

KIT-CUBE2S Installation Guide

1. Enclosure

Disassembling all the screws and the enclosure will be spitted into four pieces:

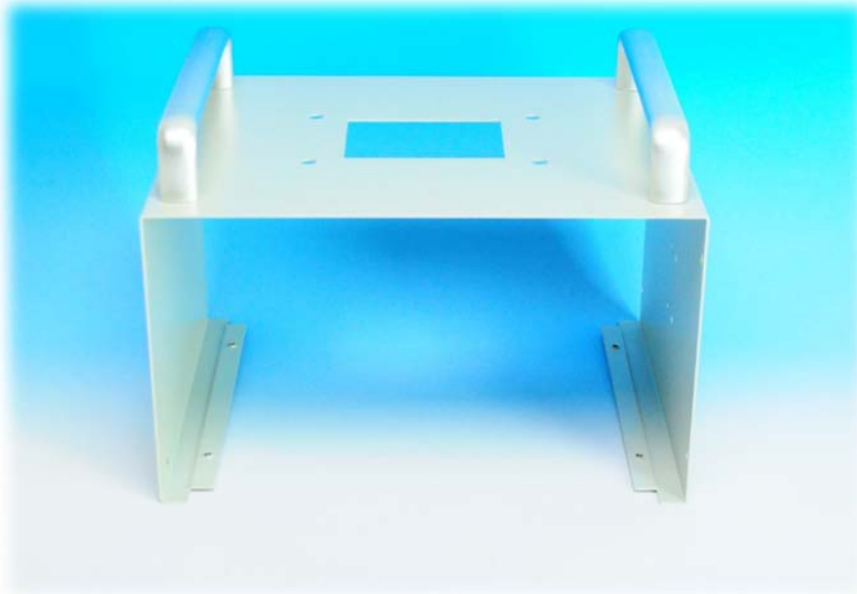


Figure 1. Top and Body of Qbox1.



Figure 2. Rear Plate of Qbox1.



Figure 3. Front Plate of Qbox1.

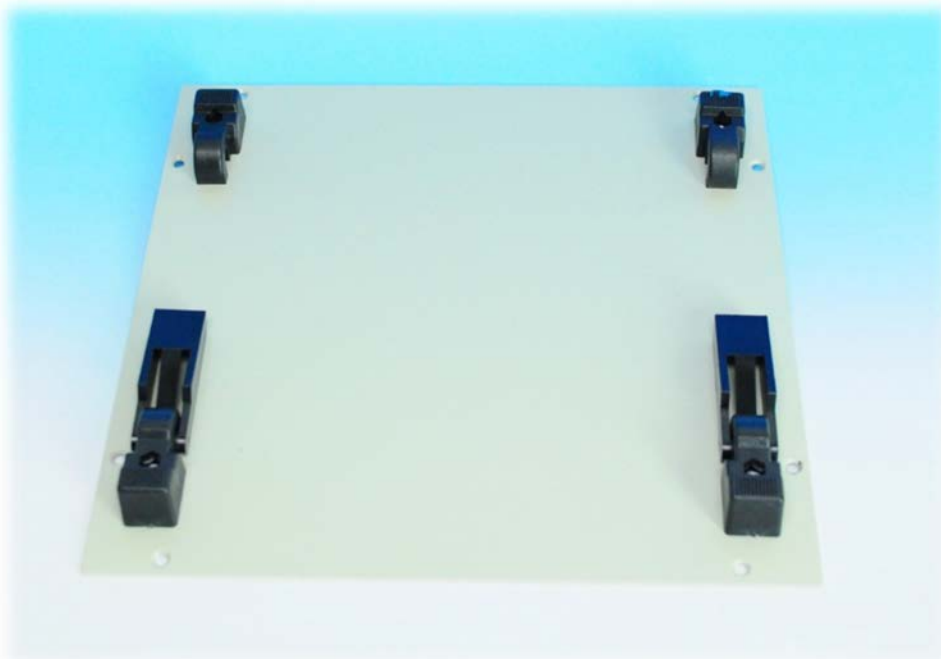


Figure 4. Bottom Plate of Qbox1.

Tips: Due to the space inside the enclosure is limited, we recommend you to start with the installation of heat sink, SSR, fuse holders and mini relays first, and then complete the wiring for the parts. During all the wiring process, the enclosure should be kept upside down; the bottom plate should be assembled back lastly.

2. Heat Sink and Solid-State Relay (SSR)

There are (4) M6 screws offered to mount the heat sink on the top of CUBE box.



Figure 5. Top view of heat sink installation.

