



KISAE

FRESH IDEAS IN POWER

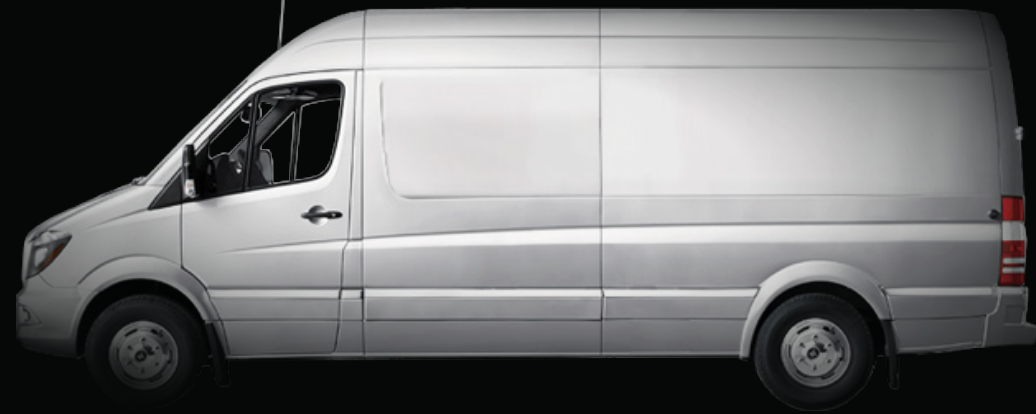
Abso Charger 30A



DC-DC Battery Chargers

Getting to know the DMT series





The 'Go Anywhere' Charger for your RV, Boat, and Commercial Vehicle Needs



Always the innovator, KISAE steps up again by introducing its line of smart DC-DC battery chargers. Ideal for recreational or commercial van owners, power boat owners, or RV'ers who like to dry camp away from traditional campsites, these KISAE chargers are fast becoming the must-have accessory for onboard battery maintenance.

What is the DMT series

The DMT series are a set of fully automatic, multi-stage, DC - DC battery chargers with an integrated Maximum Power Point Tracking (MPPT) solar controller.

Dual DC Input / DC Output: the main/house battery is charged from either the engine while driving, or via PV solar panels when stationary.

Full Auto Input Choice: either DC input – engine or solar – is controlled from within the DMT charger. No need for external relays.

RV, Boat, and Commercial Vehicle Needs

Features:

- Independent DC inputs for both engine & solar regulation output, charging one house battery bank.
- DC M6 screw terminals to allow for large battery cable connection between all sources.
- Dedicated Maximum Power Point (MPPT) solar regulator.
- The same battery algorithms used in the ABSO line of AC battery chargers.
- Vehicle input allows for either 12 or 24v and a maximum solar input of 45V/800W.
- 50A output up to 40+°C with thermo-controlled fan cooling.
- Fully programmable LCD display indicates which source is charging the battery, plus charger status, voltage, and amperage.



