

(21) Application No: (22) Date of Filing: (86) International Application Data: PCT/IL2001/000776 En 16.08.2001 (87) International Publication Data: WO2003/017453 En 27.02.2003	(51) INT CL ⁷ : H02M 1/00 (52) UK CL (Edition W): G3U UAA1B U212 U306 (56) Documents Cited by ISA: EP 1049239 A US 6259614 B1 US 6043633 A US 5991172 A (58) Field of Search by ISA: INT CL ⁷ H02M Other: ONLINE: EPODOC, WPI
(71) Applicant(s): Green Power Technologies Limited (Incorporated in Israel) Hamada Street 12, Park Tamar, Rehovot 76703, Israel (72) Inventor(s): Shmuel Ben-Yaakov (74) Agent and/or Address for Service: Haseltine Lake & Co Imperial House, 15-19 Kingsway, LONDON, WC2B 6UD, United Kingdom	

(54) Abstract Title: **PFC apparatus for a converter operating in the borderline conduction mode**

(57) Abstract Power factor correction apparatus, for a switching power supply fed by an array of rectifying diodes and consisting of at least an input inductor, a contact of which is connected in series with a contact of the array, and of a power switch connected between the other contact of the array and the other contact of the input inductor that comprises circuitry for identifying, in each cycle determined by the switching frequency of the power supply, whenever the instantaneous value of the current through the inductor reaches a minimal value; circuitry for switching the power switch to its conducting state in response to the minimal current through the inductor; circuitry for reflecting the current flowing through the inductor by a measurable or simulated parameter; and circuitry for providing indication, in each cycle, by using the parameter, the indication being related to the timing until the peak value of the current, that corresponds to a specific load, has been essentially reached, or to the time from the moment that the current reaches the minimal value until the timing, and for switching the power switch to its non-conducting state in response to the indication.