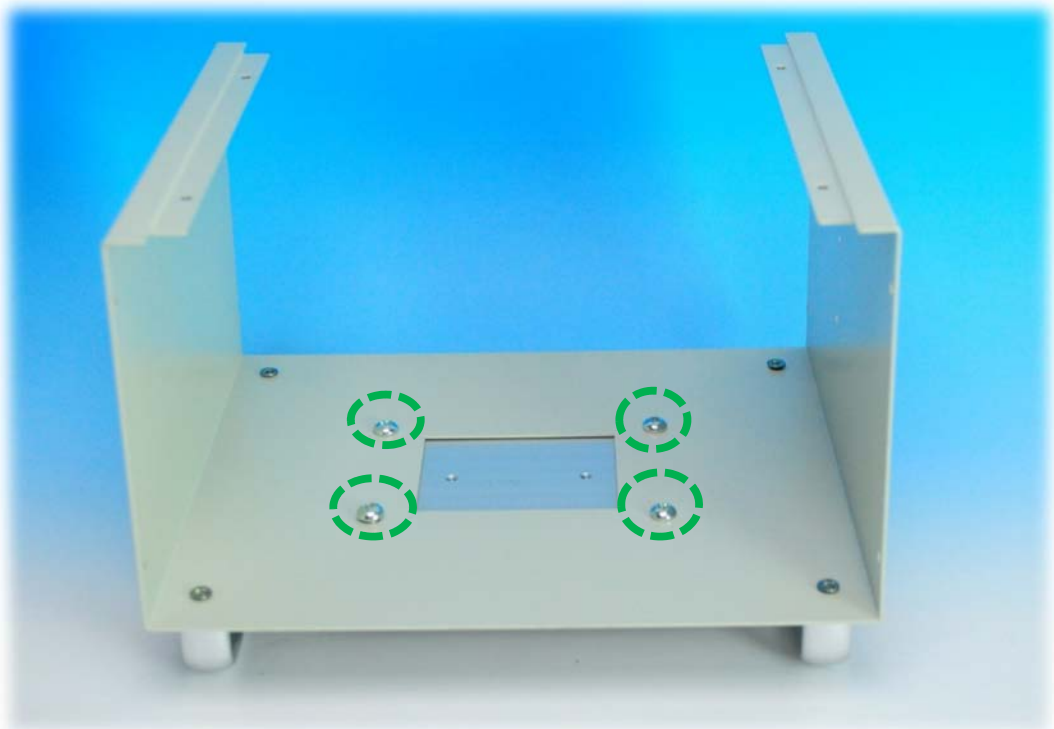


Figure 6. Bottom view of heat sink installation.

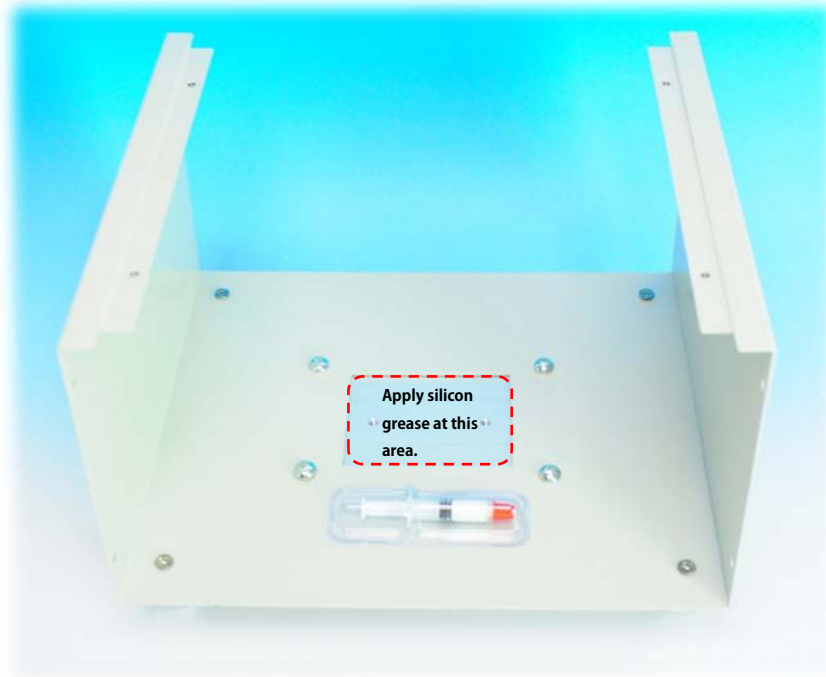


Figure 7. Apply Silicon Grease uniformly before mounting the SSR.

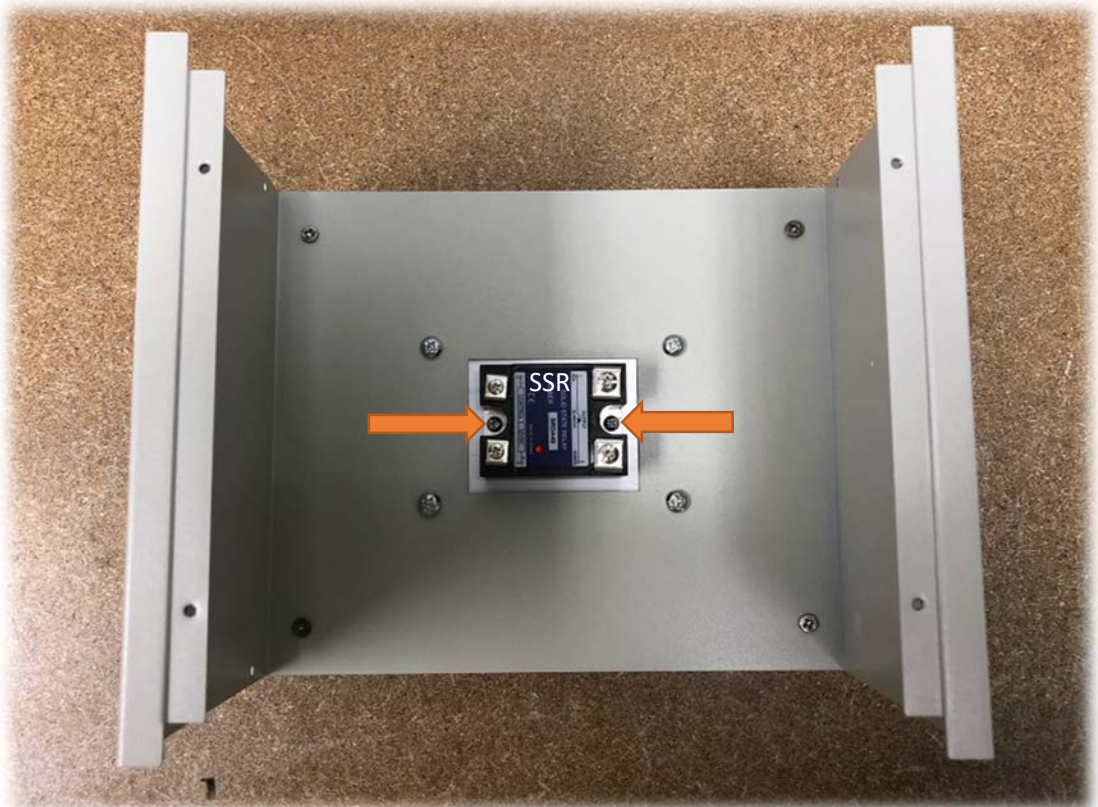


Figure 8. Using (2) M4 screws provided to mount the SSR on the heat sink.

