WAKESPEED ADVANCED ALTERNATOR REGULATOR

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The Wakespeed Advanced Alternator Regulator [WS500] is the only alternator regulator available that can utilise current, voltage, and temperature to deliver the most precise and effective charging possible for 12V, 24V, and 48V battery systems.

Developed during years of cruising in the Pacific Northwest, the Wakespeed Alternator Regulator is uniquely designed to be configured via easy-to-use onboard DIP switches, or can be connected to a PC to provide more than 100 user controls. The unit can also be connected to battery BMS modules other CAN J1939 devices through its data ports, making it the only regulator of choice to provide safe and smart charging for LiFeP04 and other emerging battery technologies.

The Wakespeed Alternator Regulator can be connected to a current shunt to monitor current flow to and from the batteries, enabling the regulator to control charging based on a combination of system voltage and amperage delivered from the alternator to the batteries. In addition, the unit can also monitor alternator and battery temperatures and modify charging output to ensure optimal safety and charging performance at the alternator and batteries. When connected to a BMS system, the WS500 can receive critical voltage, current and temperature data via the CAN J1939 pathway, reducing the need for external sensor connections.

- **Auto-detect function** that identifies system voltage and automatically adjusts charging to support 12V, 24V, and 48V profiles.
- **Supports eight battery types** including standard and deep-cycle flooded lead acid, standard and high-density AGM batteries, carbon foam AGM, gel, and LiFeP04.
- **Greater flexibility** provided by the ability to customise profiles using the WS500 Configuration Tool.
- **Small alternator mode** limits the maximum alternator output to 75% of maximum field potential and can protect smaller alternators with larger battery loads.
- **Compatible with different polarity alternators** by selecting the appropriate NType or P-Type regulator wiring harness.

PART #	**05-5001**
PRODUCT NAME	**WS500 ADVANCED ALTERNATOR REGULATOR**
SYSTEM VOLTAGE	
12V	YES, AUTO-DETECT
24V	YES, AUTO-DETECT
48V	YES, AUTO-DETECT
OTHER	YES, CUSTOM ADJUSTABLE
FIELD POLARITY	
A-TYPE (N)	SELECT COMPATIBLE WIRING HARNESS TO MATCH ALTERNATOR POLARITY
B-TYPE (P)	SELECT COMPATIBLE WIRING HARNESS TO MATCH ALTERNATOR POLARITY
REGULATION CAPABILITY	
VOLTAGE	YES, VIA SENSE WIRES INCLUDED IN WIRING HARNESS
CURRENT	YES, VIA AMP SHUNT
TEMPERATURE	YES, VIA ALTERNATOR AND BATTERY TEMPERATURE SENSORS
BASIC CONFIGURATION	
VIA BUILT-IN DIP SWITCH	CHARGE PROFILE BY BATTERY TYPE, BATTERY CAPACITY, AND ALTERNATOR OUTPUT RANGE
BATTERY CHARGE PROFILES	
8 PRESET PROGRAMS	AGM, STANDARD FLA, DEEP CYCLE FLA, HD AGM, GEL, CARBON FOAM, CUSTOM #1, CUSTOM #2 (LIFEPO4)
CHARGE PHASE CRITERIA	FLEXIBLE CHARGING PROTOCOL
ADVANCED CONFIGURATION	
VIA USB PORT	100+ ADVANCED ADJUSTMENTS ACCESSIBLE VIA ASC11 TERMINAL SOFTWARE
VIA APP	BASIC LICENSE TO THIRD-PARTY APP PROVIDED
COMMUNICATION	
CONTROL AREA NETWORK (CAN)	YES, J1939-BASED CAN
USB	YES, BUILT-IN MICRO USB
FIELD OUTPUT CONTROL	
DEFAULT VALUES	LARGE ALTERNATOR MODE (100%), SMALL ALTERNATOR MODE (75%), HALF POWER MODE (50%)
ADVANCED CONFIGURABLE	MAXIMUM FIELD BANDWIDTH ADJUSTABLE FROM 10% TO 100%
REGULATOR DISPLAY	
ONBOARD LED	OPERATIONAL AND TROUBLESHOOTING DATA VIA BLINK PATTERN
REMOTE DISPLAY	VIA CAN TO REMOTE DISPLAYS
TEMPERATURE SENSING	
ALTERNATOR	YES, INCLUDED IN WIRING HARNESS (SOLD SEPERATELY)
BATTERY	YES, BATTERY TEMPERATURE SENSOR CABLE (SOLD SEPERATELY)
INTERNAL	YES
ENCLOSURE	
DIMENSIONS (MM)	160 X 100 X 60
WEIGHT (KG)	0.762
PROTECTION CLASS	IP67
WIRING HARNESS	COLOUR CODED TINNED WIRE
TERMINAL CONNECTIONS	AMPEAL 23-PIN WATERPROOF RUGGEDIZED RJ45 (CAN)
USB CONNECTOR	MICRO USB