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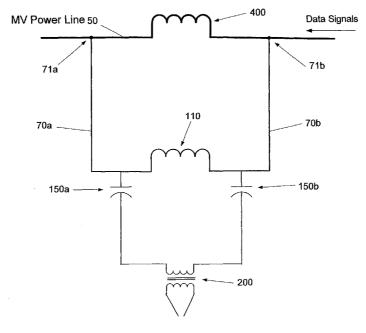
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(54) Title: POWER LINE COUPLING DEVICE AND METHOD OF USING THE SAME



(57) Abstract: The coupler (100) of the present invention couples broadband RF signals to and from a power line conductor (105). The coupler (100) of one embodiment that is for use with overhead power lines (50) includes a length of URD MV cable (10) with neutral removed and that is communicatively coupled to a MV power line at each end on opposite sides of a low pass filter (400). A radio frequency choke (110) is communicatively coupled to URD MV cable between first (150a) and second capacitor (150b). The semi-conductive jacket (30) of the URD cable may be coupled to ground via a low frequency conductive path.



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PCT/US04/01199

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|--|---|--|--|--|
| USPC: 340/310.01 According to International Patent Classification (IPC) or to both national classification and IPC | | | | |
| B. FIELI | OS SEARCHED | | | |
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| 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) Please See Continuation Sheet | | | | |
| C. DOC | UMENTS CONSIDERED TO BE RELEVANT | | | |
| Category * | Citation of document, with indication, where appropriate, of the relevant passages | | Relevant to claim No. | |
| X Y | US 5,557,698 A (GAREIS et al) 17 September 1996, col.2, lines 20-55, col.4, line 60 to col.5, line 49 and US 6,452,482 B1 (CERN) 17 September 2002, figs. 1 col.col.2, lines 18-35, col.4, lines 44-65, col.5, line col.8, lines 44-47 and col.12, lines 35-51. | 1 col.8, lines 10-19. 1-2,5,10-12,15, | 1-4, 8, 19 and 21 5-7, 9-18, 20, 22-24 and 53-56 | |
| Furthe | r documents are listed in the continuation of Box C. | See patent family annex. | | |
| "A" document of partic | Special categories of cited documents: at defining the general state of the art which is not considered to be ular relevance pplication or patent published on or after the international filing | "T" later document published after the int date and not in conflict with the appli the principle or theory underlying the "X" document of particular relevance; the considered novel or cannot be considered when the document is taken alon | cation but cited to understand invention claimed invention cannot be ered to involve an inventive | |
| | nt which may throw doubts on priority claim(s) or which is cited to the publication date of another citation or other special reason (as i) | "Y" document of particular relevance; the considered to involve an inventive ste combined with one or more other such being obvious to a person skilled in the | p when the document is th documents, such combination | |
| | at referring to an oral disclosure, use, exhibition or other means | "&" document member of the same patent | family | |
| priority | priority date claimed | | - In manager | |
| Date of the actual completion of the international search Date of mailing of the international search report | | | 2006 . | |
| 10 March 2006 (10.03.2006) Name and mailing address of the ISA/US Authorized officer | | | | |
| Mail Stop PCT, Attn: ISA/US Commissioner for Patents | | RGUYEN, HUNG T. | X. Ward | |

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| Continuation of B. FIELDS SEARCHED Item 3: | |
| CABLE\$1 AND (POWERLINE OR "POWER LINE" OR POWER\$1 NEAR5 I OR CHOKE\$1) AND CAPACITOR\$1 AND FUSE\$1 AND TRANSFORMER \$ | INE\$1) AND CONDUCT\$3 AND (IMPEDANCE\$1 \$1 AND FILTER\$1 AND TOROID\$1 |
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