



DUAL BATTERY VOLTAGE SENSITIVE ISOLATOR

12V-140A



**P/NO.: ISO-PRO140, ISO-PRO140K,
ISO-PRO140DBK**

140A, VOLTAGE INDUCTION FOR 12V DUAL BATTERY SYSTEMS

*Thank you for purchasing the KeyLine Chargers Smart battery isolator.
Read these instructions carefully and thoroughly before installing and operating
this unit.*

INTRODUCTION AND INTENDED APPLICATIONS

Automatic power isolation and connection of the primary (starting) battery in parallel with the auxiliary battery according to the voltage level of the primary battery. The ISO-PRO140 smart isolator will constantly scan the primary battery voltage level and determine whether or not the voltage is high enough to engage the auxiliary battery for charging. This constant dynamic switching always leaves you with a charged primary battery so you can safely use your accessories without concern of a dead primary or starting battery. The isolator also stops battery drain (when one battery will drain the other with the higher voltage until equalized) and allows for simultaneous charging of both power sources as if they were entirely independent.

WARNING

Never use the battery isolator in a location with the possibility of contact with gas or other flammables.

Proper, accurate connections and safety guidelines must be followed according to local applicable regulations.

Use suitable sized cables and connectors. Use high quality terminals intended for this application and torque all bolts tightly.

INTENDED APPLICATIONS

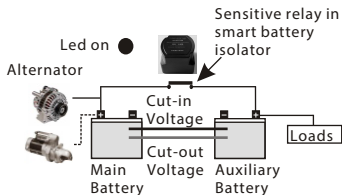
Caravan, 4WD, marine, off road, RV, UTV, ATV or any vehicle with a second battery. Also good for solar/wind charging multiple battery banks, preventing multiple battery drain and battery over charging.

FEATURES

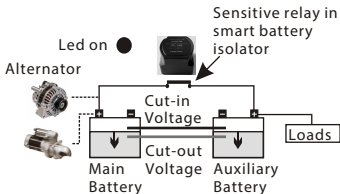
- Designed for dual battery systems
- Suitable for most 12V electrical/charging systems
- Surge protection
- Easy to install
- Automatically senses voltage level of primary battery

Visual diagrams of function

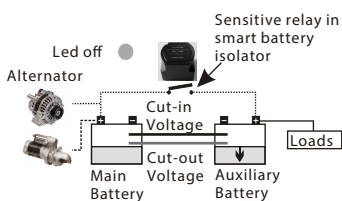
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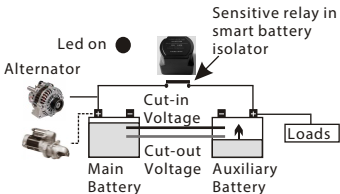
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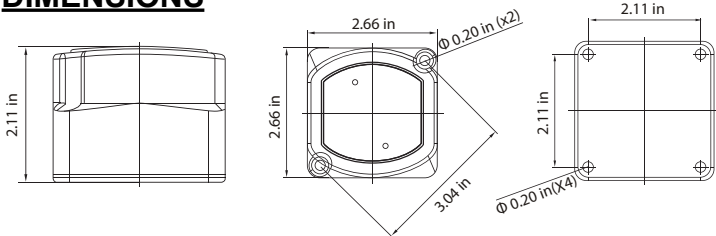
HOW DOES IT WORK?

1. When the engine is started and the voltage of the start battery is higher than the cut-in volts (13.3V), the smart battery isolator (SBI) stays engaged and both batteries (start and aux.) are charged simultaneously. The unit indicator (LED) is on in this state.
2. When the engine is stopped, the batteries no longer are being charged from the alternator and the loads connected to the batteries begin to deplete them. Until the voltage reaches the cut-out voltage (12.8V) the unit will be engaged and the indicator (LED) will remain on in this state.
3. When the voltage drops below cut-out volts (12.8V) for 5 seconds, the SBI detects it and disengages, separating the batteries. This saves the power of your start battery from being drained by loads on the auxiliary battery. The unit indicator (LED) is off in this state.
4. When the vehicle needs to be restarted, the start battery has sufficient power to crank the engine, and the engine powers the alternator supplying current to the start battery. When the start battery voltage reaches the cut-in volts (13.3V), the SBI engages again and the unit indicator (LED) is on and now both batteries are being charged again.

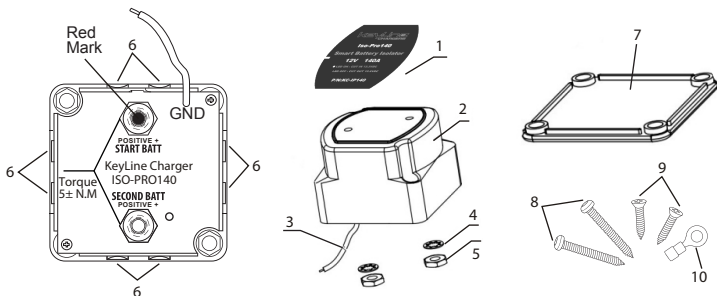
SPECIFICATIONS

P/N	Rating Voltage	Continuous Current	Intermittent Current	Cut-in Voltage	Cut-out Voltage
ISO-PRO140	12V	140A	170A	13.3V	12.8V
Delay Timer	5 Seconds				
Function	Fully Automatic Module				
Operation Temperature Range	-30~105 °C				
Storage Temperature Range	-40~125 °C				
Dimension (L*W*H)	67.5*67.5*53.5 mm ² (2.66*2.66*2.11inch)				
Weight	200g(7.05oz)				

DIMENSIONS



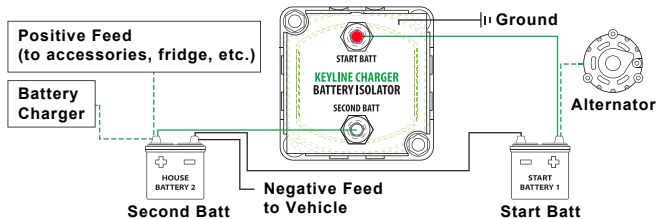
INSTALLATION



ITEM	QTY	DESCRIPTION
1	1	KeyLine Chargers Label
2	1	House, GE material
3	1	Wire cable, 0.5mm ² , black, to be connected to ground
4	2	Internal teeth serrated lock washers
5	2	Hexagonal nut, Brass H62
6	8	Removable wire outlet cutouts
7	1	Base
8	2	Cross screws, 4cm length
9	2	Cross screws, 2cm length
10	1	Ring-terminal

INSTALLATION

Be sure to connect the battery isolator as shown in the diagram.



Be sure to use the correct size AWG wire for your installation application. Please refer to the voltage drop chart.

Total cable length(m)	Total cable length(ft)	Amps	Voltage drop(%)	MM ²	AWG
1	3	50	2.3	4	11
1	3	100	3.0	6	10
2	6	50	3.0	6	10
2	6	100	3.5	10	7
3	9	50	2.7	10	7
3	9	100	3.4	16	5
4	12	50	3.6	10	7
4	12	100	2.6	25	3
5	15	50	2.8	10	5
5	15	100	3.3	25	3
6	18	50	3.4	16	5
6	18	100	3.9	25	3
7	21	50	3.9	16	5
7	21	100	4.6	25	3
8	24	50	2.6	25	3
8	24	100			

ISOLATOR CONNECTION DIAGRAM

