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(54) Title: OPTO-ISOLATOR MULTI-VOLTAGE DETECTION CIRCUIT

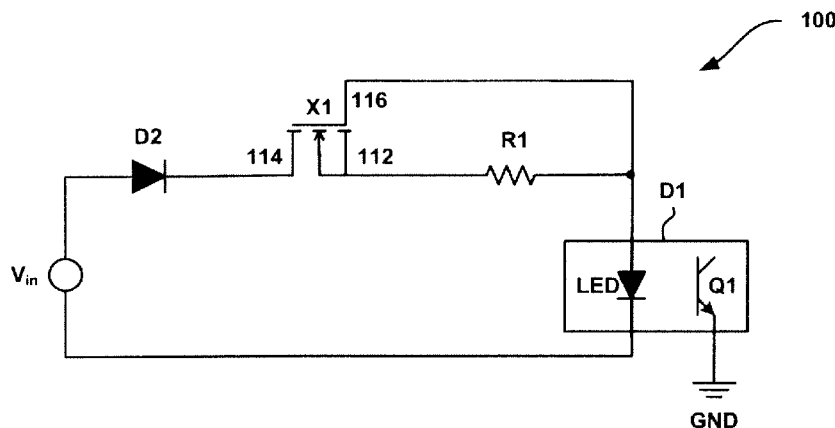


FIGURE 2

(57) Abstract: An opto-isolator multi-voltage detection circuit is capable to handle a wide range of input voltages ranging from about 9 volts DC to about 240 volts AC includes an input voltage, an opto-isolator, a rectifier, a voltage divider, first and second transistors, and a DC to DC converter. The voltage divider operatively coupled to the first and second transistors is capable of evenly dividing the input voltage across the first and second transistors. The DC to DC converter operatively coupled to the transistors, the voltage divider, and the opto-isolator is capable of maintaining an output current from the rectifier. The use of the DC to DC converter, the voltage divider, and the transistors provide benefit of reducing a power dissipated throughout the entire circuit.

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**A. CLASSIFICATION OF SUBJECT MATTER***G01R 19/155(2006.01)i, G01R 19/165(2006.01)i, G01R 19/20(2006.01)i*

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: G01R 19/155; B01D 17/12; G01R 27/26; H03F 3/68

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

Korean utility models and applications for utility models since 1975.

Japanese utility models and applications for utility models since 1975.

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

eKOMPASS(KIPO internal) &amp; Keywords: opto-isolator, voltage detector

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002-0067172 A1 (ALKER, R.) 06 June 2002 See Abstract; Paragraph [0001] - Paragraph [0032]; Claims 1 - 7; Figures 1 - 2.	1-24
A	US 5834973 A (KLATSER, P. et al.) 10 November 1998 See Abstract; Column 3, Line 17 - Column 7, Line 20; Claims 1 - 10; Figures 3 - 5.	1-24
A	US 5401394 A (MARKHAM, R. C.) 28 March 1995 See Abstract; Column 1, Line 6 - Column 5, Line 50; Claims 1 - 12; Figures 1 - 4.	1-24

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002-0067172 A1	06.06.2002	EP 1221621 A1 GB 0029815 D0	10.07.2002 17.01.2001
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