



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
03.09.2003 Bulletin 2003/36

(51) Int Cl.7: **H05B 41/36**, H05B 41/282,
H05B 41/24, H05B 41/285

(43) Date of publication A2:
03.07.2002 Bulletin 2002/27

(21) Application number: **01124310.2**

(22) Date of filing: **19.10.2001**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR**
Designated Extension States:
AL LT LV MK RO SI

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(30) Priority: **28.12.2000 IT TV000163**

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(54) **Power supply device for cold-cathode discharge lamps**

(57) A power supply device (1) for cold-cathode discharge lamps, constituted by a unit (2) for conversion from alternating-current mains voltage to direct current with voltage reduction, and by a distribution unit (12) which supplies power to one or more inverters (16) suit-

able to convert from low-voltage DC to high-voltage AC one or more cold-cathode discharge lamps (13). Appropriate devices (28) are also provided for diagnostics, programming, functional testing, any ground leakage, and identification of failure of the individual lamp.

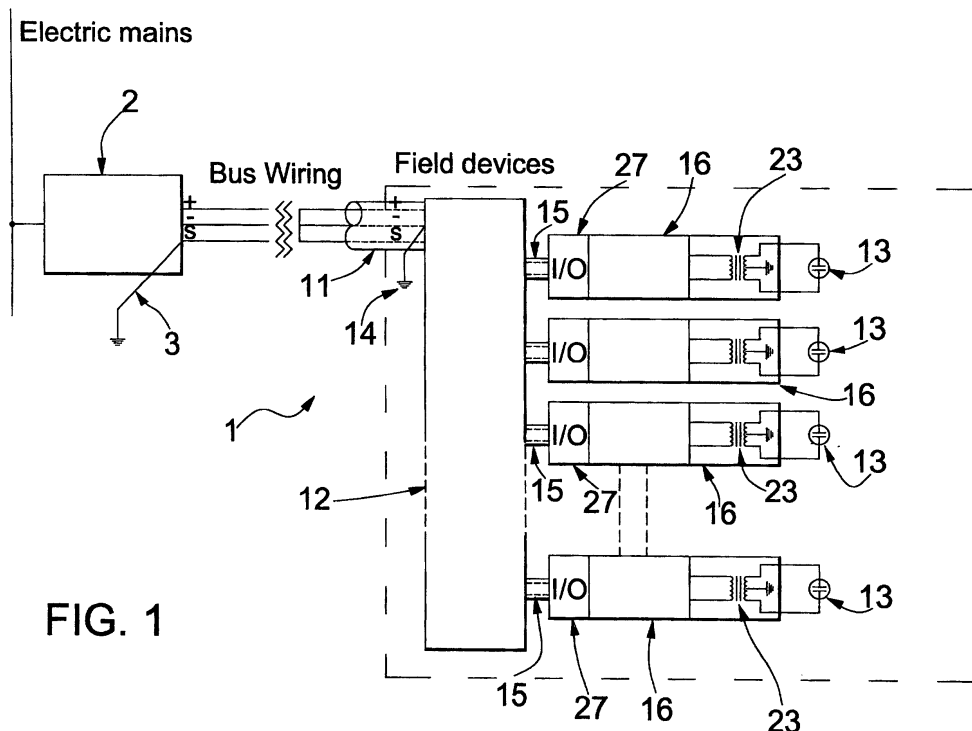


FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 01 12 4310

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	US 4 751 398 A (ERTZ III ALEXANDER L) 14 June 1988 (1988-06-14) * column 4, line 10 - column 8, line 16; figures 1,2 *	1,2,5-8, 17,18	H05B41/36 H05B41/282 H05B41/24 H05B41/285
Y	ALONSO J M ET AL: "A MICROCONTROLLER-BASED EMERGENCY BALLAST FOR FLUORESCENT LAMPS" IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, IEEE INC. NEW YORK, US, vol. 44, no. 2, 1 April 1997 (1997-04-01), pages 207-216, XP000656632 ISSN: 0278-0046 * the whole document *	1,2,5-8, 17,18	
Y,D	US 5 814 938 A (BELAND ROBERT ET AL) 29 September 1998 (1998-09-29) * column 2, line 40 - column 5, line 21; figures 1-5 *	1,2,5-8, 17,18	
Y	DE 32 12 339 A (FRANKAUER MANFRED) 22 September 1983 (1983-09-22) * page 4, line 5 - page 9, line 12; figures 1-4 *	1,2,5-8, 17,18	TECHNICAL FIELDS SEARCHED (Int.Cl.7) H05B
A	US 5 487 088 A (WELTZ RICHARD ET AL) 23 January 1996 (1996-01-23)		
A	US 5 949 197 A (KASTNER MARK) 7 September 1999 (1999-09-07)		
A	WO 99 12399 A (SPARTON CORP) 11 March 1999 (1999-03-11)		
A	US 5 420 779 A (PAYNE RODGER E) 30 May 1995 (1995-05-30)		
-/--			
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 9 July 2003	Examiner Albertsson, E
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03.82 (FOAC01)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 12 4310

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	DE 196 13 263 A (SOLAR WIDE IND LTD) 10 October 1996 (1996-10-10) ---		
A	US 5 654 609 A (ZARICH MICHAEL PAUL ET AL) 5 August 1997 (1997-08-05) ---		
A	WO 94 27419 A (ETTA IND INC) 24 November 1994 (1994-11-24) ---		
A	US 4 630 005 A (DAVIS ARIEL R ET AL) 16 December 1986 (1986-12-16) -----		
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 9 July 2003	Examiner Albertsson, E
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EPO FORM 1503 03.82 (P04001)

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 01 12 4310

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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09-07-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4751398	A	14-06-1988	NONE
US 5814938	A	29-09-1998	NONE
DE 3212339	A	22-09-1983	DE 3212339 A1 22-09-1983
US 5487088	A	23-01-1996	CA 2134600 A1 29-04-1995
US 5949197	A	07-09-1999	AU 8275098 A 19-01-1999 WO 9901013 A2 07-01-1999
WO 9912399	A	11-03-1999	WO 9912399 A1 11-03-1999
US 5420779	A	30-05-1995	NONE
DE 19613263	A	10-10-1996	DE 19613263 A1 10-10-1996 FR 2732541 A1 04-10-1996 GB 2299659 A 09-10-1996 JP 8287723 A 01-11-1996 NL 1002784 C2 06-11-1997 NL 1002784 A1 04-10-1996
US 5654609	A	05-08-1997	US 5485057 A 16-01-1996 AT 214517 T 15-03-2002 AU 7794794 A 22-03-1995 CA 2169752 A1 09-03-1995 DE 69430142 D1 18-04-2002 EP 0746867 A1 11-12-1996 WO 9506951 A1 09-03-1995
WO 9427419	A	24-11-1994	AU 6908894 A 12-12-1994 CA 2162889 A1 24-11-1994 WO 9427419 A1 24-11-1994
US 4630005	A	16-12-1986	US 4508996 A 02-04-1985 CA 1228890 A1 03-11-1987

EPO FORM P0459

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