



- (51) International Patent Classification:
H02J 3/38 (2006.01) *G05F 1/67* (2006.01)
- (21) International Application Number:
PCT/US2012/024470
- (22) International Filing Date:
9 February 2012 (09.02.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/441,585 10 February 2011 (10.02.2011) US
13/359,695 27 January 2012 (27.01.2012) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

[Continued on next page]

(54) Title: PSEUDO-RANDOM BIT SEQUENCE GENERATION FOR MAXIMUM POWER POINT TRACKING IN PHOTO-VOLTAIC ARRAYS

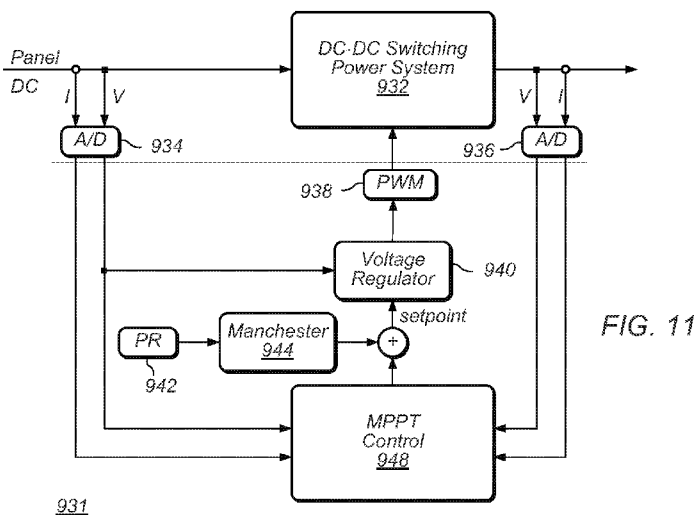


FIG. 11

(57) Abstract: A converter unit configured to couple to a photovoltaic panel (PV) may include a controller to sense an input voltage and input current obtained from the photovoltaic panel, and manage the output voltage of a corresponding power converter coupled to a DC bus to regulate the resultant bus voltage to a point that reduces overall system losses, and removes non-idealities when the panels are series connected. The controller may also perform input voltage management and regulation, including maximum power point tracking (MPPT) for the PV. The controller may probe the bus voltage using a probe waveform generated according to a pseudo random bit sequence (PRBS), to provide a probe signal that is distinct from the control steps performed by the controller. A PV array may feature a respective converter unit coupled to each PV, with each respective controller using a different and unique seed for generating its PRBS.

WO 2012/109437 A3

(88) Date of publication of the international search report:
8 May 2014

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/024470

A. CLASSIFICATION OF SUBJECT MATTER
 INV. H02J3/38 G05F1/67
 ADD.
 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)
 H02J G05F H02M
 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)
 EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 2010 0136167 A (KOREA ELECTRONICS TELECOMM [KR]) 28 December 2010 (2010-12-28) figures 3-5 & US 2012/101645 A1 (JUN YONG IL [KR] ET AL) 26 April 2012 (2012-04-26) paragraph [0019] - paragraph [0070]; figures 3-5 -----	1-36

Further documents are listed in the continuation of Box C.

See patent family annex.

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Date of the actual completion of the international search 12 March 2014	Date of mailing of the international search report 20/03/2014
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/024470

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 20100136167 A	28-12-2010	KR 20100136167 A US 2012101645 A1 WO 2010147420 A2	28-12-2010 26-04-2012 23-12-2010
