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(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2024/0178650 A1**
(43) **Pub. Date: May 30, 2024**(54) **CONTACTOR, AN INTEGRATED CIRCUIT, A METHOD OF INTERRUPTING A CURRENT FLOW**(52) **U.S. Cl.**
CPC **H02H 3/08** (2013.01); **H02H 1/0007** (2013.01); **H02H 3/05** (2013.01)(71) Applicant: **Melexis Technologies SA**, Bevaix (CH)(72) Inventors: **Bruno BOURY**, Tessenderlo (BE);
Stephane RAUW, Tessenderlo (BE)(57) **ABSTRACT**(21) Appl. No.: **18/432,436**(22) Filed: **Feb. 5, 2024****Related U.S. Application Data**

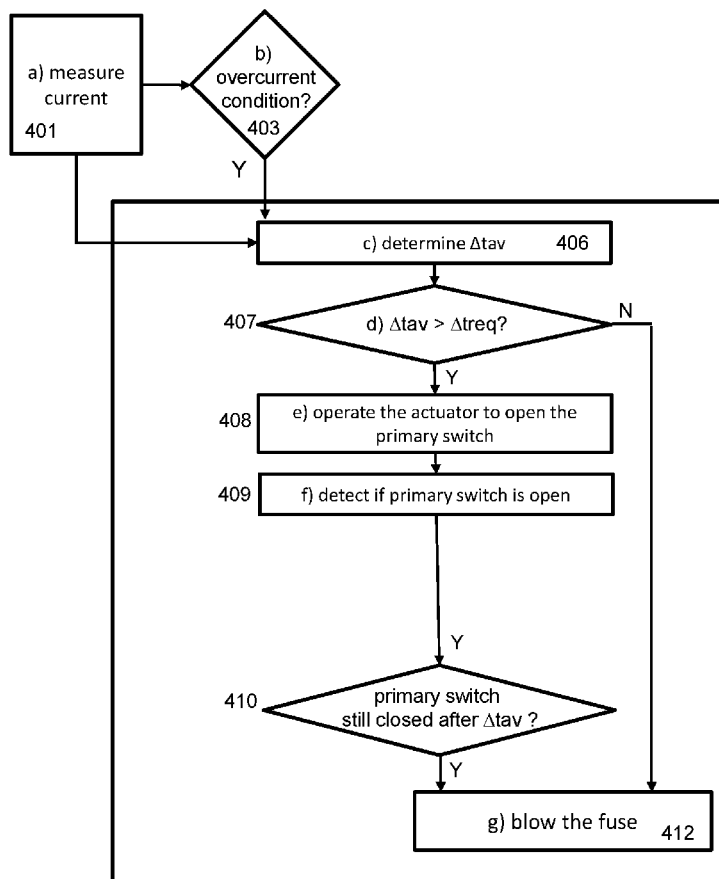
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A contactor includes: a first and second power terminal; a sub-circuit connected between this first and second power terminal and comprising the following three elements connected in series: an electrical conductor portion, a primary switch, and a fuse. The primary switch has a movable part driven by an actuator. The contactor further has a magnetic sensor for measuring a primary current flowing through the electrical conductor portion, and a controller connected to the magnetic sensor and to the actuator. The controller has a communication port for receiving commands. The contactor can detect whether the primary switch is actually open. The controller is configured for: (i) receiving a command to open the switch; (ii) operating the actuator, (iii) detecting if the primary switch is actually open; and (iv) blowing the fuse if the switch is not open.



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