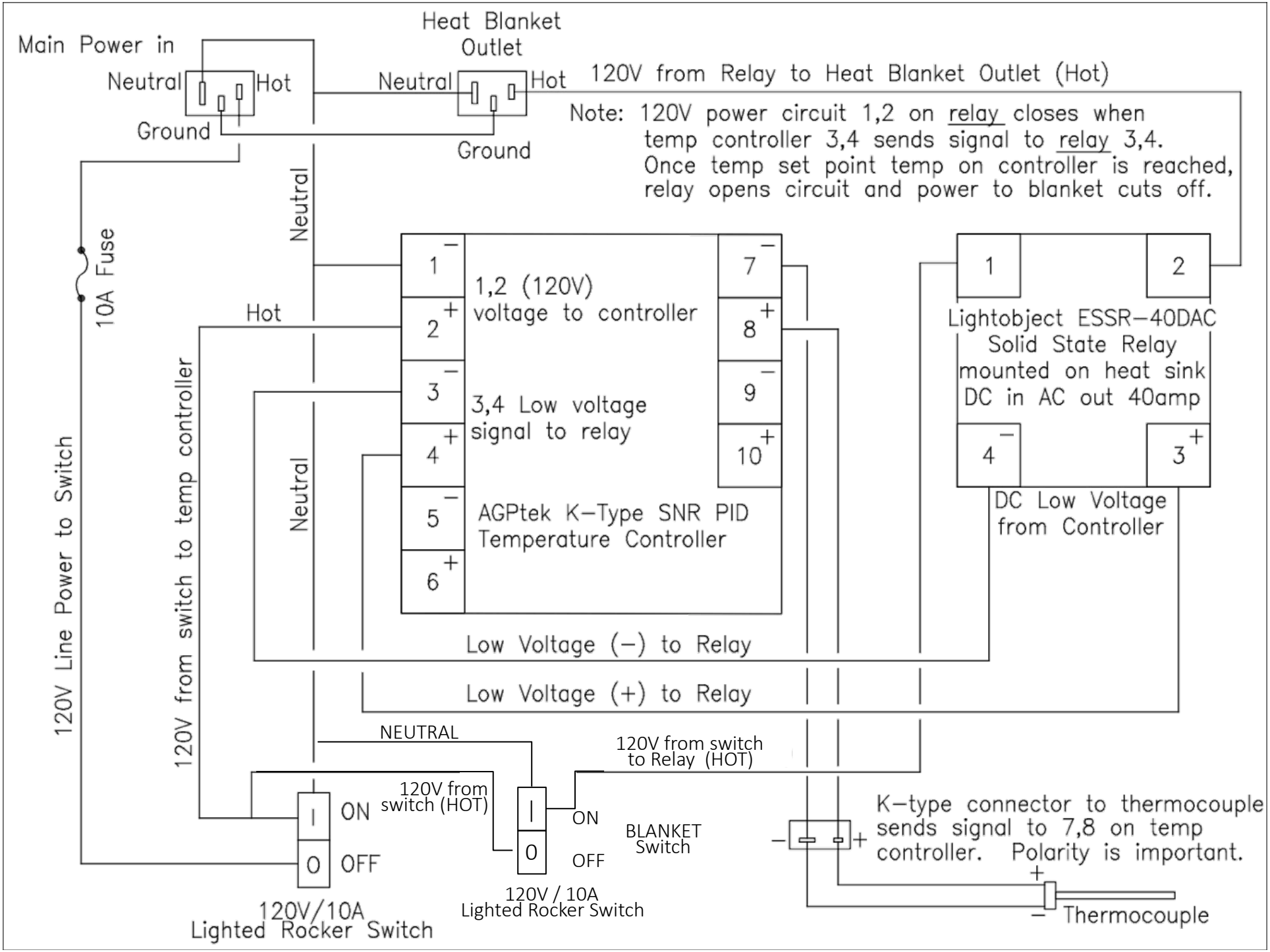

Main Power in
Neutral
Hot
Ground
Heat Blanket Outlet
Neutral
Hot
Ground
120V from Relay to Heat Blanket Outlet (Hot)
Note: 120V power circuit 1,2 on relay closes when temp controller 3,4 sends signal to relay 3,4. Once temp set point temp on controller is reached, relay opens circuit and power to blanket cuts off.
10A Fuse
Neutral
Hot
120V Line Power to Switch
120V from switch to temp controller
1,2 (120V) voltage to controller
3,4 Low voltage signal to relay
AGPtek K-Type SNR PID Temperature Controller
Lightobject ESSR-40DAC Solid State Relay mounted on heat sink DC in AC out 40amp
DC Low Voltage from Controller
Low Voltage (−) to Relay
Low Voltage (+) to Relay
NEUTRAL
120V from switch to Relay (HOT)
120V from switch (HOT)
ON
OFF
120V/10A Lighted Rocker Switch
BLANKET Switch
120V / 10A Lighted Rocker Switch
K-type connector to thermocouple sends signal to 7,8 on temp controller. Polarity is important.
Thermocouple

