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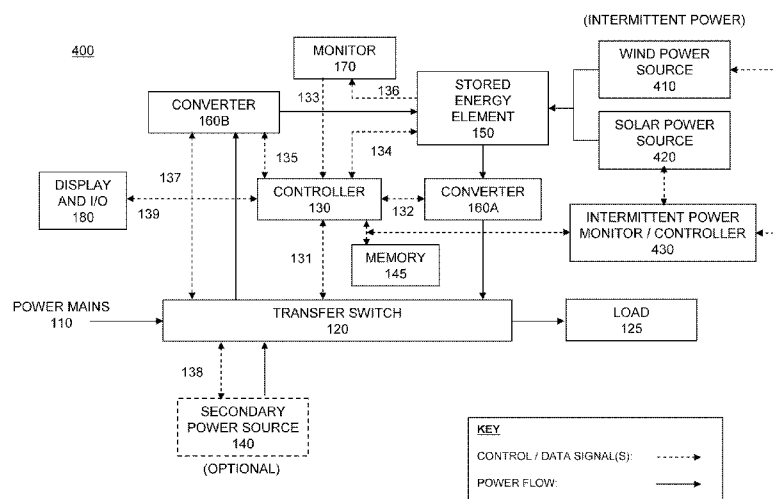
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(54) Title: BACKUP POWER SYSTEM AND METHOD

FIG. 4



(57) Abstract: Various embodiments of a backup power system and method may include a transfer switch, connections to primary and secondary power sources, a stored energy component, and an interconnected controller with a processor and memory. The transfer switch may provide power to an external load from a selected one of the primary power source, the secondary power source, or the stored energy component. The controller may compare energy stored within the stored energy component against a first threshold relating to a maximum time necessary for the secondary power source to at least reach a predetermined minimum output level, and also to compare the stored energy level to a second threshold greater than the first threshold. The second threshold may be selected to reduce a number of on/off cycles of the secondary power source during periods of intermittent primary power fluctuation that are less severe than a prolonged loss of power. Renewable energy sources may be used to supply energy to the stored energy component.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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B. FIELDS SEARCHED

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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 practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 642 004 A (BIRCHER ANTON [CH]) 24 June 1997 (1997-06-24)	1-9, 13, 14, 16, 18-30, 34-36, 38-48
Y	the whole document	10-12, 17, 31-33
Y	US 2005/184594 A1 (FREDETTE STEVEN J [US]) 25 August 2005 (2005-08-25) the whole document	10-12, 31-33
Y	US 6 134 124 A (JUNGREIS AARON M [US] ET AL) 17 October 2000 (2000-10-17) abstract column 7, line 41 - line 57	17
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☒ See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 95/34933 A (ELIN ENERGIEANWENDUNG [AT]; KRIZEK KURT [AT]) 21 December 1995 (1995-12-21) the whole document -----	1,21,42, 45
A	US 2006/192433 A1 (FUGLEVAND WILLIAM A [US] ET AL) 31 August 2006 (2006-08-31) abstract -----	1-48

INTERNATIONAL SEARCH REPORT

Information on patent family members

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PCT/US2009/033334

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5642004	A	24-06-1997	AT 161366 T	15-01-1998
			CH 687656 A5	15-01-1997
			WO 9510875 A1	20-04-1995
			DE 59404826 D1	29-01-1998
			EP 0673557 A1	27-09-1995
US 2005184594	A1	25-08-2005	EP 1719234 A1	08-11-2006
			JP 2007525139 T	30-08-2007
			WO 2005083867 A1	09-09-2005
US 6134124	A	17-10-2000	NONE	
WO 9534933	A	21-12-1995	NONE	
US 2006192433	A1	31-08-2006	WO 2006093862 A2	08-09-2006