







# KeyLine CHARGERS

## KeyLine Chargers ATV/UTV Dual Battery Isolator Kit

Installation of the KeyLine Chargers Battery Isolator Pro ATV/UTV Kit is a relatively simple and requires no special knowledge of vehicle electrical systems and uses tools available in most home workshops.



COMPONENTS ATV-DBK	
 ×1	24" #4 red cable cut to length, single 5/16" lug connector
 ×1	12" #4 red cable, 5/16" lug connector
 ×1	12" #4 black cable, 5/16" lug connector
 ×1	5/16" lug connector
 ×1	3/18" lug connector
 ×2	1 1/2" red shrink



Total Cable Length(m)	Total Cable Length(ft)	Amps	Voltage Drop(%)	MM <sup>2</sup>	AWG
1 1	3 3	50 100	2.3 3.0	11 10	4 6
2 2	6 6	50 100	3.0 3.5	6 10	10 7
3 3	9 9	50 100	2.7 3.4	10 16	7 5
4 4	12 12	50 100	3.6 2.6	10 25	7 3
5 5	15 15	50 100	2.8 3.3	10 25	5 3
6 6	18 18	50 100	3.4 3.9	16 25	5 3





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### ATV SMART BATTERY ISOLATOR KIT'S INSTALLATION GUIDE

#### Tools required:

- Cutting pliers, side cutters or cable strippers to cut and strip the cable
- Crimping or electricians pliers for terminal crimping
- Spanner set or socket set
- Philips screwdriver
- Hairdryer, heat gun or flame for heat shrink tubing
- Power drill and 3.5mm (9/64) drill bit
- Voltmeter

These instructions assume you have purchased and mounted your auxiliary battery (preferably a deep cycle) in your vehicle.

#### 1. Lay out your installation kit and check that all the components are in the kit.

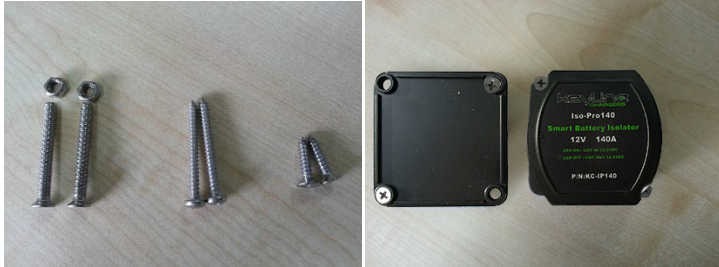
You should have:

- 1 x Smart Battery Isolator (SBI) with mounting screws
- 1 x 24" #4 red cable cut to length, single 5/16" lug connector
- 1 x 12" #4 red (positive) cable, 5/16" lug connectors
- 1 x 12" #4 black (negative) cable, 5/16" lug connectors
- 1 x 5/16" lug connector
- 1 x 3/8" lug connector
- 2 x 1/2" red shrink tubing
- 2 x 19mm screw
- 2 x 38mm screw
- 2 x 38mm Self-tapping screws with nuts
- 1 x insulated ring terminal



#### 2. Isolate the starting battery by removing the negative terminal connector and cable, then disconnect the positive terminal connector and cable.

3. Select a location for the Smart Battery Isolator that is easily accessible and neither cables nor isolator will be exposed to extreme heat or gasoline and is as close as possible to the primary (starting) battery.
4. Remove the lower mounting plate from the SBI to use as a template and mark the position of the four (4) holes to be drilled. Drill the holes using a 3.5mm (9/64) drill bit.
5. Secure the two (2) blind holes of the base to the vehicle with the short 19mm screws.



6. Strip the un-terminated end of the 24" cable back 15mm-20mm, or whatever is appropriate for your battery's terminals (most ATV battery leads are like the picture below)

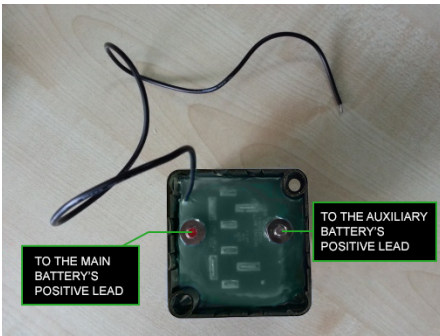


7. Use a socket wrench or pliers to loosen the screw of the battery lead, secure the un-terminated end into the hole of the primary battery positive (red/+) lead, as shown.



8. Then connect the negative (black/-) lead of the primary battery to the negative lead of AUX battery with the black (negative/-) cable. Make sure to tighten the connections for safety.
9. Connect the lug connector attached to the 24" red cable to the stud on the SBI with the painted RED dot. Then attach the red 14" cable from the auxiliary battery positive lead to the unpainted stud on the bottom of the SBI.

The image below shows these connections:



10. Attach the insulated ring terminal to the ground (black) exiting the bottom of the SBI. This is a ground wire and it is important that it has a secure and clean (bare metal) connection.



11. Mount the SBI to the already mounted base plate and attach with the two (2) longer 38mm screws.

12. Secure the black ground lead from the SBI to the selected ground point, (probably will be on the frame/body of the ATV, there are typically a lot of screws on the body of ATV, just select one as a ground point)

13. Reconnect the primary battery (as it was originally).

- Now it's time to do some tests.

14. Test for a proper ground on the auxiliary battery by placing a voltmeter across the positive (+) and negative (-) terminals and take a reading. Remove the negative (-) probe and place on a ground point on the body or engine (not the point the ground cable is mounted), both readings should be the same. If the readings are not the same check that the ground cable has a clean and secure mounting and connection with bare metal.

15. Start the vehicle's engine.

16. Usually, if the SBI is connected properly, when we start the engine, the voltage of the start battery will reach the cut-in voltage very quickly, then the SBI will cut in, the light on the SBI will light and this means it is functioning properly. There is no need to test the cut-in voltage, however, if you like, placing a voltmeter across the positive (+) and negative (-) terminals on the primary battery will give you the voltage measurement when the unit cuts in.

17. By placing a voltmeter across the positive (+) and negative (-) terminals on the auxiliary battery and taking a reading will ensure that the auxiliary battery is being charged if the voltage is above 13.0V.

# ISOLATOR CONNECTION DIAGRAM