3. Fuse Holders and Mini Relays.

NOTE: Two pairs of M3 screw and nuts are provided to mount each fuse holder in the KIT.

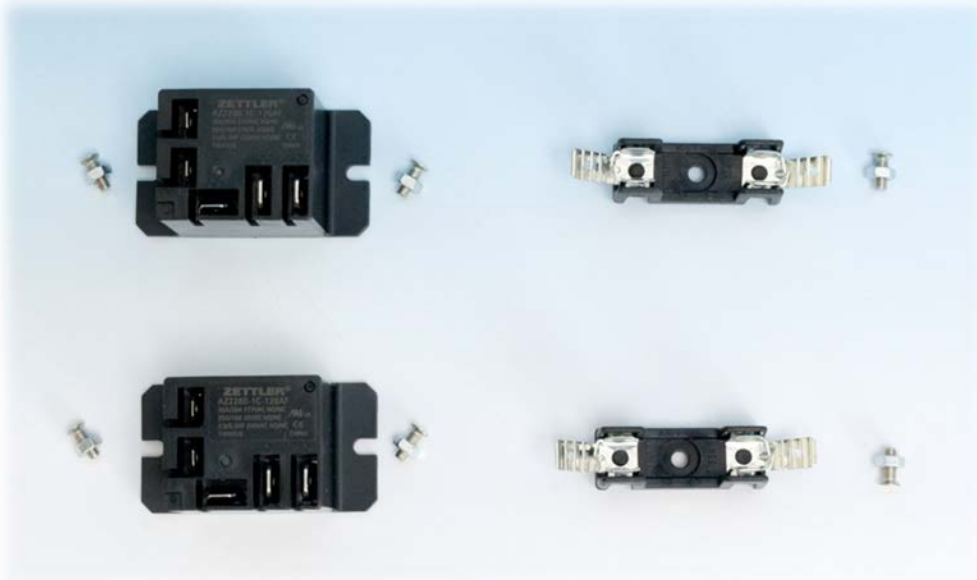


Figure 9. (2) pairs of M3 screw and nuts are provided for mounting each mini relay, (1) pair of M3 screw and nuts are provided for mounting each fuse holder.

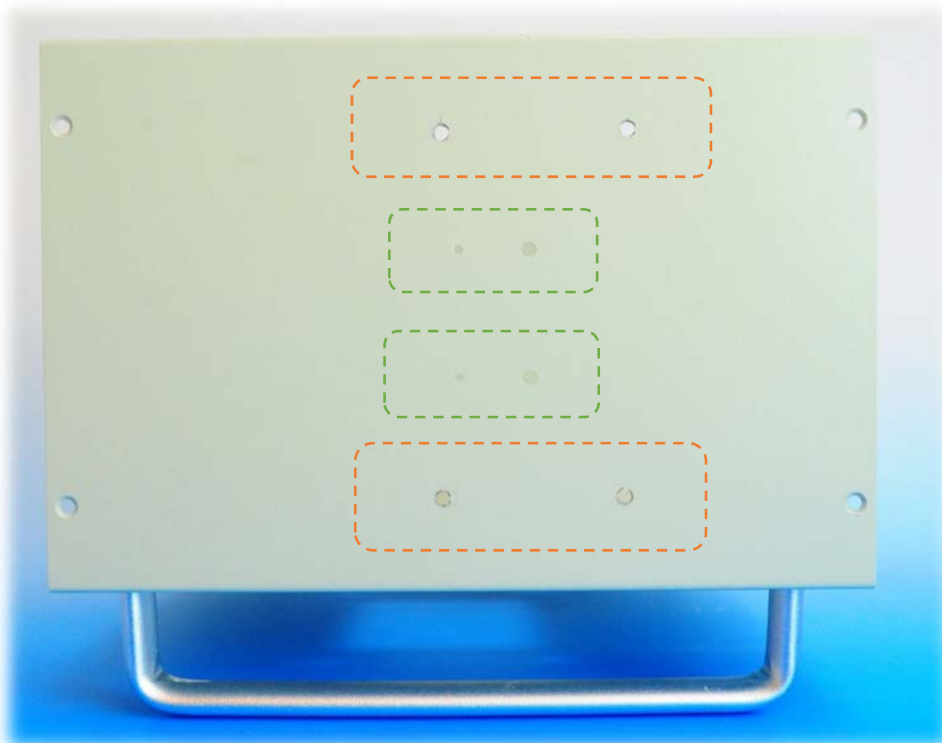


Figure 10. Locate the (8) small holes pre-drilled and start to mount your (2) mini relays and (2) fuse holders.



Figure 10. Outside View (Screw cap should be facing outside).



Tips: if you have rivets and rivet gun, you can also use it to mount the fuse holder instead of using M3 screw and nut.

Figure 11. Inside view (all nuts should be installed inside).

4. Wire Preparation

Table 1. The total length of each wire needed.

Wire Color	10AWG	14 AWG	22 AWG
Green	2 ft	2 ft	0 ft
White	0 ft	3 ft	3 ft
Black	3 ft	5 ft	3 ft
Red	3 ft	0 ft	1 ft
Yellow	0 ft	0 ft	1 ft
RTD Extension Wire	This is offered in the kit and soldered with black XLR male connector.		

Table 2. The total number of connectors needed.

