



30A MPPT DUAL-IN, DUAL-OUT CHARGE CONTROLLER



*Patent Pending

PHANTOM*

DUAL SOURCE CHARGE CONTROLLER

*PATENT PENDING

ELIMINATE POWER-RELATED DOWNTIME

The Phantom is a smart charge controller that effortlessly pairs solar and alternator charging, replacing traditional alternator charging systems. The Phantom eliminates the need for idling to charge liftgate batteries, as it provides solar charging whether vehicles are parked or driving.

No more idling to charge batteries; solar charges no matter if the truck is driving or parked. Intelligent charging system boosts the charging voltage to charge batteries more effectively for the liftgate and electric pallet jacks. Keep electric pallet jacks in your truck or trailer without the need to remove them to charge the batteries.

FEATURES:

- Integrates renewable energy from the sun and keeps the reliability of traditional alternator charging.
- Dual-source charging that automatically supplies power to 12- or 24-volt DC sources with dual in/dual out functions
- An intelligent charging function that boosts alternator charging voltage to charge batteries more effectively
- On-truck charging that allows electric pallet jacks to remain on the vehicle all the time, charged and at the ready
- Supports emergency charging between pallet jacks and liftgates
- 5-year warranty

SPECIFICATIONS

No-Load Loss	<10mA
Grounding	Negative
Operating Temperature	-40 to 50°C
Storage Temperature	-60 to 85°C
Humidity	95% N.C.
Water Ingress Protection	IP68
Altitude	< 3000m
Standards Compliance	UL 1741,FCC Part 15 Class B, CE, RoHS
Protection	Solar/Bat1/Bat2 Reverse Polarity Solar/Bat1/Bat2 Over Voltage Solar Short Circuit Over Temperature
Dimensions	14.4 x 7.6 x 4.13in (366 x 194 x 105mm)

SOLAR

Max Input Current	30A
MPPT Tracking Efficiency	>99%
Max Input Voltage	150Voc
Max Input Power	600W (12V) / 1200W (24V)
Wire Gauge	8 AWG
Connectors	MC4
Conversion Efficiency	≤98%

BATTERY OUTPUTS

System Voltage	12V/24V
Voltage Range	8V – 32V
Temperature Compensation	-3mv/°C/2V, none for Lithium batteries
Max Output Current	30A
Supported Battery Types	Lead Acid (AGM, Gel, Flooded), LiFePO4
Wire Gauge	8 AWG
Connectors	2-way Aptiv Metri-Pack 630 Male Connector

BUCK-BOOST CONVERTER

Conversion Efficiency	12V/24V
Input Voltage Range	8V – 32V
Max Input Power	-3mv/°C/2V, none for Lithium batteries
Max Charge Current	30A
Wire Gauge	8 AWG
External Input Connector	2-way Aptiv Metri-Pack 630 Male Connector

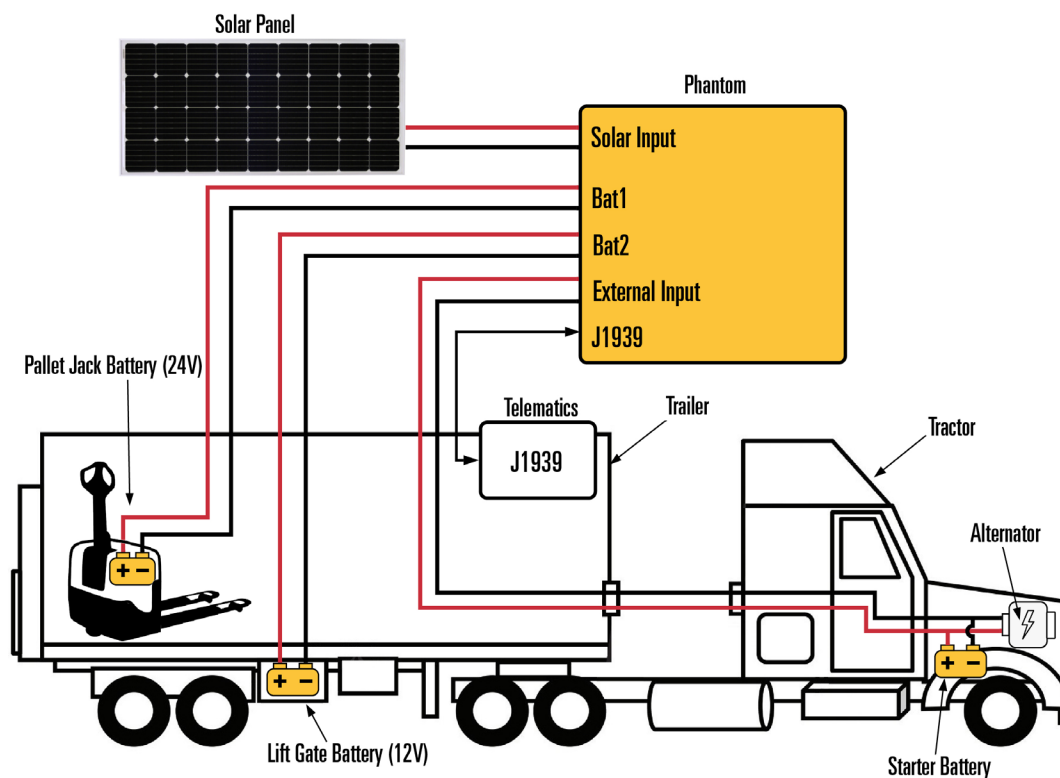
Charge voltages shown are at 77°F / 25°C. The total rated Maximum Power Current (Imp) of the PV input should not exceed 30 amps.

Specifications may be subject to change. Product may not be exactly as shown. Specifications subject to local environmental conditions.



➤ 30A MPPT DUAL-IN, DUAL-OUT CHARGE CONTROLLER

BATTERY CHARGING PROFILE	SEALED/GEL	AGM	FLOODED	LIFEPO4	CUSTOM
High Voltage Disconnect	16.0 / 32.0 V	16.0 / 32.0 V	16.0 / 32.0 V	14.6 / 29.2V	8 - 32 V
Equalize Voltage	-	-	14.9 / 29.8V	-	8 - 32 V
Bulk-Absorption Voltage	14.1 / 28.2 V	14.4 / 28.8 V	14.4 / 28.8 V	14.2 / 28.4 V	8 - 32 V
Float Voltage	13.7 / 27.4 V	13.7 / 27.4 V	13.7 / 27.4 V	14.0 / 28.0 V	8 - 32 V
Recharge Voltage	13.2 / 26.4 V				8 - 32 V
Over-Discharge Return Voltage	12.8 / 25.2 V	12.8 / 25.2 V	12.8 / 25.2 V	12.2 / 24.4 V	8 - 32 V
Under-Voltage Warning Level	12.0 / 24.0 V				8 - 32 V
Discharge Limit Voltage	10.5 / 21.0 V				8 - 32 V
Over-Discharge Time Delay	10 seconds				0 - 120 seconds
Equalize Duration	-	-	120 minutes	-	0 - 600 minutes
Absorption Duration	120 minutes				10 - 600 minutes
Equalize Interval	-	-	30 days	-	0 - 250 days
Temperature Compensation Factor	-24 mV/°C			-	0 - 30 mV/°C



*Patent Pending