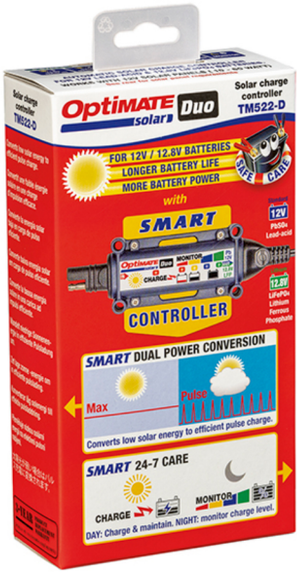
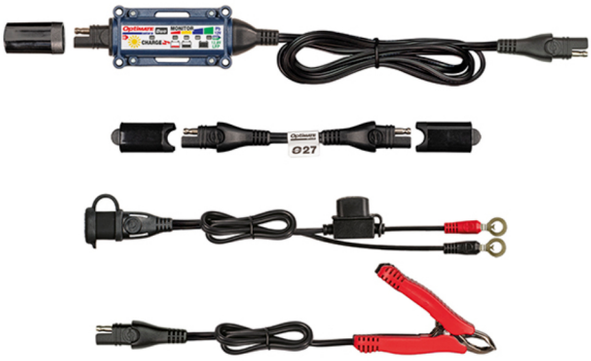
Game-changing Pulse Based Solar Charging Tech - as proven in Alaska!

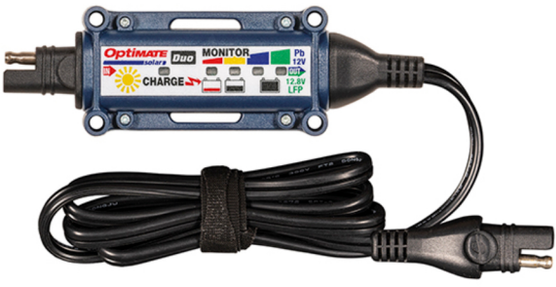
TecMate has introduced a smart solar controller that charges and maintains 12V lead-acid (conventional, AGM, GEL) or 12.8V/13.2V lithium (LFP/LiFePO4) batteries from any solar panel.
TecMate's CEO/CTO Martin Human says that "many cost-effective solar panels are delivered without any form of charge control as the low trickle of current is meant to be just enough to prevent the battery losing charge in the vehicle. The drain from the vehicle's circuitry and the battery will keep the voltage within range of the battery's natural rest voltage (12.5V-12.8V for lead-acid or 13.3V-13.6V for lithium LFP).



"If the battery started out partially discharged when the vehicle was stored, a solar panel by itself may not deliver sufficient voltage to bring that battery back to full charge, resulting in a battery that might be in poor health come spring."
Enter the OptiMate Solar DUO controller (TM522-D) - a gamechanger for the way in which solar charging works. The unique feature is the conversion of the trickle of current from solar to pulses of controlled higher energy that is more effective for the charging requirements of any battery.
Installed between the solar panel and the battery, this smart little gadget absorbs the low current into a high-efficiency capacitor that is then frequently discharged into the battery, with the concentrated energy raising the voltage going into the battery. It can, therefore, absorb most of the delivered energy, with the vehicle's circuitry continuing its low constant drain from the battery between pulses. Essentially, more is now going into the battery than it is delivering.



"The frequency of pulses depends on the size of panel and strength of sunlight," says Martin. "The lower the light intensity the slower the pulses, sometimes down to once every two seconds, but even at the lowest rate, that pulse is powerful enough for the battery to effectively absorb charge."
Like all OptiMate battery chargers, the TM522-D Solar DUO controller is rated for 24-7 continuous use. It can, and in fact should, be left connected when the vehicle or battery is stored, so that it can safely maintain the battery in optimal condition, never mind how cold it is or how little direct sun the panel might receive daily.



"The controller delivers a controlled charge during the day and then overnight it monitors and displays the charge level reached on a four LED array. Come the following morning, it will continue charging or optimally maintain the battery if it has reached full charge.
"The Solar DUO works best with panels from 10 to 60 watt. It is delivered with an O-27 polarity converter adapter (as many aftermarket solar panels have an SAE connector in opposite polarity), a set of O-04 charge clips and an O-01 fused permanent battery lead.
"Many doubt that solar can be effective in the freezing cold and low light conditions of mid-winter, but the OptiMate Solar DUO controller changes how solar battery maintenance works - changing a trickle of low power to pulses of higher energy.
"It has been thoroughly tested and proven - my favorite case study is with an industrial client of ours who uses our OptiMate solar technology to maintain the batteries of its standby generator sets in Alaska."

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