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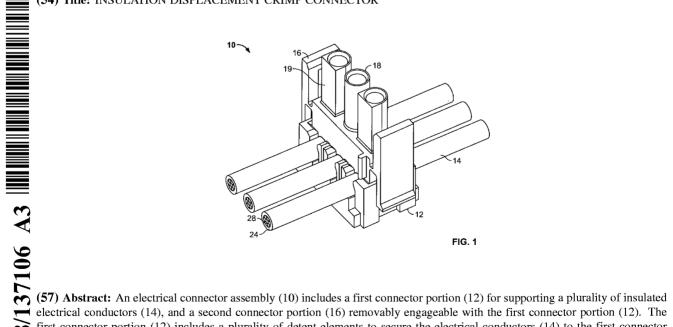
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#### (54) Title: INSULATION DISPLACEMENT CRIMP CONNECTOR



electrical conductors (14), and a second connector portion (16) removably engageable with the first connector portion (12). The first connector portion (12) includes a plurality of detent elements to secure the electrical conductors (14) to the first connector portion (12), and at least one alignment recess. The second connector portion (16) includes socket portions (18) corresponding to the plurality of electrical conductors (14) of the first portion (12), and an alignment member cooperative with the alignment recess to guide the second connector portion (16) into engagement with the first connector portion (12). Socket portions (18) include an insulation displacement crimp (IDC) connector portion configured to penetrate a corresponding external insulating layer (24) of a corresponding one of the plurality of electrical conductors (14) to place the IDC connector portion in electrical communication with the conductive core portion (28) of the corresponding electrical conductor (14).



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A. CLASSIFICATION OF SUBJECT MATTER INV. H01R4/24 H01R13/506 H01R13/627 H01R13/11 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 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 C. DOCUMENTS CONSIDERED TO BE RELEVANT Category\* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. χ US 2004/266250 A1 (MURO TAKASHI [JP] ET 1,2,5-7,AL) 30 December 2004 (2004-12-30) 9,11,13, 14 abstract 3,4,12 page 5, paragraph 89 - page 6, paragraph 106 figures 1-12,29 χ US 2006/199423 A1 (YAMANASHI MAKOTO [JP] 1,5-9, ET AL) 7 September 2006 (2006-09-07) 11 - 14abstract 2,15 page 2, paragraph 48 - page 3, paragraph figures 1-5,610,12,13,15 Υ DE 10 2004 054203 A1 (ERNI ELEKTROAPP GMBH 2,12[DE]) 11 May 2006 (2006-05-11) abstract; figures 1-5 X Further documents are listed in the continuation of Box C. See patent family annex. Special categories of cited documents: \*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 investigation. "A" document defining the general state of the art which is not considered to be of particular relevance invention earlier document but published on or after the international "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 filing date "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) "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 docudocument referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled in the art. document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 23 October 2008 03/11/2008 Name and mailing address of the ISA/ Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Fax: (+31–70) 340–3016 Kardinal, Ingrid

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C(Continua	tion). DOCUMENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Υ	EP 1 369 956 A (TYCO ELECTRONICS NEDERLAND B V [NL]) 10 December 2003 (2003-12-10) figures 1-4	3,4
Υ	US 4 666 227 A (GALIZIA MAURO [IT] ET AL) 19 May 1987 (1987-05-19) abstract; figure 7	15
<b>A</b> .	US 4 758 536 A (MILLER VERNON R [US] ET AL) 19 July 1988 (1988-07-19) abstract; figures 2-7	15

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2008/005727

Patent document cited in search report			Publication date	Patent family Publication member(s) date
US	2004266250	A1	30-12-2004	DE 102004022260 A1 09-12-2004 FR 2854740 A1 12-11-2004 JP 3948526 B2 25-07-2007 JP 2004335221 A 25-11-2004
US	2006199423	A1	07-09-2006	NONE
DE	102004054203	A1	11-05-2006	JP 2006140157 A 01-06-2006 US 2006134966 A1 22-06-2006
EP	1369956	Α	10-12-2003	NONE
US	4666227	A	19-05-1987	ES 297142 U 16-03-1989 FR 2578362 A1 05-09-1986 IT 1179895 B 16-09-1987 SE 461885 B 02-04-1990 SE 8506140 A 29-06-1986
US	4758536	Α	19-07-1988	NONE