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## **DESCRIPTION**:

This AMS charger automatically chooses the Solar/Wind input or the vehicles 24V electrical system to charge nominal 24V battery packs. It works with Ignition control, Constant Voltage Alternators, Euro 5 & 6 engines, STOP/START, Smart Alternator charging systems & Vehicles with Regenerative Braking, (Mercedes Benz Blue Efficiency Vehicles, VW Blue Motion Vehicles, Ford ECOnetic vehicles, Vauxhall ecoFlex vehicles to name a few).

The AMS charger monitors the solar input to determine whether the vehicle alternator or solar panel input should be used to charge the secondary battery. When using the solar input the charger uses a maximum power point tracking algorithm (MPPT) to ensure maximum use of the solar/wind energy source and disconnects the solar input if the solar voltage exceeds acceptable limits (<32V).

The AMS charger charges at up to 30A charging currents, and has a protection circuit to prevent damage from current overload or overheating. The software controlled switching converter provides a low noise output (<50mV)closely regulated against variations in input voltage & changes in output load current.

The charging cycle is configured to suit most types of lead acid including Gel, AGM and can easily be reprogrammed to fit a particular type of battery or customer specification using the **Ablemail Software Interface (ASI)**. The serial interface can be used to interface to other ABLEMAIL products or the Vehicle Power Management System.

A Interface Card can be added to fine tune the parameters which optimise speed of charge and battery life. The Interface Card adds Remote Output Voltage monitoring for when the secondary battery is a long way from the charger and Battery Temperature monitoring for operating in extremely hot or cold conditions.

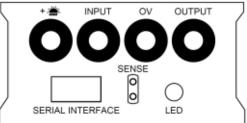
There is a charging status led & the Interface card allows remote indication (cab display) to be added. An assisted charge relay can be added to charge the vehicle/primary battery from the solar input .

The unit is assembled in an aluminium extruded case which allows reliable operation in harsh vehicle environments, It can be supplied with a variety of connection options see the Ablemail Hardware Options.

This product is part of a large range & if this product specification does not meet your requirements or you have any questions please contact our technical department .

| ISOLATION             | Non-Isolated                                                                                                                                                |  |  |  |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| INPUT VOLTAGE         | 24 Volt nominal vehicle and solar supply (8-32V) ; USE 12V SOLAR PANELS >100                                                                                |  |  |  |
| OUTPUT VOLTAGE        | 24V nominal Varied as required for battery charging programme                                                                                               |  |  |  |
| OUTPUT LOAD CURRENT   | 30A Continuous                                                                                                                                              |  |  |  |
| NO LOAD INPUT CURRENT | <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 |  |  |  |
| SIZE AND WEIGHT       | Length: 250mm, Height: 46mm, Width: 124mm, 975g                                                                                                             |  |  |  |
| CONNECTIONS           | +# INPUT OV OUTPUT                                                                                                                                          |  |  |  |





For Guidance on component size Installation & troubleshooting: See Installation Instructions



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## ABLEMAIL SOFTWARE INTERFACE (ASI) :