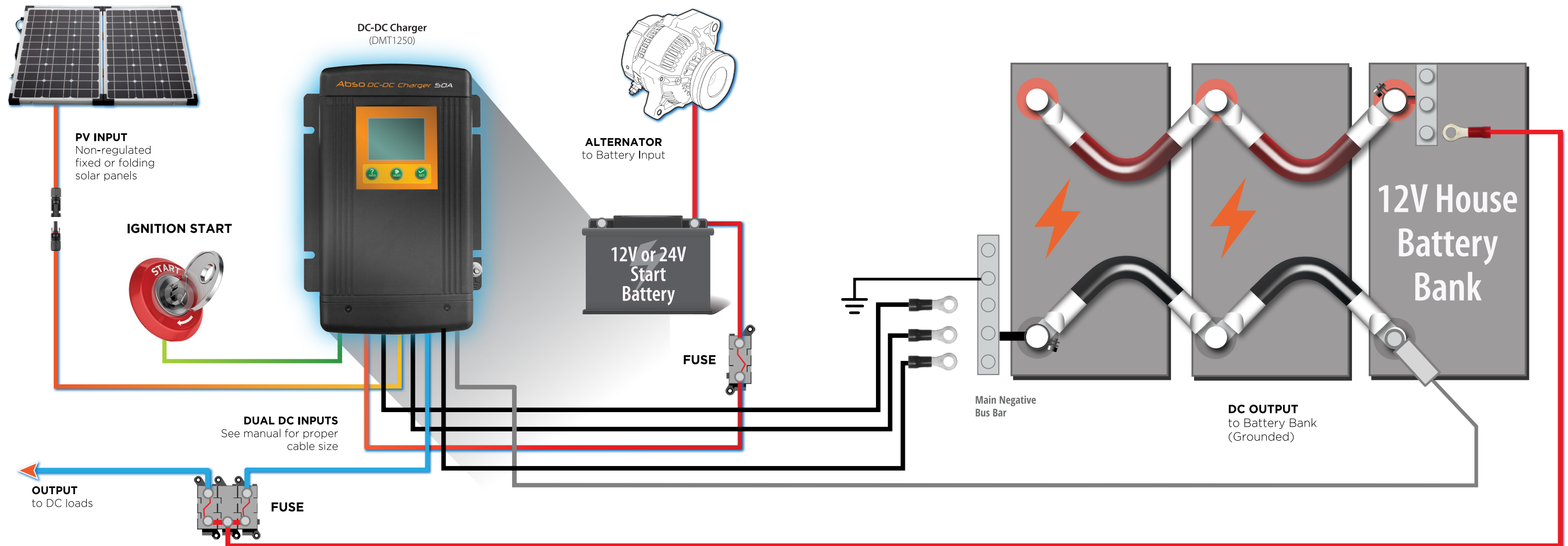
About the 3-stage Charging Algorithm:

- **Stage 1 – Bulk (“bUL”) or Boost or Constant Current charge:** The battery is charged at a full rated output current of the charger (as per the “Cu” current parameter setting) until the battery reaches its final charging voltage in the 14.xV range and as per the setting, known as its absorption voltage. In this step, around 80% (in lead-acid) or 95-100% (in Lithium) of the battery is recovered as fast as possible.
- **Stage 2 – Absorption (“AbS”) or Constant Voltage Charge:** With the charger voltage held steady in the 14.xV range. The remaining 20% (in lead-acid) or 0-5% (in most Lithium-Ion) of the battery is replaced with the charger allowing the current to taper off as the battery approaches full charge. When entering this stage, the charging current starts to drop (as long as there are no potential DC loads drawing enough current from the battery to avoid the drop). The Absorption stage is finished when the charging current

is equal or lower than the termination current set with the “L” (Low) parameter for at least several minutes in a row.

- **Stage 3 – Float (“FUL”):** When exiting the Absorption stage the charger stops supplying charging current allowing the voltage to drop from the previous 14.xV range to a safe Floating level in the 13.xV range. Once that 13.xV floating voltage level is reached, the charger will hold it by supplying current if necessary. This prevents the battery from being overcharged, yet allows the charger to supply current to compensate for the self-discharge losses of the battery and any additional discharge by the DC loads connected to it.

Recharge your Batteries from Two Separate Sources when AC is Unavailable



Charge your Deep Cycle Batteries from PV Solar or your Engine Alternator.

The KISAE DC-DC Battery Chargers are fully automatic, multistage, multi-input battery chargers with the ability to charge from either an alternator linked to a battery, or via solar power with the built-in Maximum Power Point Tracking (MPPT) solar controller. With two inputs available, the main/house battery will be charged from either the engine while driving, or via the solar panels while stationary. The process to choose either engine or solar is fully automatic and both functions are controlled from within the KISAE Charger without the need for external relays.