PARTS LIST

If you do your homework, parts should be around $40 less cost of case. Cases can be $0 (DIY), $10 (Radio Shack), $30+ (fancy metal case)

Search for best prices on Ebay or Amazon

1	MYPIN® Universal Digital TD4-SNR PID Temperature Controller with Relay
1	uxcell Heat Sink + Solid State Relay SSR-25 DA 25A 3.2-32V DC / 24-380V AC
2	Lighted Rocker Switches 120v / 10A
1	Outlet to mate to your Heater Blanket
1	Power Outlet to mate to Power Cord
	- Alternatively, just use a power cord with pigtails with a strain relief
1	Power cord if building with a outlet on the Temp Controller box
1	K-Type Thermocouple Probe
1	Thermocouple female receptacle
1	Fuse & Fuse Holder 10A
2 ft.	18 Gauge HOT wire (Red or Black…whatever is available)
2 ft.	18 Gauge NEUTRAL wire (White)
4 ft.	16 Gauge HOT wire (Red or Black…whatever is available)
2 ft.	16 Gauge NEUTRAL wire (White)
1 ft.	16 Gauge Ground (Green)
1	Case. Build one or purchase. I used a Radio Shack Large Project Box (8" x 6" x 3")
	- You could build one or select any box you fancy.
	Just keep in mind size of SSR with Heat Sink

