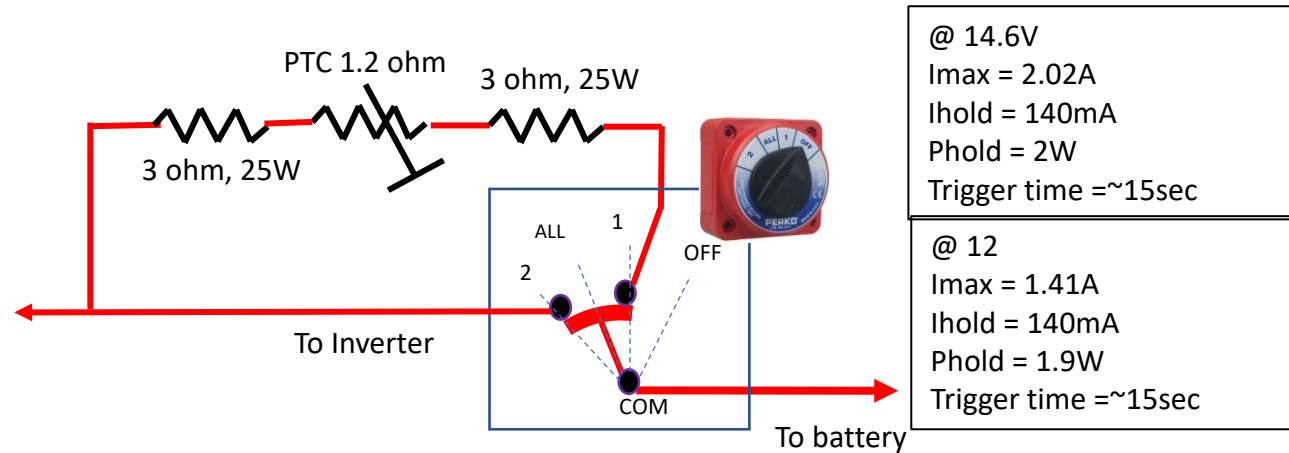


## **Inverter Disconnect with pre-charge**

This circuit is designed as an inverter disconnect that allows the user to pre-charge the inverter capacitors before fully turning on the system.

## 12V SYSTEM



### PTC specs

Bulk Part Number	Max. voltage	*1 Resistance Value at +25 °C	*2 Max. Current	*3 Hold Current		*4 Trip current		Dimensions (mm)		
Taping Part Number				+105°C	+85°C	-10°C	-40°C	D	H	d
PTGLCSAS1R2K3B51B0	D.C. 51V	1.2ohm $\pm$ 10%	5.0A	315mA	449mA	1168mA	1270mA	11.5	16.5	0.6
PTGLCSAS1R2K3B51A0										

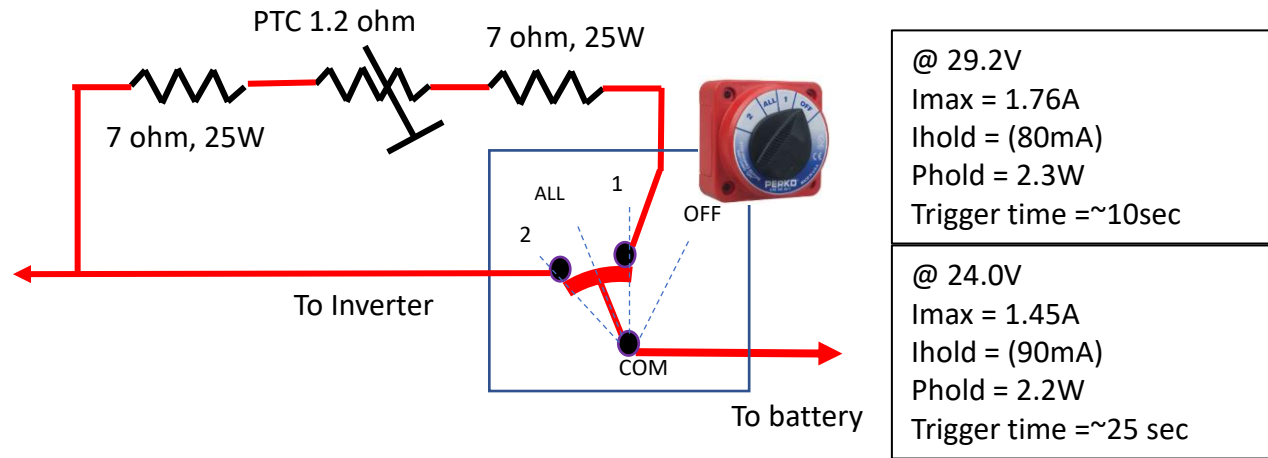
### Operation:

Turn ON

1. Ensure inverter is off
2. Turn switch to position '1' for  $\sim 1$  second
3. Turn switch to position 'All' or '2'
4. Turn on inverter

Note: The PTC resistor is a safety. If the user leaves the inverter on and the switch in position 1, the PTC will significantly reduce the current after several seconds.

