



Ablemail Electronics

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PART NUMBER : AEC12-12-30 - KIT

ELECTRIC VEHICLE / ELECTRIC HYBRID VEHICLE – EV AUXILIARY BATTERY TO BATTERY CHARGING SYSTEM.

Ablemail Electronics introduce the most advanced automotive 12 Volt DC Multistage Auxiliary Battery charging systems designed specifically for full electric & electric hybrid vehicles . The kit maintains the auxiliary battery charge with no reduction in driving range in many cases and where there is a potential for range reduction it allows the user to choose the level of range reduction permitted .

The kit incorporates an Ablemail AES-001 Advanced AC/DC charging detector to ensure the the auxiliary is fully charged while an EV charging station is charging the traction batteries. The AEC12-12-30 then allows the auxiliary battery to be discharged to a predefined level (usually set to 20%) while driving . Once the 20% level is reached the AEC12-12-30 attempts to maintain the auxiliary battery at 20% . This ensures minimal traction battery charge is used charging the auxiliary battery while driving . This is to ensure no / minimal impact on range.

The programmeability of the AEC12-12-30 means it can be optimised to solve the issues of auxiliary 12 Volt DC battery charging on full electric & electric hybrid vehicles in most installations. Programming is carried out using the Ablemail Battery manager App and a mobile phone . This AEC12-12-30 unit works with rapid vehicle AC chargers & rapid vehicle DC chargers but for either/or detection an additional AES001 will be required.

The Ablemail Battery Selector ver B.pdf explains the particular options /requirements for EV charging and the Ablemail AEC12-12-30- Kit offers the flexibility and capability to meet the users specific EV requirements.

AUTOMOTIVE AUXILIARY BATTERY COMPATIBILITY.

The EV Auxiliary Battery Charger (AEC12-12-30) is fully compatible with all the most readily available +12 Volt DC auxiliary battery types including AGM, GEL, Flooded and sealed lead acid battery variants & Lithium batteries up to a Maximum of 250Ah . It can be programmed for any of these batteries on shipping or using an in built bluetooth & the Ablemail Device Battery Manager IOS or Google Play phone app.

ELECTRIC VEHICLE JUMP START AND AUXILIARY LOAD RUNTIME BOOSTING FEATURE. (WHERE FITTED)

The EV Auxiliary Battery Charger unit can be equipped with a timed jump start feature (AEP12-200A or AER12-30A) . In the event the electric vehicle +12-volt DC battery becomes depleted or flat the electric vehicle will not drive even though the high voltage drive train battery is sufficiently charged a remote push button switch can be pressed and the EV Auxiliary Battery Charger unit will provide + 12 Volt DC power from the charged electric vehicle auxiliary battery to the electric vehicle +12 Volt DC chassis battery. This enables the electric vehicle to power up & drive as long as the electric vehicle has an adequately charged high voltage drive train battery. These relays also allow the vehicle dc dc converter to power auxiliary loads in parallel with the auxiliary battery . The vehicle dc dc converter often has a 100-150A charging capability and so can allow prolonged running of auxiliary loads although it does reduce range .





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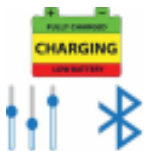
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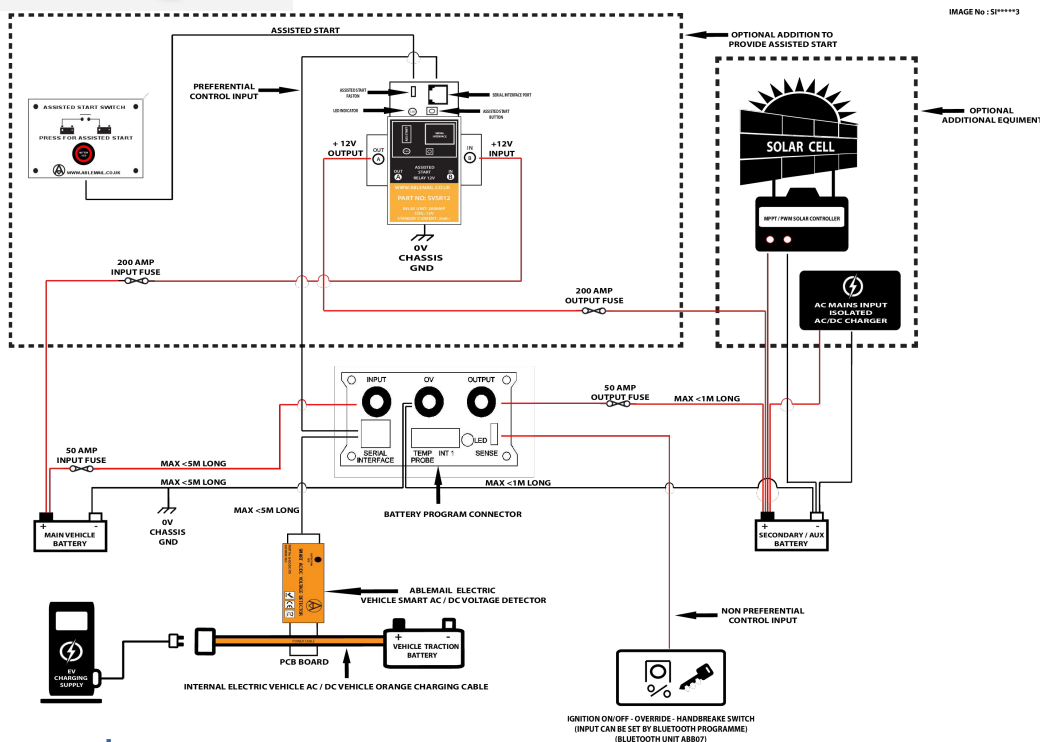
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ISOLATION	Non-Isolated
INPUT VOLTAGE	12 Volt nominal vehicle supply (9-32V).
OUTPUT VOLTAGE	12 Volt Varied as required for battery charging programme
OUTPUT LOAD CURRENT	30A max. See AMNperformance for more detail
NO LOAD INPUT CURRENT	Max 2mA @ 12V input.
PROTECTION	Output overload & over temperature protection with fully automatic reset.
OPERATING TEMPERATURE	Maximum 70°C. Minimum -30°C
STANDARDS	E11 Approval-Immunity requirements UNECE regulation 10 issue 4 Which covers all aspects of EN50489:2010 & CE Approval-Immunity to requirements of EN61204-3

Ablemail Device Manager



This is an app which allows an Android or IOS device to communicate through bluetooth with the AEC12-12-30 and the AES001 . The app can be used to change settings on the AEC12-12-30 or on the AES001 . The Ablemail Device Manager App also allow the user to view operation of both the AEC12-12-30 and the AES001 .



Accessories The AEC12-12-30 can be upgraded to an AEC12-12-60 for applications requiring quicker charging or larger battery pack charging . An additional AES001 can be used for charging from an AC or a DC charger and if the mains sensor needs to be placed in a damp environment an AES002 can be used . Extension cables allow the AES001 to be placed up to 5m from the AEC12-12-30 . The AEP12-200A and AER12-30A can be used to allow emergency jump starting of the vehicle or to allow high current loads to be run from the traction battery to 12V dc converter if desired