Connector Types	QTY	For
Yellow Stud Ring Terminal (12-10AWG)	4	Ground
Red Insulated Female Disconnect Square (22 - 18 AWG)	8	5-15R socket & Mini Relay
Blue Insulated Female Disconnect Square (16 - 14 AWG)	4	Mini Relay
Blue #6 Stud Locking Spade/Fork Terminal (22 - 18 AWG)	8	Controller and SSR input
Yellow #8 Stud Locking Spade/Fork Terminal (12 - 10 AWG)	2	SSR Output
Blue Vinyl Fully Insulated Female Wire Disconnect (16 – 14 AWG)	4	Fuse holder

Please cut and strip your wire to recommended length, and crimp them with appropriate connectors.

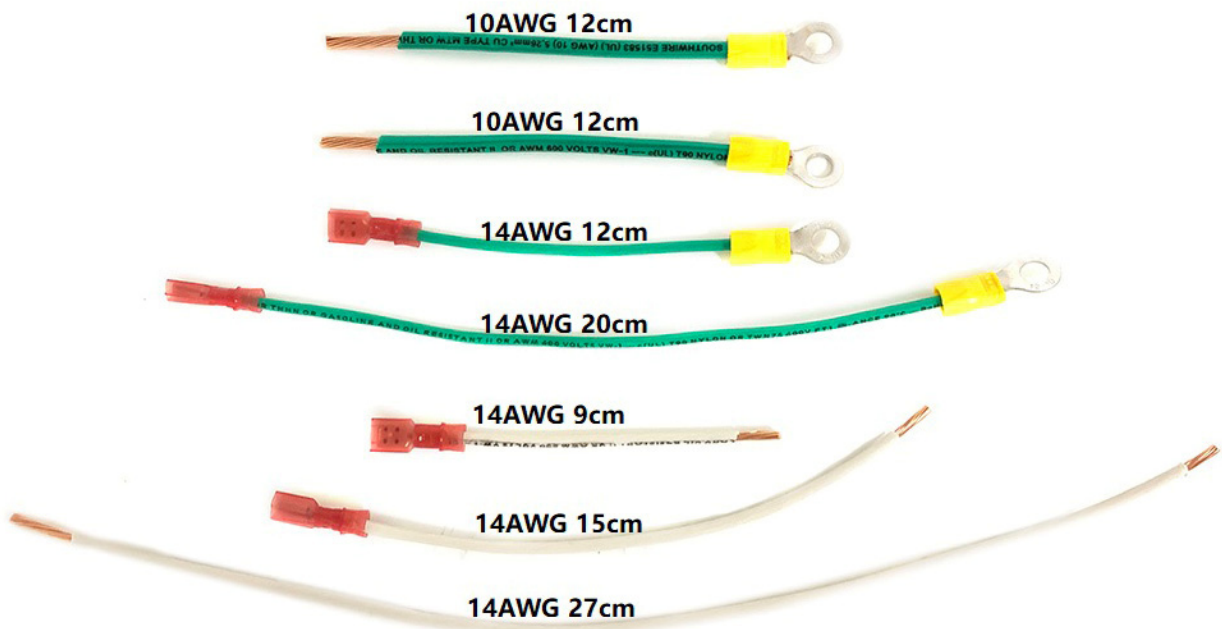


Figure 13. Ground and neutral wires.

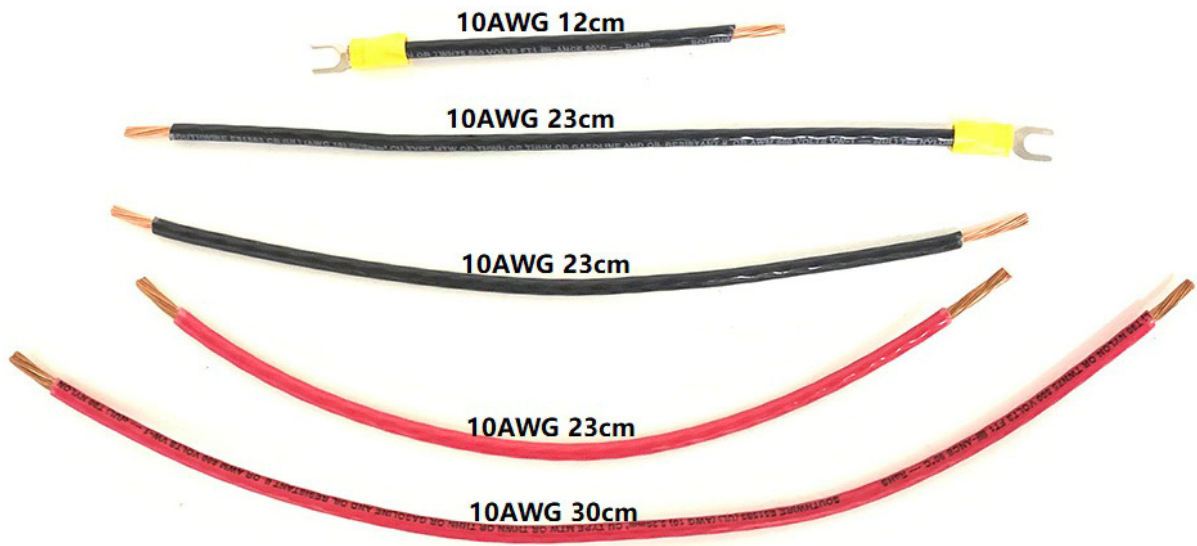


Figure 14. 10-AWG hot wires.

