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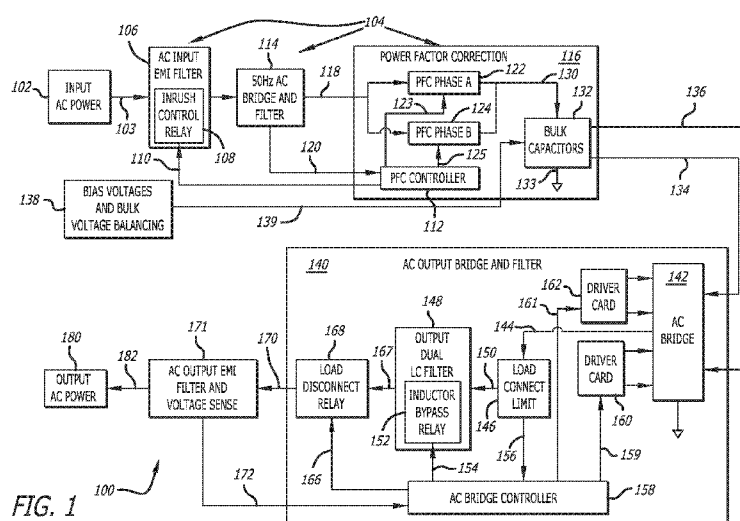
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(54) Title: ADAPTIVE AC POWER EXCHANGER



(S7) Abstract: An adaptive AC power exchanger generates stable 120 VAC 60 Hz power from variable grid input power nominally at 220 VAC and 50 Hz. The exchanger includes an AC-DC circuit stage coupled to receive the input AC current and generate a VDC output, and a DC-AC circuit stage to generate power for a load. The AC-DC stage includes an EMI filter and surge protection circuit, a 50 Hz rectifier and a power factor correction (PFC) circuit controlled by a PFC controller to yield a 400 VDC output coupled through a bulk capacitor stack to a common connection to generate a 200 VDC voltage node. The 200 VDC and 400 VDC voltages are coupled to the DC-AC circuit including a pulse width modulator; current load limiter; an LC filter having a capacitor, dual inductors and an inductor by-pass relay; and a load disconnect relay all controlled by an AC bridge controller.



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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) ADAPTIVE FREQUENCY		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2012/0086382 A1 (PETO) 12 APRIL 2012, SEE ENTIRE DOCUMENT.	
A	US 2009/0135629 A1 (PAGOLA) 28 MAY 2009, SEE ENTIRE DOCUMENT.	
A	US 7,903,439 B2 (OETTINGER ET AL.) 08 MARCH 2011, SEE ENTIRE DOCUMENT.	
A	US 5,371,666 A (MILLER) 06 DECEMBER 1994, SEE ENTIRE DOCUMENT.	

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