

Title (en)

Power supply arrangement with voltage regulation and current limiting

Title (de)

Stromversorgungseinrichtung mit Spannungsregelung und Strombegrenzung

Title (fr)

Dispositif d'alimentation avec régulation de tension et limiteur de courant

Publication

EP 0421516 B1 19951220 (DE)

Application

EP 90202535 A 19900925

Priority

DE 3932776 A 19890930

Abstract (en)

[origin: JPH03123916A] PURPOSE: To obtain a current supply device having a sufficient dynamic control range with less circuit elements by operating a control transistor with emitter arrangement during active voltage adjustment and operating it with base arrangement during active current restriction. CONSTITUTION: The output terminal of a second control amplifier OP2 is connected to the emitter of the control transistor T2 through a resistor R5. The transistor T2 is operated with emitter arrangement during active voltage adjustment and operated in base arrangement during active current restriction. Thus, a first control amplifier OP1 becomes active for voltage control during a regular operation. When the measured voltage UM of a current measuring resistor R10 becomes more than a restricted value decided by second reference voltage and the output voltage increases, the transistor T2 operates with base arrangement and load current reduces by quantity that measured voltage increases. Thus, voltage control or current restriction easily becomes active by combining the two amplifiers OP1 and OP2 with the transistor T2, and the sufficient control range is provided with the less elements.

IPC 1-7

G05F 1/573

IPC 8 full level

H02H 9/02 (2006.01); **G05F 1/56** (2006.01); **G05F 1/573** (2006.01)

CPC (source: EP US)

G05F 1/573 (2013.01 - EP US); **Y10S 323/908** (2013.01 - EP US)

Cited by

EP2637160A1; CN102625512A; EP0497106A3; EP0576772A1; US5453678A; US6172491B1; WO9531762A1; WO9512916A1; WO9531761A1; US9514671B2

Designated contracting state (EPC)

BE DE FR GB IT NL SE

DOCDB simple family (publication)

EP 0421516 A2 19910410; **EP 0421516 A3 19910821**; **EP 0421516 B1 19951220**; DE 3932776 A1 19910411; DE 59009980 D1 19960201; JP H03123916 A 19910527; US 5041777 A 19910820

DOCDB simple family (application)

EP 90202535 A 19900925; DE 3932776 A 19890930; DE 59009980 T 19900925; JP 26064590 A 19901001; US 58730990 A 19900921