## 24V SYSTEM



### Operation:

#### Turn ON

1. Ensure inverter is off
2. Turn switch to position '1' for ~1 second
3. Turn switch to position 'All' or '2'
4. Turn on inverter

### PTC specs

Bulk Part Number	Max. voltage	*1 Resistance Value at+25 °C	*2 Max. Current	*3 Hold Current		*4 Trip current		Dimensions (mm)		
Taping Part Number				+105°C	+85°C	-10°C	-40°C	D	H	d
PTGLCSAS1R2K3B51B0	D.C. 51V	1.2ohm±10%	5.0A	315mA	449mA	1168mA	1270mA	11.5	16.5	0.6
PTGLCSAS1R2K3B51A0										

Note: The PTC resistor is a safety. If the user leaves the inverter on and the switch in position 1, the PTC will significantly reduce the current after several seconds.

# Assembly

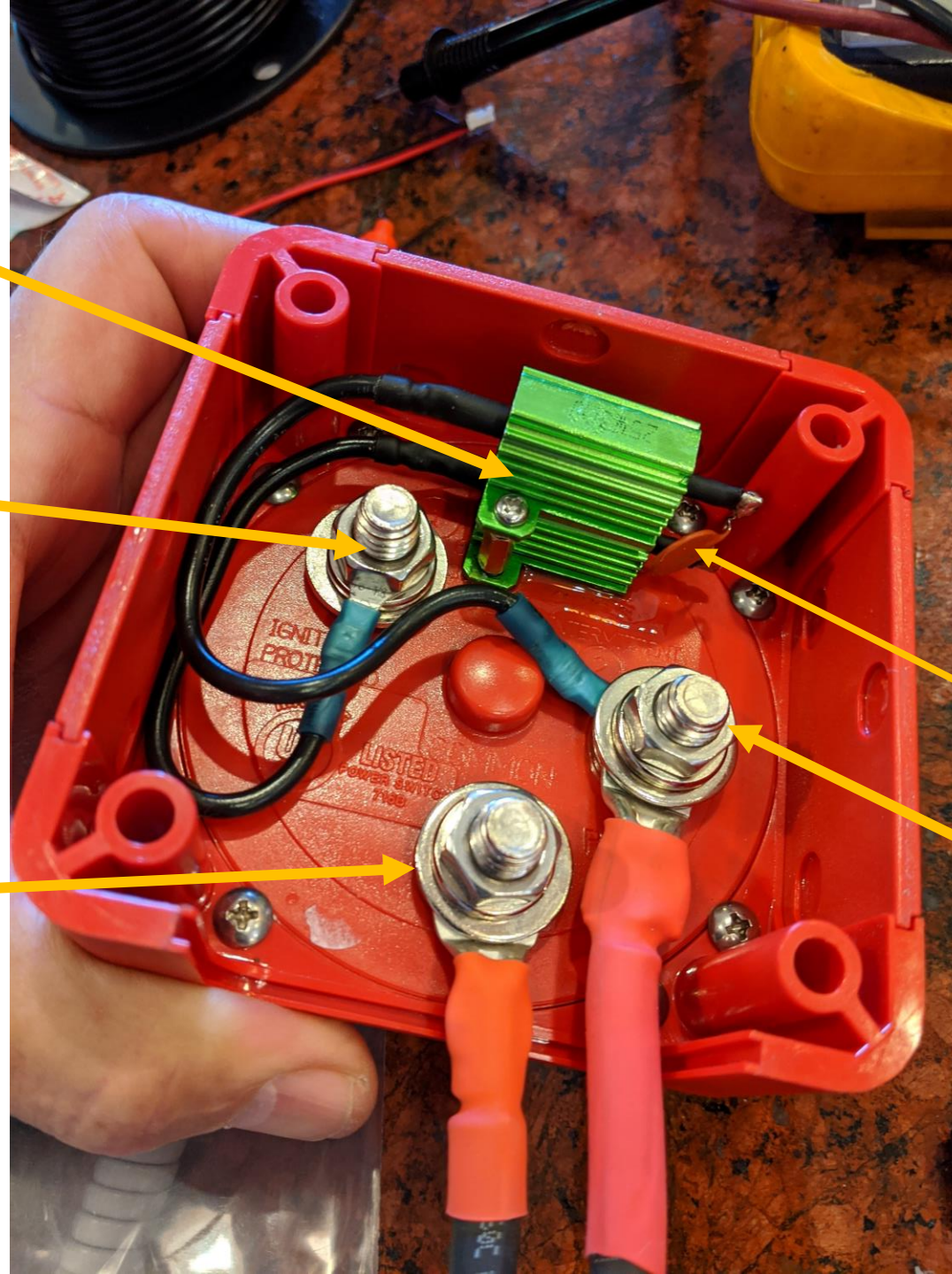
Two 25W resistors  
Stacked and glued

Post 1

Common

PTC resistor

Post 2





Label to help instruct the user



# Parts

## **Perko Switch:**

<https://www.ebay.com/p/1122213842>

Or

<https://www.ebay.com/itm/Perko-8511DP-Compact-Battery-Switch-7411/362536682888>

## **PTC Resistor: 1.2ohm, 5 Amp.**

<https://www.mouser.com/ProductDetail/murata/ptglcsas1r2k3b51a0/>

## **3 ohm 25W resistor (12 V System)**

<https://www.ebay.com/itm/25W-3ohm-Wirewound-Power-Resistor-Aluminum-Hosing-Chasis-Mount/401838767539>

## **7 ohm 25W resistor (24 V System)**

<https://www.ebay.com/itm/US-Stock-2x-7-ohm-7R-25W-Watt-Aluminum-Housed-Metal-Case-Wirewound-Resistors/401396173511>