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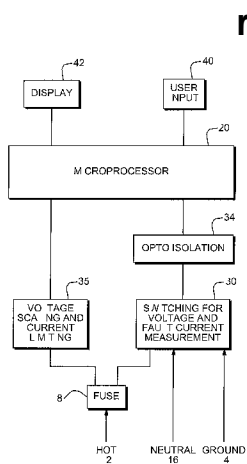
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(54) **Title:** DEVICE AND METHOD FOR TESTING AN ELECTRICAL POWER BRANCH CIRCUIT



(57) **Abstract:** A device and method for testing an electrical power branch circuit that includes hot, neutral and protective ground conductors and that carries alternating current. The device includes circuitry for determining the total available short-circuit current that can be carried by the neutral conductor, circuitry for determining the total available ground-fault current that can be earned by the protective ground conductor, and circuitry that, based on at least one of the determined short-circuit current and the determined ground-fault current, applies a short-circuit or ground-fault current to the electrical power branch circuit.

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**A CLASSIFICATION OF SUBJECT MATTER**

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USPC - 324/509

According to International Patent Classification (IPC) or to both national classification and IPC

**B FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
USPC 324/500, 509, 512, 525, 527 (search term limited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
PubWEST(USPAT, USPGPB, EPAB, JPAB); Google search,  
Search terms including fault, ground, time, current, neutral, hot, conductor, AC<sub>1</sub> zero point, short-circuit, branch circuit, amps, determination, start time

**C DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X --- Y	US 6,815,955 B1 (O'NEAL, III) 09 November 2004 (09 11 2004) col 3, ln 29 to col 4, ln 48	11-14, 16 17 ----- 1-10, 15, 23-25
X --- Y	US 2005/0001607 A1 (BERLAND et al ) 06 January 2005 (06 01 2005) para [0121]-[01 28J	18-22 ----- 4, 5, 15, 25
Y	US 6,960,916 B2 (WALKER) 01 November 2005 (01 11 2005) col 4, ln 40-51	1-10, 23-25

**D Further documents are listed in the continuation of Box C D**

* Special categories of cited documents	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means	
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