or to said adjoined side faces, the neutral circuit connecting conductors (38, 40) being in said lower part of the case, and the phase circuit connecting conductors (54, 56) above this lower part.

IPC 1-7  
**H01H 71/00**; **H01H 83/22**

IPC 8 full level  
**H01H 71/00** (2006.01); **H01H 83/22** (2006.01)

CPC (source: EP)  
**H01H 71/002** (2013.01); **H01H 83/226** (2013.01)

Cited by  
FR2715767A1; EP0732718A1; FR2731837A1; EP0456585A1; FR2662017A1; EP0458431A1; US5157366A; FR2627324A1; US10984974B2; EP0473246A1; EP0320928A3; EP3671799A1; WO2006008273A1; WO0067280A1

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