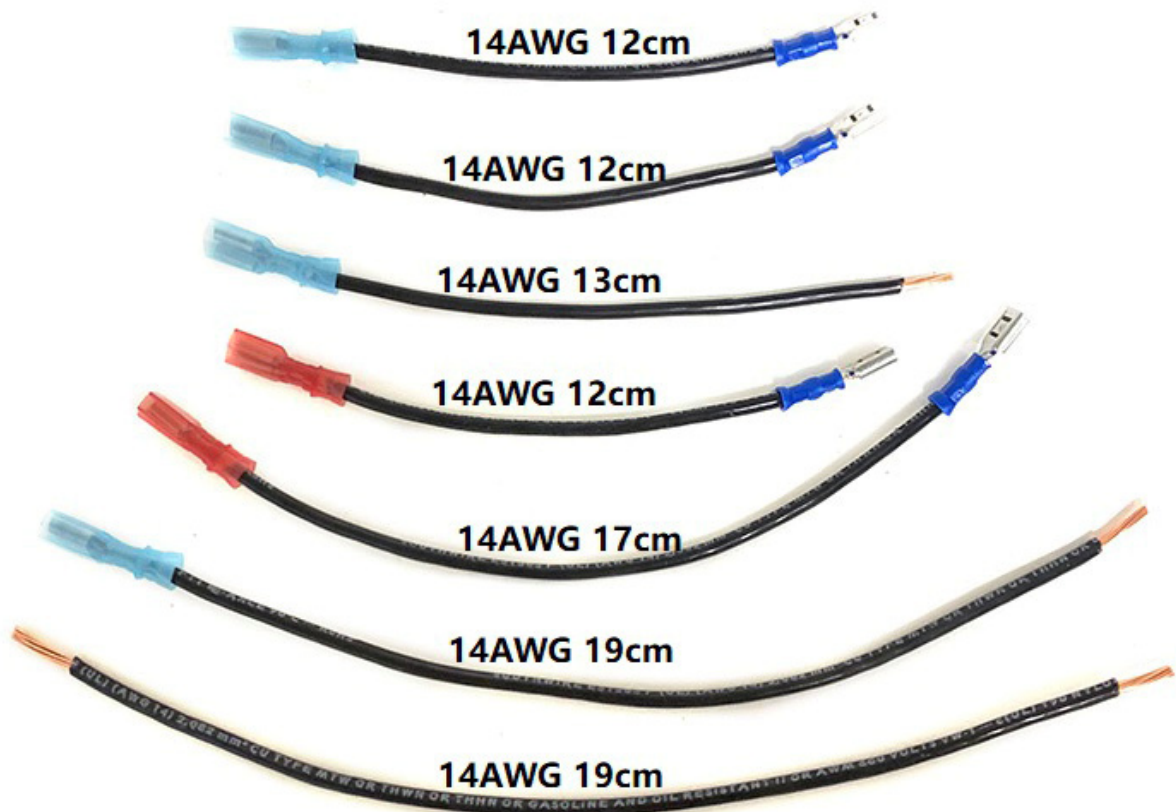


Figure 15. 14-AWG hot wires.

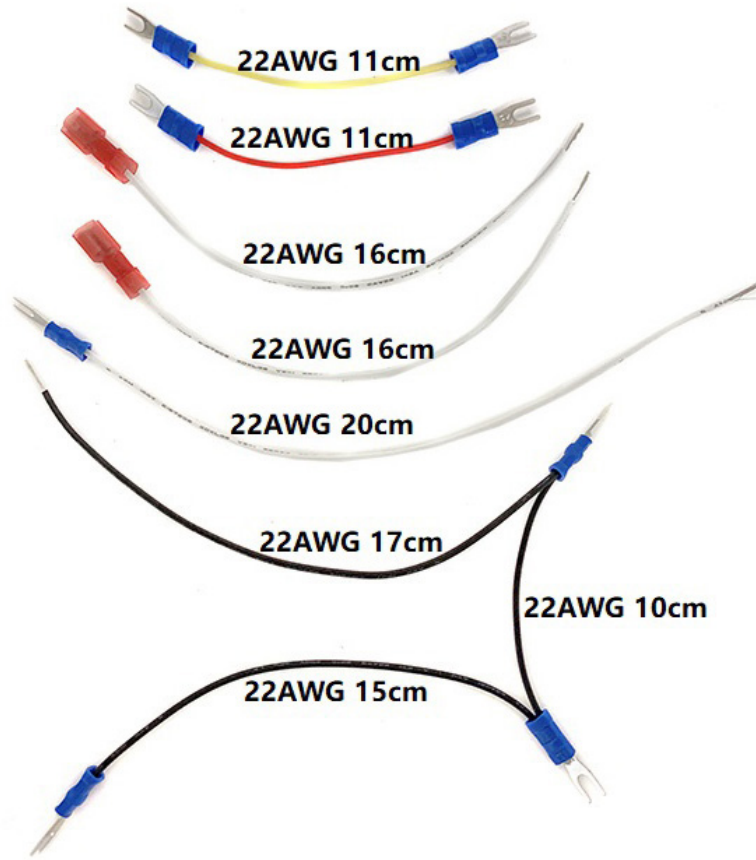


Figure 16. Other control wires.

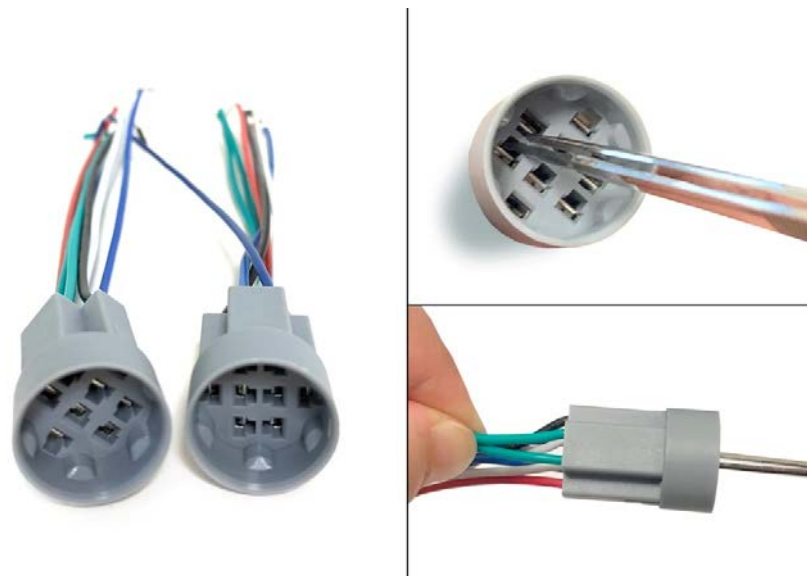


Figure 17. Wiring harness of illuminated switches. Remove the unnecessary green wires by insert a pair of tweezers into the corresponding slots (for green wires) and pull them out gently by hand at the same time. If the wires cannot be removed easily, that means the tweezers may not be inserted into the right slots.