| Universal Power Convert<br>Edit Deven Data Help                 | or Configuration and Montions                                                         | ig Tool                                                                                                                     |                                                                                                 |                                                                                      | <u>e</u> e |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------|
| Device Settings Hardware Infor<br>Device Templates and Profiles | mation   Investigate Device   Monitor                                                 | Device                                                                                                                      |                                                                                                 |                                                                                      |            |
| It is possible to load st                                       | andards or existing profiles into the int<br>in the battom section of this page and i | erface browsing through "Handware Information" and "Device<br>the handware informations in the top section of the next page | : Settings" and double disking on a .<br>L                                                      | , this or , dop file. It is also possible to do so from the "File nerva". The device | settings   |
| in Constants<br>in Translation                                  |                                                                                       |                                                                                                                             |                                                                                                 |                                                                                      |            |
| exice Settings                                                  |                                                                                       |                                                                                                                             |                                                                                                 |                                                                                      |            |
| white the configured.                                           | anacteristics and then upliced them to 0                                              | e device from the "device menu". Once correctly set up, save                                                                | e these settings as a new profile/ter                                                           | mplate through the "Memeru". This will be the only way to identify a devic           | ca once it |
| Customer                                                        | Ablemal                                                                               |                                                                                                                             | For help with device settings how                                                               | ver the mouse over the setting                                                       |            |
| Product Name                                                    | 129 LA Charger                                                                        |                                                                                                                             | you vish to change:                                                                             |                                                                                      |            |
| Outplut Type                                                    | Lead Add Battery Charger                                                              |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Output Regime                                                   | Constant Current Only                                                                 |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Output "Heat' Volkage                                           | 12.499                                                                                |                                                                                                                             | 6                                                                                               |                                                                                      |            |
| Boost Voltage                                                   | 13.099                                                                                |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Battery Vokage                                                  | 24V Battery                                                                           |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Renxite Terry, Cut OF                                           | F gosc                                                                                |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Run Cantral                                                     | Atenator/Supply Corerol                                                               |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Pun Control Timer                                               | 5 Minute Timer                                                                        |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Run Control On Voltag                                           | 2.704                                                                                 |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Pun Cantrol Off Voltag                                          | # 2.529                                                                               |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Blue-Ploton Off Value                                           | # 2.529                                                                               |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Status Output Control                                           | LED Charging Status                                                                   |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Alarm Output Control                                            | LED Protection Mades                                                                  | 8                                                                                                                           |                                                                                                 |                                                                                      |            |
| Low Power Mode                                                  | Low Porver Mode Disabled                                                              |                                                                                                                             |                                                                                                 |                                                                                      |            |
| Sava Values                                                     | to Universal Power Canvertor                                                          |                                                                                                                             |                                                                                                 |                                                                                      |            |
| r                                                               | 183.50                                                                                | _1                                                                                                                          |                                                                                                 |                                                                                      |            |
|                                                                 | 123.50                                                                                | NOTES:                                                                                                                      |                                                                                                 |                                                                                      |            |
| 1.30                                                            | 108.50 -7                                                                             | 1. 4 off fixing he                                                                                                          |                                                                                                 | ð.                                                                                   |            |
|                                                                 | 6                                                                                     | and non con<br>4. Connector e<br>(as dashed l<br>5. Recommend<br>6. Orientate Le                                            | led air space a<br>nector end 30<br>nd space 80m<br>ines).<br>led mounting:<br>d for visibility |                                                                                      |            |
| 28                                                              |                                                                                       | <sup>™</sup> i as case may                                                                                                  | reach temepr                                                                                    | ratures up to 75 deg C.                                                              |            |
|                                                                 |                                                                                       | 8. Do not fit ne<br>heater pipes                                                                                            |                                                                                                 | es such as exhaust or                                                                |            |
|                                                                 |                                                                                       | · · · · · · · · · · · · · · · · · · ·                                                                                       | 183.50                                                                                          | 1.75                                                                                 |            |
|                                                                 | 5                                                                                     |                                                                                                                             |                                                                                                 |                                                                                      |            |
| 10.00                                                           | 103.501                                                                               |                                                                                                                             | 100.00                                                                                          | INSTALLATION                                                                         |            |
|                                                                 | CONNECTION<br>AREA                                                                    |                                                                                                                             |                                                                                                 |                                                                                      |            |
| 30.00                                                           | INSTALLATION 3                                                                        |                                                                                                                             | ENSIONS MM<br>ED1001414                                                                         | 30.00 VEHICLE MOUNTING AREA<br>PREFERABLY METAL.                                     |            |
|                                                                 | - anare                                                                               |                                                                                                                             |                                                                                                 | Versio<br>31/10/                                                                     |            |