

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification⁶:

H01F 38/16, 30/10, 27/30

A1

(11) International Publication Number:

WO 96/38849

(43) International Publication Date:

5 December 1996 (05.12.96)

(21) International Application Number: PCT/US96/08147

(22) International Filing Date: 31 May 1996 (31.05.96)

(30) Priority Data:

08/460,072

2 June 1995 (02.06.95)

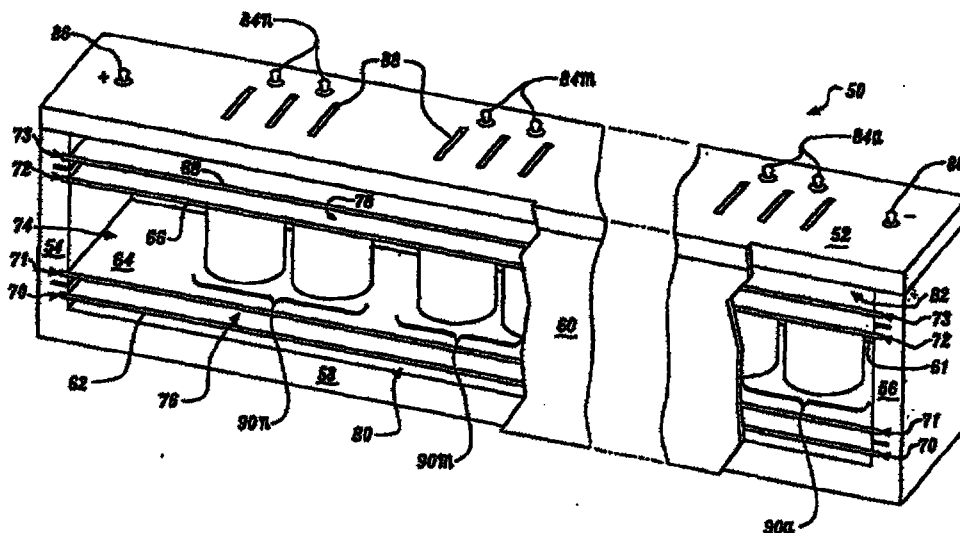
US

(71) Applicant: INTERNATIONAL POWER GROUP, INC.
[US/US]; 20210 - 142nd Avenue N.E., Woodinville, WA
98072-0630 (US).(72) Inventors: KRICHTAPOVITCH, Igor, A.; 10206 N.E. 68th
Street #C202, Kirkland, WA 98033 (US). SINITSYNA,
Irina, Z.; 12616 N.E. 180th Street #FF201, Bothell, WA
98011 (US).(74) Agent: BISHOP, Stephen, C.; Christensen O'Connor Johnson
& Kindness P.L.L.C., Suite 2800, 1420 Fifth Avenue,
Seattle, WA 98101 (US).(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY,
CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS,
JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD,
MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
SE, (SG) SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO
patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT,
BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,
NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
GN, ML, MR, NE, SN, TD, TG).

Published

With international search report.

(54) Title: HIGH VOLTAGE ISOLATING TRANSFORMER MODULE



(57) Abstract

A high voltage transformer module (50) having a pair of high voltage substrates (64, 66) and a pair of low voltage substrates (62, 68) on which high and low voltage components are respectfully mounted. Mounted between the substrates are a plurality of transformers (92a, 92b, ... 92n). In a preferred embodiment, each of the plurality of transformers is coupled to a full bridge rectifier (102a, 102b, ... 102n) and the outputs of the rectifiers connected so that an output voltage produced by each transformer/rectifier pair is summed to produce a total output voltage for the high voltage transformer module. Electrical shorts are prevented within the module by fixedly mounting the substrates in the casing and by filling the cavities formed between the substrates with insulation having a high breakdown voltage. The components on the high voltage substrates are both physically and electrically isolated from the components on the low voltage substrates.