5. Parts Wiring.

**Note: using 8-32 nut as
Grounding Post.**

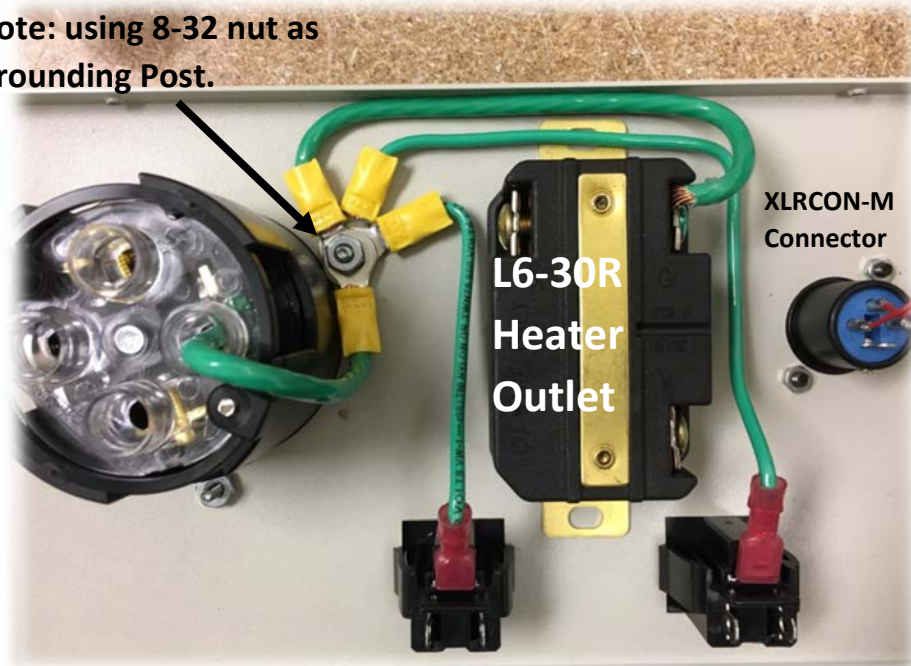


Figure 17. Rear plate assembly and ground wiring. (Note: L6-30R heater output should be mount with the (2) M4 screws; XLRCON-M connector needs (2) pairs of M3 screws and nuts.)

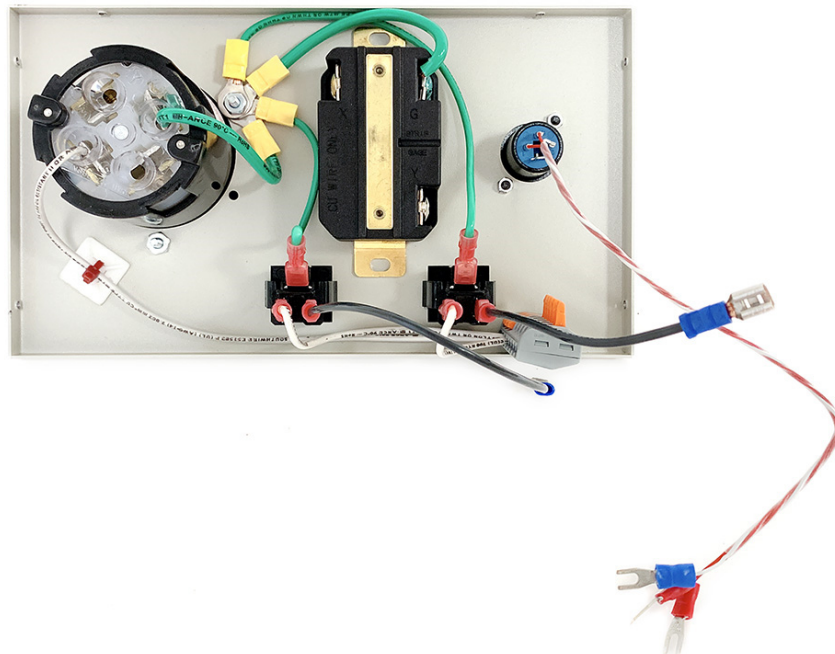


Figure 18. Continue with hot and neutral wires like the photo. Leave the hot wires to be connected later.



Figure 19. Start front panel from switches and EZBoil.



Figure 20. Add wiring harness to the switches and mount breaker bracket.



Figure 21. Push the two side legs out so that it can clamp on the front panel firmly.

