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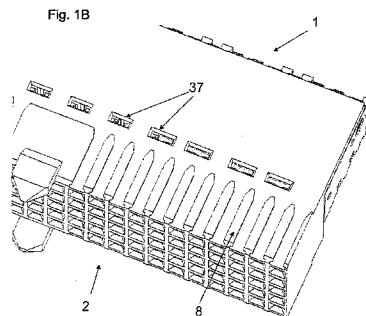
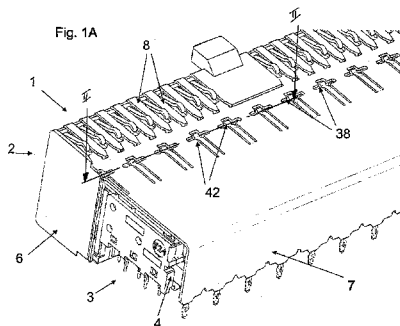
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Published:

- with international search report (Art. 21(3))
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- (88) Date of publication of the international search report:
28 February 2013

(54) Title: CROSS TALK REDUCTION FOR ELECTRICAL CONNECTORS



(57) Abstract: An electrical connector module comprising a housing and an array of electrical contacts within the housing. The electrical contacts include a plurality of signal conductors and a plurality of ground conductors. Ground coupling bars are used with at least two contact portions for contacting ground conductors. The connector comprises slots enabling insertion of the ground coupling bar in a longitudinal direction of the ground coupling bar.



INTERNATIONAL SEARCH REPORT

International application No PCT/IB2012/001315
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A. CLASSIFICATION OF SUBJECT MATTER
 INV. H01R13/6471 H01R13/6461
 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)
 H01R H01T

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)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	US 2003/181077 A1 (ROTHERMEL BRENT RYAN [US] ET AL) 25 September 2003 (2003-09-25) paragraph [0032] paragraph [0040] figures 4, 8, 9, 10 -----	1-6,8 9 10,11
X	US 2009/156027 A1 (CHEN WAN-TIEN [TW]) 18 June 2009 (2009-06-18) paragraph [0016] - paragraph [0019] figures 1, 2a, 2b -----	17
Y A	US 2009/170373 A1 (PAN FENG [CN]) 2 July 2009 (2009-07-02) paragraph [0029] - paragraph [0033] figures 7, 8, 9, 10, 11 -----	9 13

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

- | | |
|---|---|
| <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> | <p>"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</p> <p>"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</p> <p>"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</p> <p>"&" document member of the same patent family</p> |
|---|---|

Date of the actual completion of the international search

19 October 2012

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2012/001315

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.: 16
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:
see FURTHER INFORMATION sheet PCT/ISA/210

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.:
1-14, 17

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-14, 17

An electrical connector assembly with its cross-talk reducing solution and the corresponding assembling method.

2. claim: 15

A tool for removing the one or more ground coupling bars used in the cross-talk reducing solution.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 16

Since independent claim 16 does not contain any features relating to the ground coupling bar which is its subject matter, it does not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/IB2012/001315

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003181077 A1	25-09-2003	AU 2003220324 A1 CN 1650478 A DE 10392400 T5 JP 2005521224 A US 2003181077 A1 WO 03081726 A1	08-10-2003 03-08-2005 09-06-2005 14-07-2005 25-09-2003 02-10-2003
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