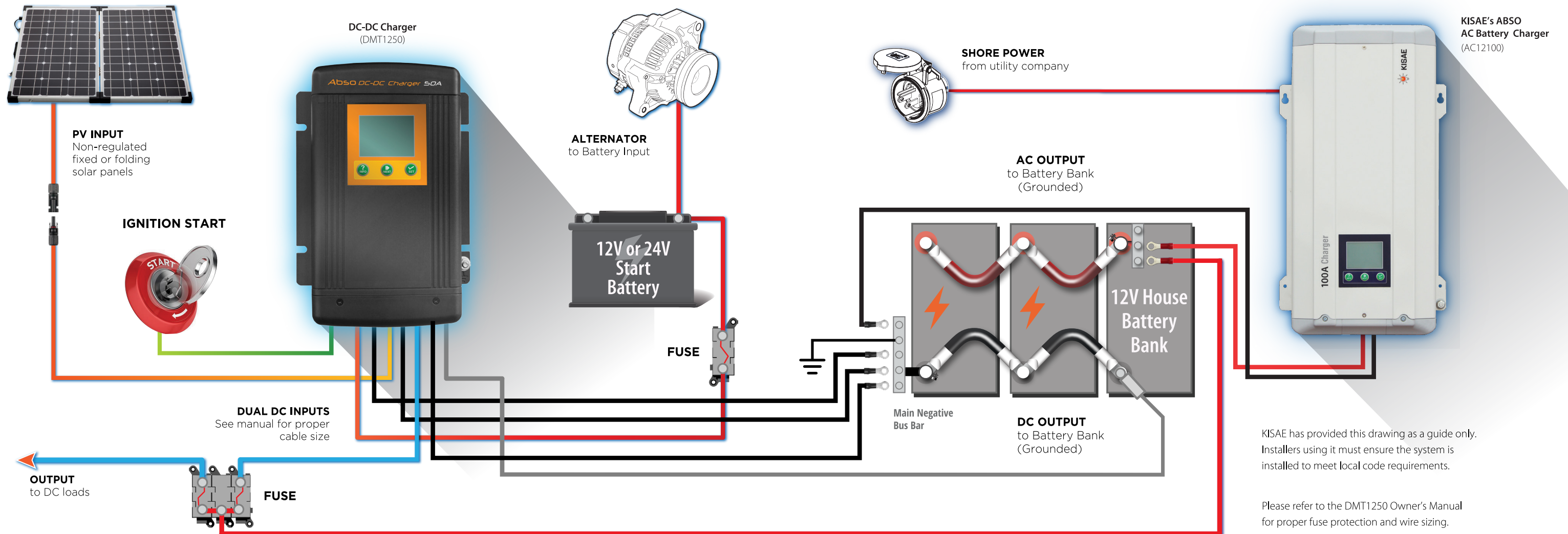
During normal operation, the KISAE DC-DC Charger will do a full charge cycle to float stage, with the ability to choose either GEL, AGM, Flooded, Custom Programmable, or Lithium. Once float stage is

reached, the charger transitions to a power supply mode to support any on-board DC loads.

A glimpse into KISAE's line of AC -DC Battery Chargers

The KISAE ABSO line of AC battery chargers are smart, multi-stage chargers that take AC household input and use advance charging algorithms to charge your AGM, GEL, Flooded and Lithium batteries. By combining the ABSO AC chargers with the KISAE DC-DC charger, you will truly be able to charge your household battery anywhere: from the vehicle alternator, from a solar panel, from a generator, or from utility power when that is available to you.

Combine with a KISAE ABSO AC Charger and recharge your batteries Anytime, Anywhere



Keeping pace with Lithium technology

The recent advances in high capacity Lithium battery technology has resulted in a need for smart battery chargers that are both compatible and will provide a fast, accurate charge that will preserve the lifetime of the battery. With most traditional battery chargers, their compatibility with lithium batteries is limited. Lithium batteries require a constant current/constant voltage charge algorithm and are unique in that almost every amp-hour of charge delivered by the charger is accepted as one amp-hour into the battery. As a result, there is a need to deliver a constant current for as long as possible.

Programmable for Lithium Batteries

KISAE DC-DC chargers can be programmed for Lithium batteries. The Lithium setting delivers the full rated output of the charger constantly with the charger switching to power supply mode once the battery bank is full.



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