Title (en)

METHOD FOR RECOGNIZING THE THEFT OF A PV MODULE AND A FAILURE OF A BYPASS DIODE OF A PV MODULE, CORRESPONDING PV SUB-GENERATOR JUNCTION BOX, PV INVERTER, AND CORRESPONDING PV SYSTEM

Title (de)

VERFAHREN ZUR DIEBSTAHLERKENNUNG EINES PV-MODULS UND ZUR AUSFALLERKENNUNG EINER BYPASSDIODE EINES PV-MODULS SOWIE DAZU KORRESPONDIERENDER PV-TEILGENERATOR-ANSCHLUSSKASTEN, PV-WECHSELRICHTER UND DAZU KORRESPONDIERENDE PV-ANLAGE

Title (fr)

PROCÉDÉ DE DÉTECTION DE VOL D'UN MODULE PV ET DE DÉTECTION DE PANNE D'UNE DIODE DE DÉRIVATION D'UN MODULE PV, AINSI QUE BOITE DE RACCORDEMENT CORRESPONDANTE D'UN GÉNÉRATEUR PV PARTIEL, ONDULEUR PV ET DISPOSITIF PV CORRESPONDANT

Publication

EP 2240789 A1 20101020 (DE)

Application

EP 09710620 A 20090211

Priority

- EP 2009051559 W 20090211
- DE 102008008504 A 20080211

Abstract (en)

[origin: WO2009101102A1] Disclosed is a method for recognizing the theft of at least one photovoltaic (PV) module (3) of a PV system. The PV system comprises at least one string (31) of serially connected PV modules (3) for supplying a field voltage (uF), said at least one string (31) being connected in parallel and said PV modules (3) each having a plurality of serially connected PV cells (7). According to the invention, bypass diodes (8) that are connected in an anti-parallel manner are provided for protecting the PV cells (7). During non-feeding operation, especially in the evening and at night, a test voltage that is negative relative to the field voltage (uF) is connected to the at least one PV string (2) in order to adjust a test current through the bypass diodes (8). A theft message is automatically output when the test current and/or the test voltage significantly change/s.

IPC 8 full level

G01R 31/26 (2006.01); **H01L 31/042** (2006.01); **H02J 7/35** (2006.01)

CPC (source: EP US)

G08B 13/1409 (2013.01 - EP US); H02S 50/10 (2014.12 - EP US); Y02E 10/50 (2013.01 - EP)

Citation (search report)

See references of WO 2009101102A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

DE 102008008504 A1 20090813; CN 101939660 A 20110105; CN 101939660 B 20140423; EP 2240789 A1 20101020; US 2011032099 A1 20110210; WO 2009101102 A1 20090820

DOCDB simple family (application)

DE 102008008504 A 20080211; CN 200980104741 A 20090211; EP 09710620 A 20090211; EP 2009051559 W 20090211; US 86717509 A 20090211