1kΩ

100kΩ

10kΩ

10kΩ

100kΩ

10uF

P1

P2



100kΩ

100kΩ

10uF

10kΩ

300kΩ

10uF

P4

P3

1kΩ

1kΩ

47uF

47uF

Vi

GND

Vo

1

2

3

2

1

3

Vi

GND

Vo

IC 7815

IC 7915

Supply Voltage

(15-30V)

Square Wave Generator and Input Comparator Block

PID Block

Summer and Plant Block

P1

P3

P4

P5

100kΩ

P2

P6

Self-Generation Circuit Block

Supply Voltage

(15-30V)

+15V

0V

-15V

100kΩ

100kΩ

50kΩ

P5

P6

100kΩ

100kΩ

100kΩ