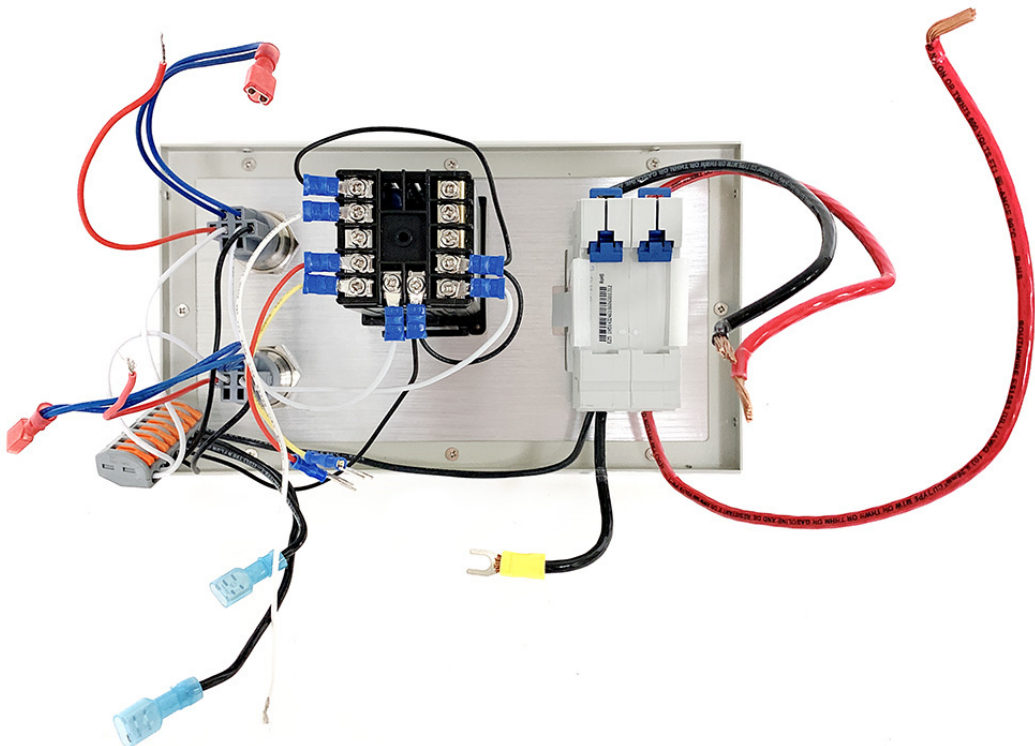


Figure 22. Wire the breaker switch before fit it into the bracket, and continue the wiring for EZboil and hot L1 bus for front plate like the photo.

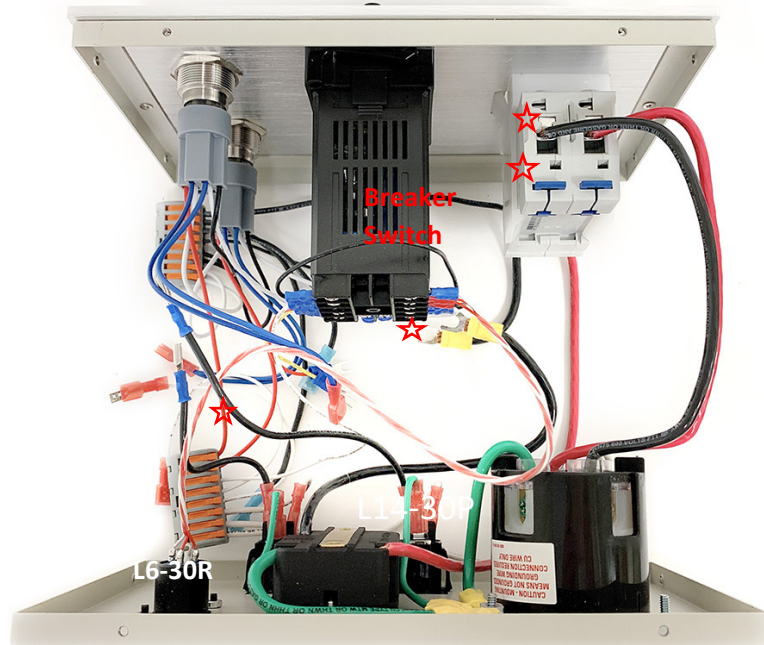


Figure 23. Connect the wires between front plate with rear plate.

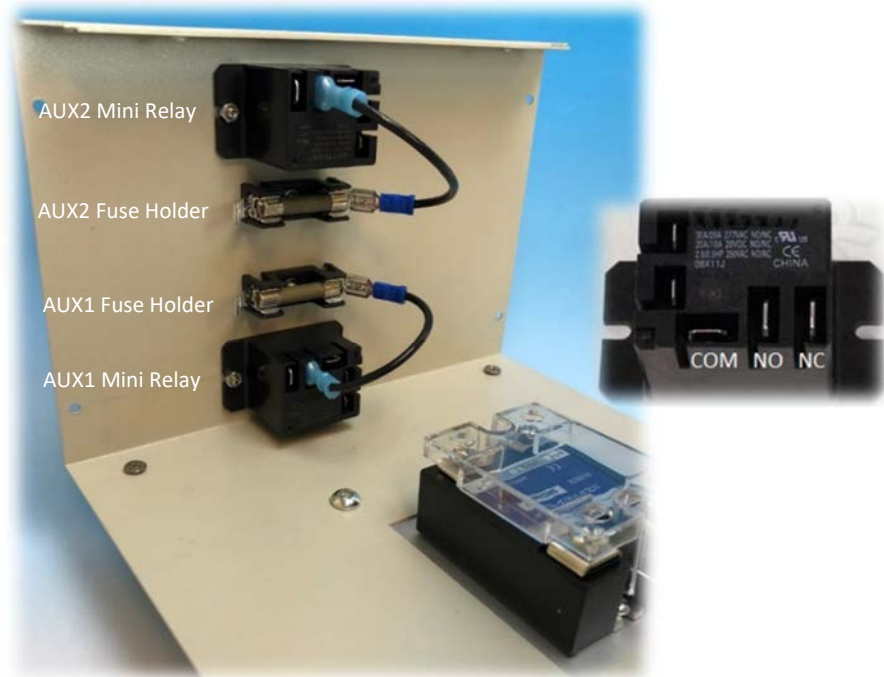
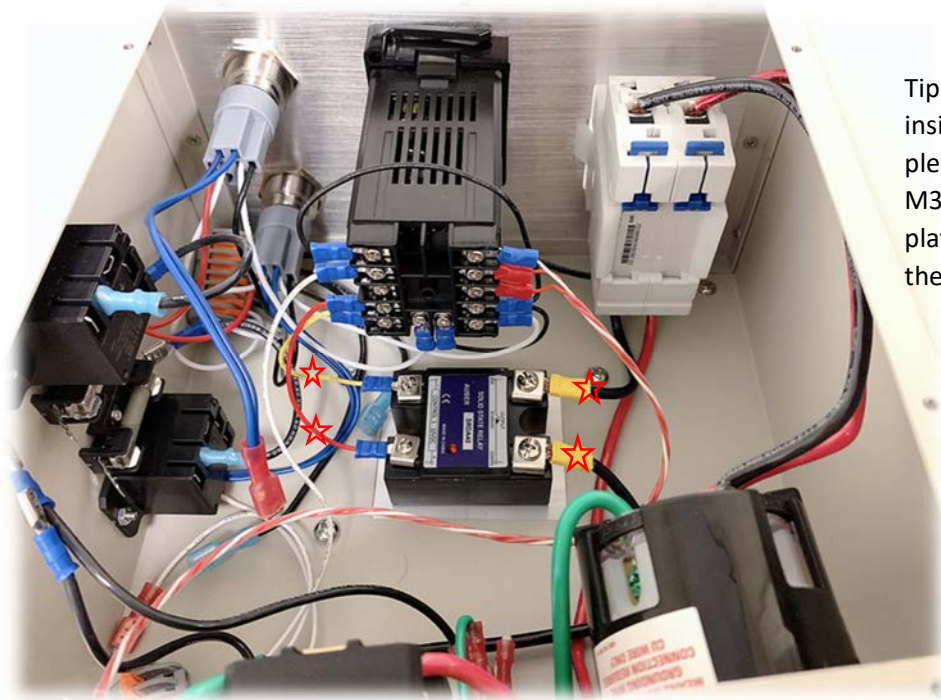