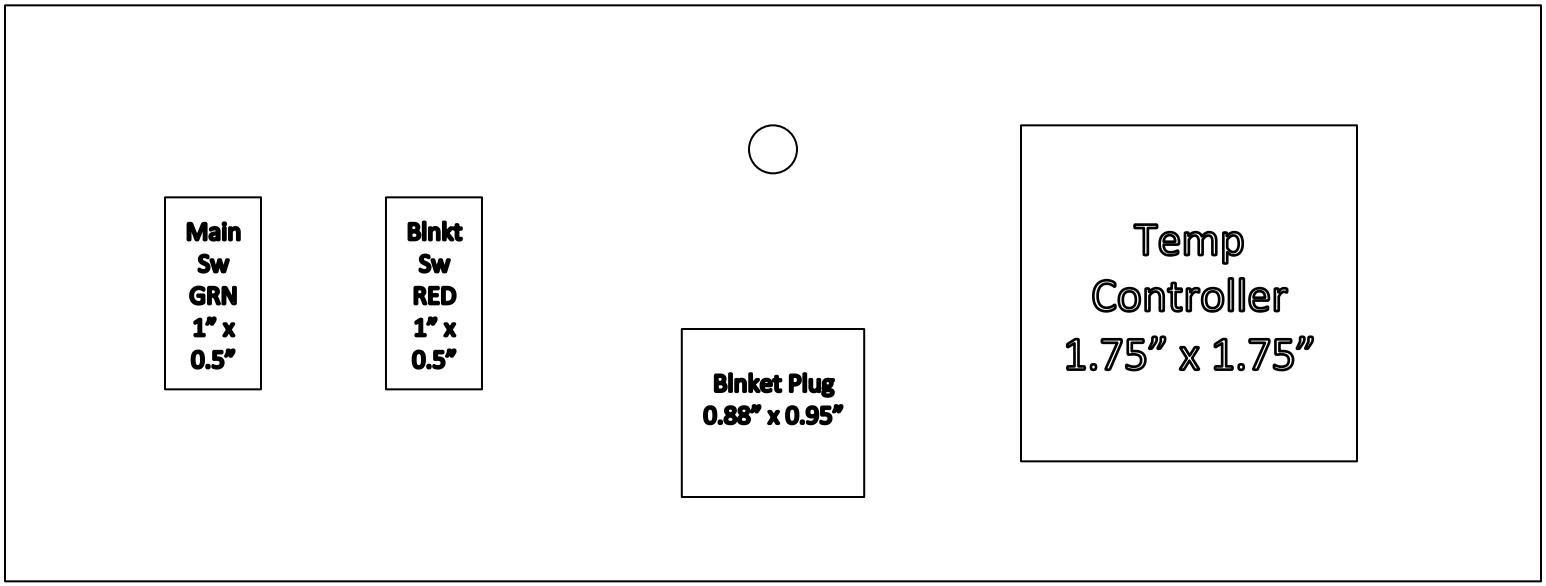
Miscellaneous

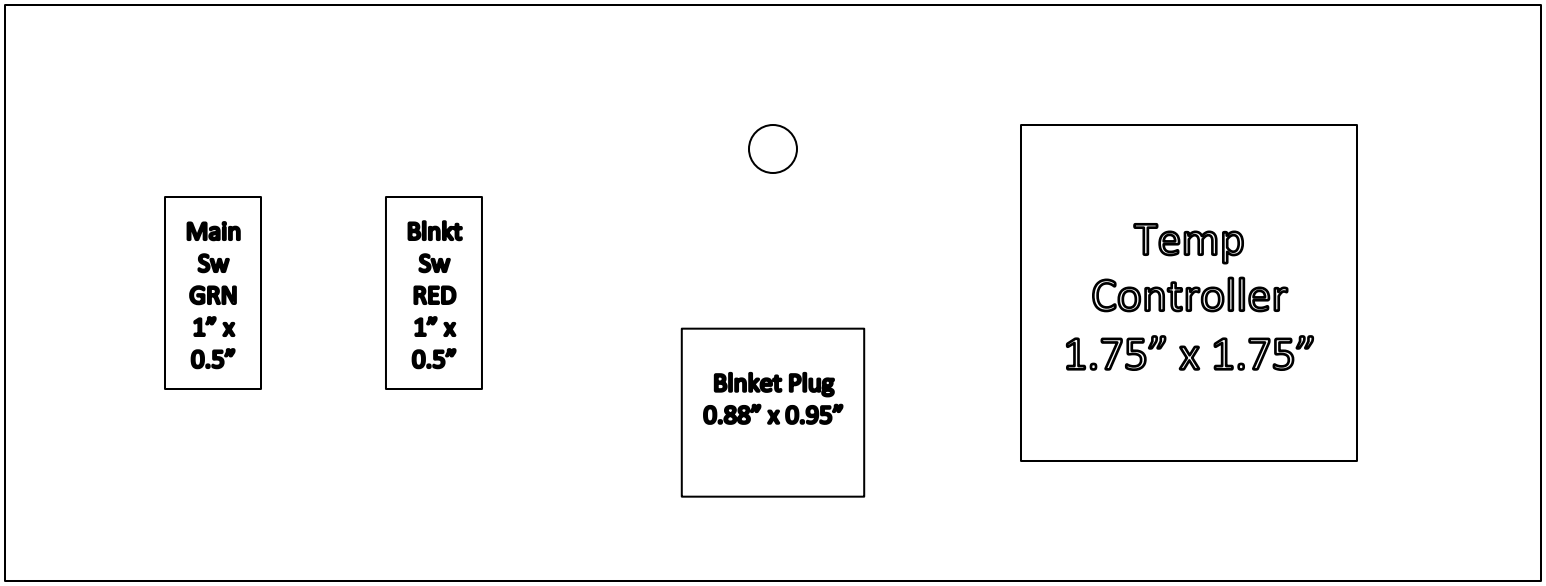
Screws to mount PID and SSR as needed,
Zip-ties or Hot Glue to tidy up wires
Wire connectors if desired for various connections (or just solder wire on terminals)

18 Ga - RED is HOT. WHITE is Neutral
16 Ga - RED is HOT. WHITE is Neutral

2' 18ga RED & WHITE,
4' 16ga RED, 2' 16ga WHITE,
1' 16Ga GREEN

0	Cut out holes	
1	Mount SSR on Aluminum bottom	4 - #6 Machine Screws, Nuts, Washers 2 - M4 Machine Screws 4" Aluminum
2	Solder Pos/Neg wires to Thermocouple Socket (Female)	1 - 8" 18Ga RED wire 1 - 8" 18Ga WHITE wire
3	Install Thermocouple Plug, switches, & power plugs	2 - #6 Machine Screws, Nuts, Washers
4	Install Ground Wire (solder both ends)	1 - 10" 16 Ga Ground Wire
5	Install Neutral Wire as follows: Main Plug (solder 2 wires) to Temp Controller (screw-on) & Main Switch (2 wires 1/4" conn) extra wire to Blanket Switch (2 wires 1/4" conn) extra wire to Blanket Plug (3/16" conn)	1 - 6" WHITE wire (Main Plug to Temp Cntl) 1 - 8" WHITE wire (Main Plug to Main Switch) 1 - 4" WHITE wire (Main Switch to Blanket Switch) 1 - 4" WHITE Wire (Blanket Switch to Blanket Plug)
6	Install Hot from main plug (solder) to Main Switch (1/4" Conn)	1 - 8" 16 Ga RED wire
7	Install Hot from Main Swtich (2 wires - 1/4" conn) to Temp Controller (screw-on) & Blanket Switch (1/4" conn)	1 - 8" 16Ga RED wire (Main Switch to Temp Controller) 1 - 4" 16Ga RED wire (Main Switch to Blanket Switch)
8	Install Hot from Blanket Switch (1/4" conn) to SSR (screw-on)	1 - 12" RED wire
9	Install Hot from SSR (screw-on) to Blanket Plug (3/16" conn)	1 - 12" RED wire
10	Install Pos/Neg wires from SSR to Temp Controller - WATCH POLARITY!!	1 - 12" 18Ga RED wire 1 - 12" 18Ga WHITE wire
11	Install Pos/Neg Thermocouple Conn wires to Temp Controller - WATCH POLARITY	Wires already prepped from step 2 above
12	OPTIONAL - only if not already connected Solder Thermocouple Connector (male) to Thermocouple	- WATCH POLARITY and
13	Verify Operation THEN Clean-up wiring with zip ties and/or Hot Glue (opt)	


