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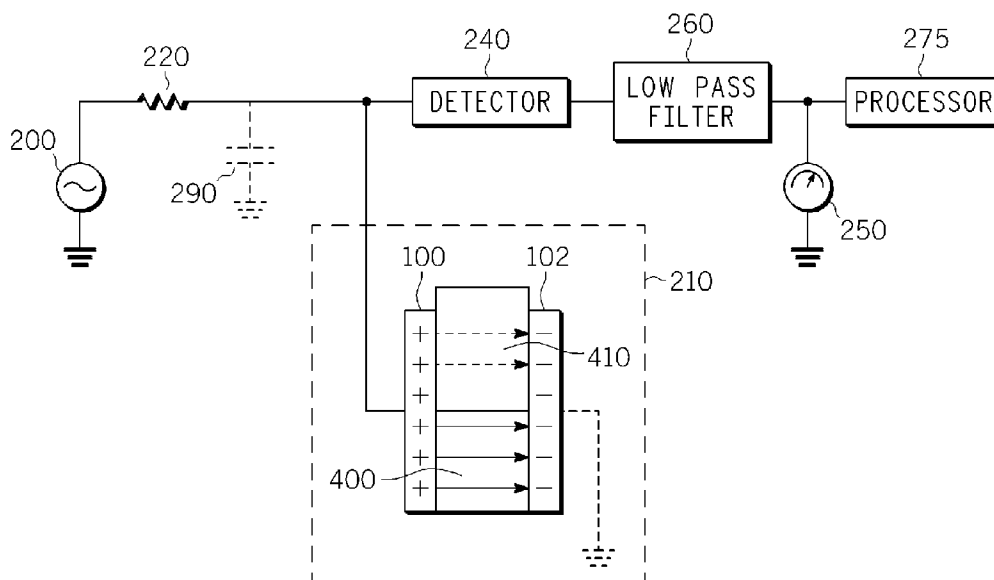
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(54) Title: ELECTRICAL FIELD SENSORS



(57) Abstract: The present disclosure provides several systems. In general, it provides E-field sensor systems that utilize at least one electrode (100) adapted for creating an E-field in an area (210) within a detection volume where fluid presence (400) or presence of a solid body (300) is to be detected. The electrical field sensor is configured to generate a detected signal responsive to a change in capacitance of the electric field, and is communicatively coupled to the electrode (100). In addition, a processor (275) is configured to determine a quantitative measure of a fluid or solid body within the detection volume in accordance with a capacitive relationship with the detection volume. Described are examples of the system for fluid presence detection, fluid level measurement and measurement of proximity to a solid object.

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## INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

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USPC - 324/667

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)

IPC(8) - G01R 27/26 (2007.01)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Google Patent, MicroPatent, IP.com, DialogPro, IEEEXplore, Google Scholar

## C DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 6,420,882 B1 (ENGBRETSSEN et al) 16 July 2002 (16.07.2002) entire document	1-3, 12, 17
Y		4-11, 13-16, 18-29
Y	US 4,879,508 A (ANDERMO) 07 November 1989 (07.11.1989) entire document	4-11, 13-16, 18-19
Y	US 6,490,920 B1 (NETZER) 10 December 2002 (10.12.2002) entire document	7-11, 19-22
Y	US 2005/0088416 A1 (HOLLINGSWORTH) 28 April 2005 (28.04.2005) entire document	23-29
Y	US 6,032,494 A (TANIGAWA et al) 07 March 2000 (07.03.2000) entire document	26-29
Y	US 4,972,154 A (BECHTEL et al) 20 November 1990 (20.11.1990) entire document	28-29

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