Figure 24. Place fuse into the fuse holder, and jump wire for each mini relay from its pin NO to the corresponding fuse holder.



Tips: Due to the limit space inside the enclosure, please do not tighten the M3 screws on the rear plate before connecting the SSR wires.

Figure 25. While assembling the front plate and rear plate with enclosure body, finish the SSR wiring.

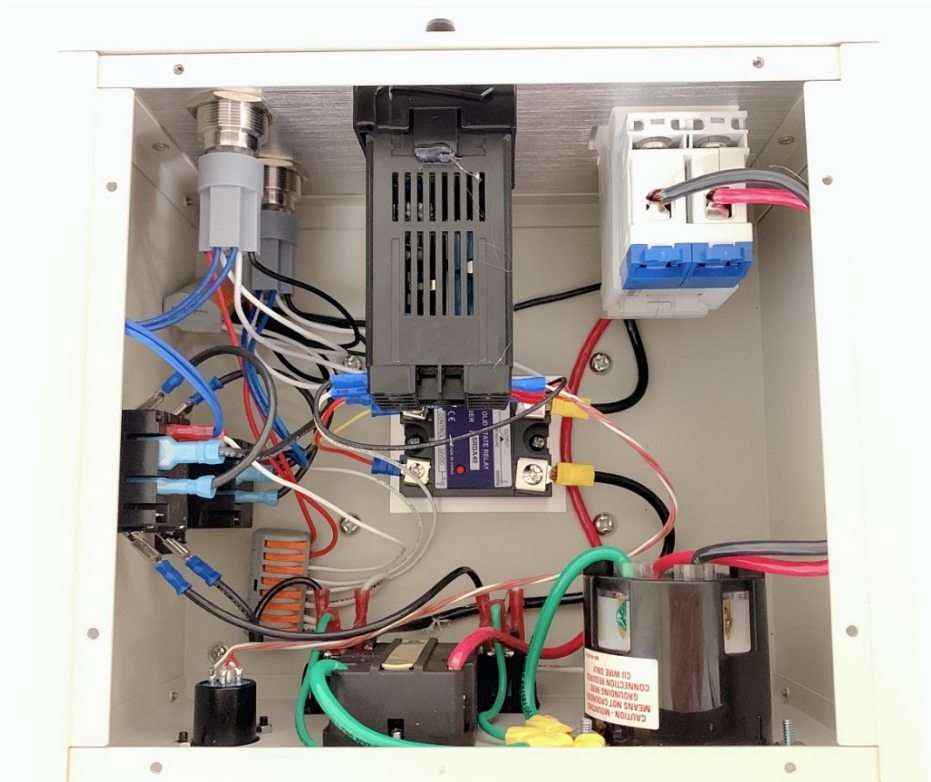


Figure 26. Complete the wiring of mini relays and fuse holders.

6. Testing.

Before closing the enclosure with bottom plate, you can do a simple test with 240V input power and load. For example, wiring a 220V light bulb to test the heater output and use a 120V lamp to test the pump output.

The EZBoil DSPR320 has initial status to be **stop**; one needs to press the run button once to start heating. And please remember to plug the sensor while testing.

In the case if there is no power from the heater outlet, please check SSR indicator and controller OUT light action; they should work synchronously.

If no power from the pump outlet when switch is at ON position, please check if fuse has been placed first.

After test, apply hot glue or silicon sealant for controller and the 5-15R pump outlets; these parts do not come with mounting screw, so they may go loose after time.

In the end, close the enclosure by fastening the screws on the bottom plate and you can enjoy brewing with it.

Appendix. Tools Recommendation

- Philip screw driver sets.
- Flat head screw driver sets.
- Ruler and caliper.
- Tweezer
- Wire cutter.
- Wire stripper.
- Wire crimper.
- Hot gun or multipurpose sealant.
- Multimeter.

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