Main
Sw
GRN
1" x
0.5"
Binkt
Sw
RED
1" x
0.5"
Binket Plug
0.88" x 0.95"
Temp
Controller
1.75" x 1.75"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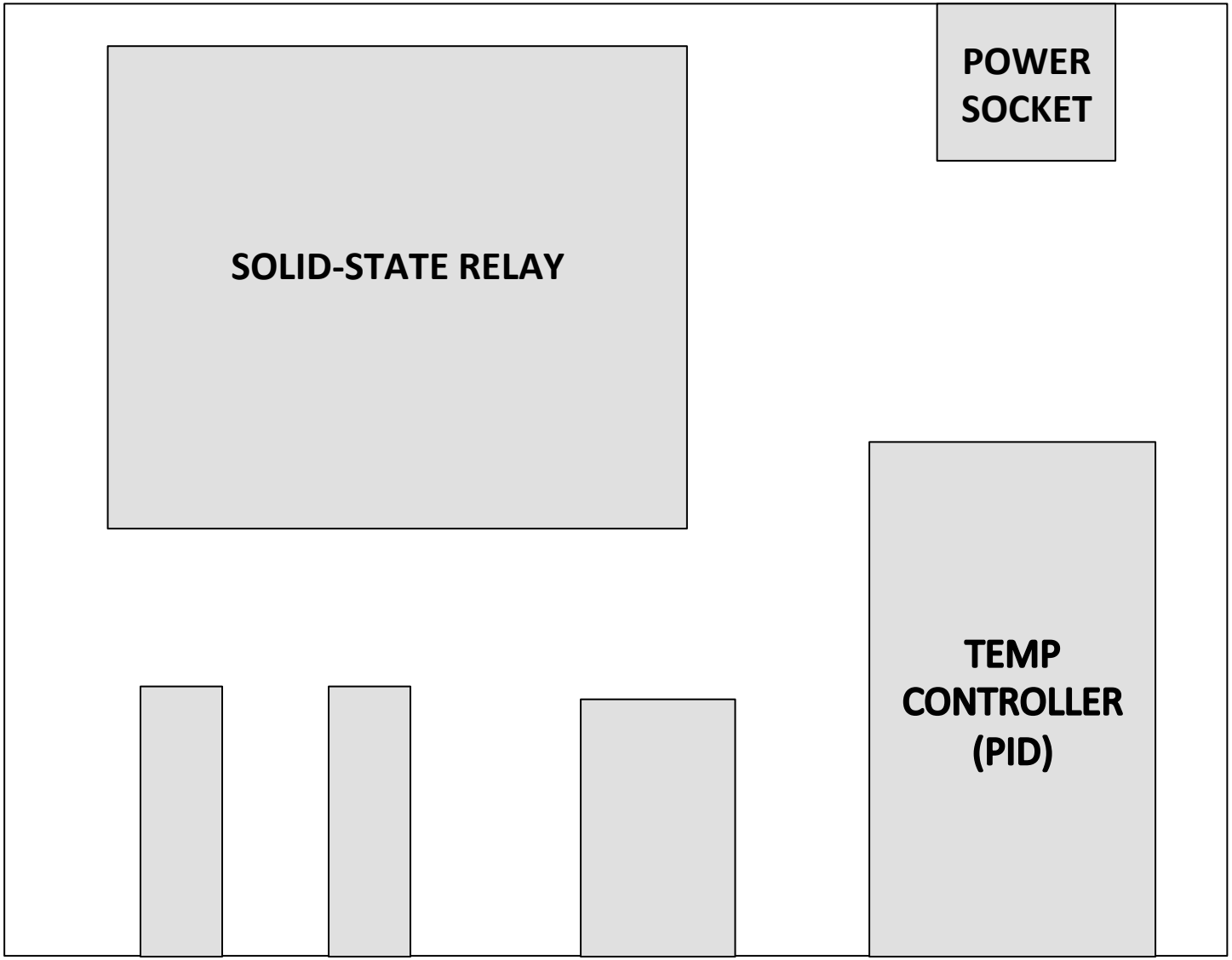
POWER SOCKET
SOLID-STATE RELAY
TEMP CONTROLLER (PID)