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(54) Title: TRIAC DIMMABLE POWER SUPPLY UNIT FOR LED

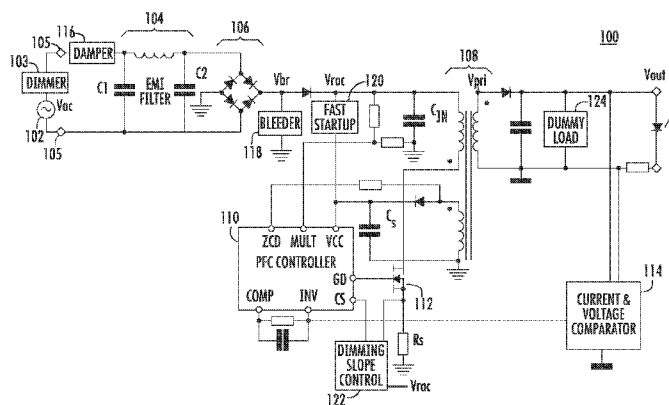


FIG. 8

(57) **Abstract:** A power-factor-corrected power supply adapted to supply power to one or more light emitting diodes (LEDs), comprises: a triac dimmer electrically connected between an alternating current source and a bridge rectifier; a damping circuit electrically connected between the alternating current source and the bridge rectifier; a bleeder circuit configured to conduct current between a supply terminal of the bridge rectifier and ground only when a triac in the triac dimmer is not conducting current; a fast startup circuit configured to conduct current between the supply terminal of the bridge rectifier and a voltage supply terminal of a power-factor-corrected controller when the triac dimmer is initially turned on until a supply voltage capacitor coupled to the voltage supply terminal of the power-factor-corrected controller has charged; a dimming slope control circuit configured to reduce a first voltage sensed at a current sensing terminal of the power-factor-corrected controller, such that a reduced amount of current is supplied to the one or more LEDs at a given firing angle, wherein the first voltage is representative of a current flowing through a primary winding of a flyback transformer; and a dummy load circuit provided in parallel with the one or more LEDs to draw a holding current for the triac only after the triac is turned on.