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(54) Instant start solid state ballast for fluorescent and gas-dis charge lamps.

(57) The standart Ballasts and starters used for the fluorescent lamps are based on the voltage kicks of a dying magnetic field in iron core. This is a somewhat artificial way of obtaining the voltage gradient necessary to establish an arc in the long vacuum tube. To facilitate this arc a cathode heating has been added for electron emission and arc starting.

In the new design

1- Instead of a weak voltage increase a dependable high voltage level is created by the sound autotransformer principle.

2- Instead of having the fully rated voltage primary coil, a much shorter one is subjected to the rated voltage for a few seconds and also protected from damage by a carefully chosen PTC (Positif Temperature Coefficient Thermistor) to separate the primary from the rated voltage circuit.

3- Therefore, with the aid of the PTC, from a 1 : 2 ratio autotransforme a voltage of $3 \times V$ (rated) is obtained instantly.

4- This very short durated voltage is enough to strike an arc even for a very low (140 V) network and light a lamp without a starter.

5- This high voltage is harmless since it has the secondary coil in series as a ballast in the lamp circuit.

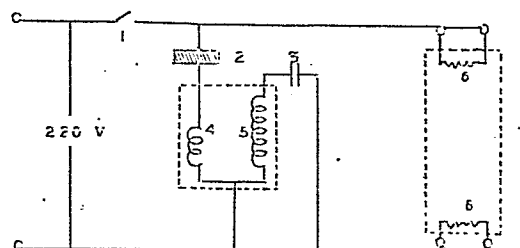


FIG 1



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. 3)
Y	FR-A-1 600 870 (KNOBEL) * Page 4, line 17 - page 6, line 28 *	1,2,4	H 05 B 41/04
Y	US-A-3 771 068 (PAGET) * Column 1, line 53 - column 2, line 59 *	1-4	
A	FR-A-2 115 886 (PHILIPS) * Pages 8,9; figure 2 *	1,3,4	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 3)
			H 05 B 41/00
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 28-03-1984	Examiner BERTIN M.H.J.
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			