



Output current can be limited actively by U8 and U13 to $I = 1.2 / R$.
 Choose R38 and R56 accordingly. To disable active current limiting:
 1) remove R38 and R56.
 2) close J6 an J7.

Output current is limited passively by the resistor R59 which is in line with the load. Its purpose is to make sure, that the peltier current does not exceed the capabilities of the supply. The resistor is mounted externally to cope with the heat at full power. For maximum current remove this resistor and close the connector CONNS with a jumper.

Proportional

Integrator

Differentiator

precision voltage reference

NTC resistance
 Dipswitch to choose the temperature range.
 sk4-1, sk4-2, sk4-3, sk4-4

error signal
 Jumper J2 adds a test voltage to the input of the circuit. This is useful for testing. Remove the jumper for best stability.

regulation on/off
 Trimmers R12 and R64 are alternative trimpoints. Choose one at population time.

Use J8, U9 to reverse the polarity of the control loop.

R1 plus the resistors enabled by the dipswitch should match the actual value of the ntc resistor at the desired temperature. R2 and R7 should match the nominal value of the ntc resistor.

error signal is significantly positive

error signal is near zero

error signal is significantly negative

TITLE		PIDpeltier.sch	
REV.		3.2a	
DATE		22.05.12	
DRAWN BY:		<(knik)>	
FILE:		PIDpeltier.sch	

M1
 Hermond 1800CRK
 BOX-HAMMOND_1800