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(54) **Surge protection arrangement**

(57) An improved surge protection for protecting an electronic device is disclosed, the device having a closed casing with walls made of a non-conducting material and being internally coated with a thin metallic layer. The device also has at least one connector, being arranged in an opening in the walls and including a connector body, at least a portion of which projects outwardly from the wall and which accommodates an internal coupling device, to which a transmission cable, including a central conductor and an outer shield conductor, is connectable. According to the invention, the connector body is also made of a non-conducting material and strong currents, being present at a conducting protection sleeve, are diverted by at least one conducting diversion member to at least one metallic structure, being in permanent electric contact with ground and having a high capacity of conducting strong currents. In use, the at least one conducting diversion member is in electrical contact with the protection sleeve, and extends radially outwardly from the protection sleeve, through the connector body, to the at least one metallic structure.

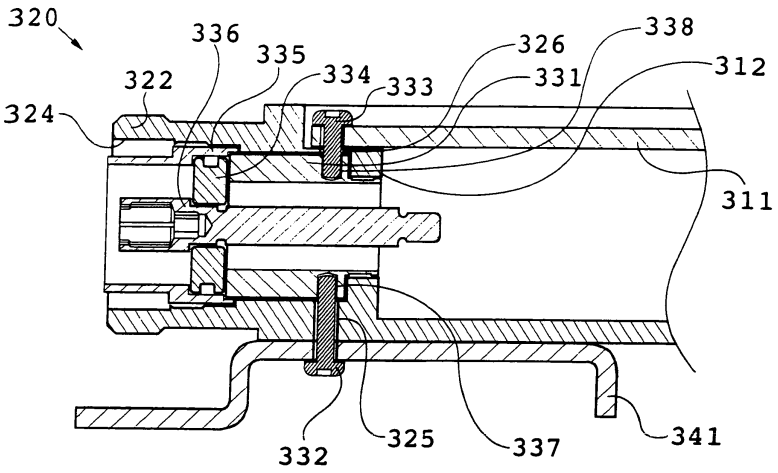



Fig. 3b

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# EUROPEAN SEARCH REPORT

Application Number
EP 09 44 5011

## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (IPC) |
|---|---|---|---|
| A | EP 1 544 963 A1 (CIT ALCATEL [FR]) 22 June 2005 (2005-06-22) * abstract * * page 2, column 1, paragraph 6 - page 2, column 1, paragraph 7; figure 1 * * page 2, column 2, paragraph 18 - page 3, column 3, paragraph 20; figure 2 * | 1-16 | INV. H01T4/08 H01R13/03 H01P1/205 H01Q1/24 H01Q1/50 |
| A,D | WO 2004/097979 A1 (LGP ALLGON AB [SE]; HOLST THORSTEN [DK]; HAGENSEN MORTEN [DK]; JENSEN) 11 November 2004 (2004-11-11) * page 6, line 14 - page 11, line 17; figures 1-4 * | 1-16 | |

TECHNICAL FIELDS SEARCHED (IPC)

H01Q
H01T
H01P
H01R

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| The Hague | 2 June 2015 | Blech, Marcel |

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 09 44 5011

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02-06-2015

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| EP 1544963 A1 | 22-06-2005 | NONE | |
| WO 2004097979 A1 | 11-11-2004 | AT 405004 T | 15-08-2008 |
| | | CN 1809949 A | 26-07-2006 |
| | | DK 176005 B1 | 21-11-2005 |
| | | DK 1620918 T3 | 10-11-2008 |
| | | EP 1620918 A1 | 01-02-2006 |
| | | US 2007053129 A1 | 08-03-2007 |
| | | WO 2004097979 A1 | 11-11-2004 |

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