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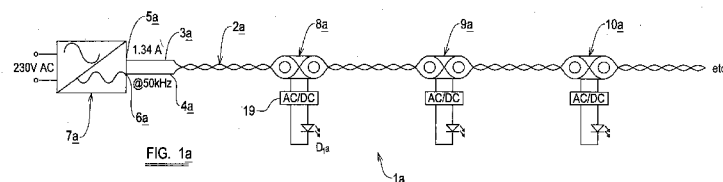
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(54) Title: ELECTRICAL SYSTEM USING HIGH FREQUENCY AC AND HAVING INDUCTIVELY CONNECTED LOADS, AND RELATED POWER SUPPLIES AND LUMINAIRES



(57) Abstract: Electrical systems comprising a power distribution system (1a) for distributing high frequency AC power having a twisted pair conductor and power tapping element, for instance to an LED or OLED load. The electrical systems comprise an LED or OLED luminaire (1c) having a heat sink and a light diffusing optical element and power supplies for powering LEDs or OLEDs such as those used in the luminaire (1c).

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER

INV. H05B33/08 H02J5/00 H01F38/14 F21V29/00 H02M7/217
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H05B H02J H01F F21V G01R H02M

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, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 264 827 A (HERZOG HANS K) 28 April 1981 (1981-04-28) column 1, line 5 - column 1, line 9 column 3, line 34 - column 3, line 50 column 4, line 1 - column 4, line 37 column 4, line 45 - column 4, line 52 column 5, line 54 - column 5, line 66 column 7, line 45 - column 8, line 8 figures 1-6	1-20
X	US 2007/076459 A1 (LIMPKIN GEORGE A [GB] LIMPKIN GEORGE A [GB] ET AL) 5 April 2007 (2007-04-05) paragraph [0060] - paragraph [0062] paragraph [0072] - paragraph [0075] paragraph [0080] paragraph [0086] figures 1, 2c, 7a-c, 14a-e	59,69
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

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Date of the actual completion of the international search

7 October 2010

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No

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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.
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Y	paragraph [0016] paragraph [0058] paragraph [0061] paragraph [0065] paragraph [0068] figures 1, 2, 4	21-38, 67
Y	US 2005/207182 A1 (WANG THOMAS G [US]) 22 September 2005 (2005-09-22) paragraph [0015] - paragraph [0020] figures 1, 2	21-26, 35, 36, 67
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Y	US 6 563 719 B1 (HUA GUICHAO [US] ET AL) 13 May 2003 (2003-05-13) column 1, line 21 - column 1, line 42 column 1, line 57 - column 2, line 39 column 3, line 65 - column 4, line 14 figures 1A, 2A, 3	27-35, 37, 38, 67
A,P	US 2010/046259 A1 (HO WING CHOI [HK] ET AL) 25 February 2010 (2010-02-25) paragraph [0002] - paragraph [0003] figure 1b	21-26
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INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2010/050472

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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X	US 2007/195527 A1 (RUSSELL RONALD J [CA] RUSSELL RONALD JAMES [CA]) 23 August 2007 (2007-08-23) paragraph [0055] - paragraph [0062] paragraph [0078] - paragraph [0079] figures 1-5, 17-19 -----	39-50
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A	EP 1 411 754 A1 (KONINKL PHILIPS ELECTRONICS NV [NL]) 21 April 2004 (2004-04-21) paragraph [0017] paragraph [0028] paragraph [0038] figures 2, 5A -----	51
A	WO 97/12436 A1 (PHILIPS ELECTRONICS NV [NL]; PHILIPS NORDEN AB [SE]) 3 April 1997 (1997-04-03) page 1, line 1 - page 1, line 2 page 6, line 12 - page 6, line 25 figure 4 -----	65,66,68
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International application No
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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	JP 7 087691 A (MATSUSHITA ELECTRIC WORKS LTD) 31 March 1995 (1995-03-31) * abstract figures 1, 2a-c -----	71
A	US 6 172 466 B1 (KI WING HUNG [HK] ET AL) 9 January 2001 (2001-01-09) column 3, line 45 - column 5, line 27 figures 1, 3-6 -----	51,52, 57,58

INTERNATIONAL SEARCH REPORT

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/GB2010 /050472

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-20

Power distribution system

2. claims: 21-38, 51, 52, 57, 58

Power supply

3. claims: 39-50, 53-56

Luminaire

4. claims: 59-77

Arrangement

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/GB2010/050472

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2010/050472

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