



2000W Series Sealed Battery Charger Specification

DESEN ADS series of high frequency PWM chargers have a compact and sealed structure design, they are suitable for flooded lead acid batteries, sealed lead acid batteries and Lithium ion batteries. They are used to cycle charge or floating charge batteries in electric cars, sightseeing vehicles, patrol vehicles, fork lifts, communication, AGV, electric power, boats, Lawn-Mowers, Agriculture Equipment, etc.

Active PFC and LLC new technology guarantee a good Power Factor and a very high efficiency. The reliable hardware protections and Impeccable charging strategies ensure a safe charging process.

MODEL LIST

Model Name	Nominal Output Voltage(V)	Max Charging Current (A)	Battery Type
ADS2000-2435XXX	24	35	> SLA : Sealed Lead-Acid (AGM or GEL) > FLA: Flooded Lead-Acid (Wet) > LCO: Lithium Cobalt Oxide(LiCoO ₂) - (3.60V nominal; range 3.0-4.2V/cell) > LMO: Lithium Manganese Oxide (LiMn ₂ O ₄) - (3.70V nominal; range 3.0-4.2V/cell) > NMC: Lithium Nickel Manganese Cobalt Oxide (LiNiMnCoO ₂) (3.60V, 3.70V nominal; range 3.0-4.2V/cell) > LFP: Lithium Iron Phosphate(LiFePO ₄)(3.20, 3.30V nominal range 2.5-3.65V/cell) > NCA: Lithium Nickel Cobalt Aluminum Oxide (LiNiCoAlO ₂)(3.60V nominal; range 3.0-4.2V/cell) > LTO: Lithium Titanate (Li ₂ TiO ₃)(2.40V nominal; range 1.8-2.85V/cell)
ADS2000-2450XXX	24	50	
ADS2000-3635XXX	36	35	
ADS2000-4835XXX	48	35	
ADS2000-6030XXX	60	30	
ADS2000-7225XXX	72	25	
ADS2000-8022XXX	80	22	

XXX: Battery type (use SLA, FLA, LCO...indicate the model)

KEY FEATURES

- AC input voltage range: 180~264Vac; 50-60Hz
- AC input rated current: <10A @ 230VAC
- Power Factor > 0.99
- Efficiency: 94% typical
- Noise level < 45dB
- Protection Level: IP67
- CAN bus with auxiliary 12Vdc supply, can extend three colored LEDs
- Charging protection below 0 °C for Lithium (LI) Chargers
- Temperature compensation of Lead Acid (LA) chargers
- Integrated die casting structure, pouring sealed inside the charger, good performance in vibration, active heating dissipation, high reliability and long life time, it can be adopted in hostile environment.





PROTECTION FUNCTIONS

Over current protection	Yes
AC Input under voltage protection	When AC voltage <150Vac, the charger will switch off
Output short circuit protection	Yes, will automatic resume after short is removed
Battery reversed protection	yes
No-load protection	yes
Over temperature	The charger must be able to operate up to 45°C and will de-rate the charge current linearly to 50% when reaching 60°C. When the case reaching >65°C the charger is allowed to stop, when the temperature falls, the charger automatically resumes. No defects at high temperatures
Temperature compensation	For the lead-acid charger the NTC is used for temperature compensation at -4mV/°C per 2V cell; the length of NTC cable is 1 meter For the Lithium charger the external temperature sensor is used to prevent charging < 0 °C ambient temperature
Fan cooling	The Fan rotates at charging and stops after fully charged
Fully charged automatic disconnect	Only for Lithium version by internal relay
Fault LED indication	Yes, see chapter LED indicators

SAFETY AND ENVIRONMENT

Safety test AC to DC	≤20mA@2000Vac/1min
Safety test AC to CASE	≤20mA@2000Vac/1min
Safety test DC to CASE	≤20mA@1000Vac/1min
Insulation Resistance test	AC to CASE > 100MΩ/DC 500V
Working ambient temperature	-20 ...+45°C ; 45...60°C linear de-rating to 50%
Storage temperature	-40 ...+80°C
Humidity	20...90 % RH

LED INDICATORS

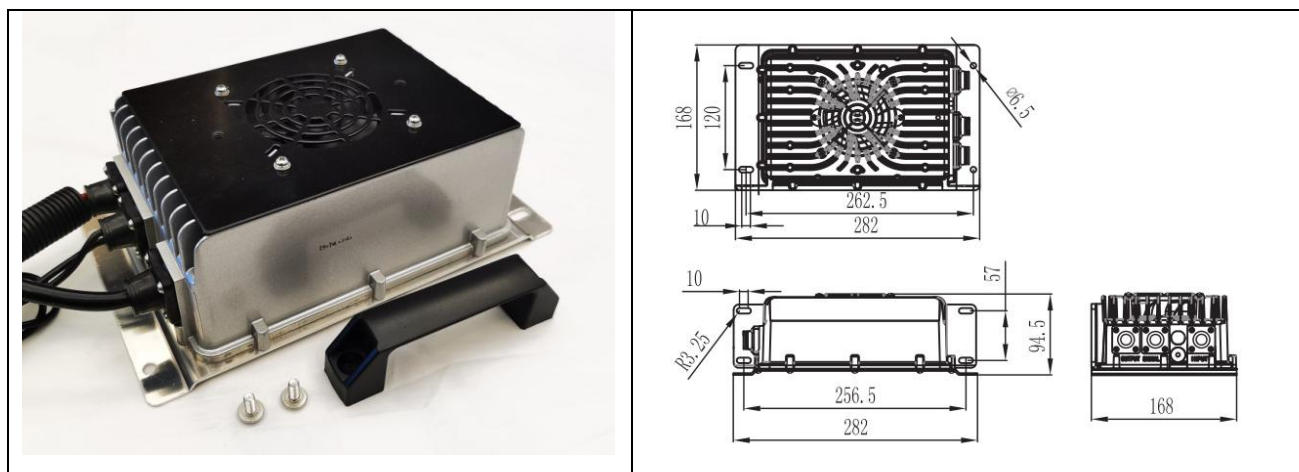
LED Indication Label	<div> For LI Battery</div> <div> For LA Battery</div>
Non Load Status	Red and Green LED cross flash
Battery Capacity Status	Red LED flash per second, to show capacity < 80% Yellow LED flash per second, to show capacity > 80% Green LED flash per second, to show capacity = 100%
Fault Status	Over-volt/current protection: flash R-G-R... Ambient temperature too high or low: flash R-G-R-G... Over temperature: flash G-R... Output under-voltage: flash R-G... Input AC voltage abnormal: flash R-G-R-G-R... Other faults: flash G-R-G...
Fully charged	Green LED light



GENERAL

Dimension(mm)	282x168x94.5
N.W(kg)	4.5
G.W(kg)	6
Input	2.5 m2 AC cable with customized AC plug
Output	6m2 with Grey SB50 or customized connector
Installation Type	Portable with Handle bar or On-board installation, FAN cover plate to protect FAN
Warranty (Year)	2

DIMENSIONS



USER ATTENTION

- Read these instructions and warnings before use.
- The Charger must be used within Operating Ambient Temperature range -20~60°C and humidity of < 90%
- Do not place the charger outside, but always in a space that has some protection from outside weather influences
- When the charger is installed, a minimum of 20 mm space all around the charger is needed.
- Do not place the charger in a small not vented space; the charger will run hot.
- The Charger must be yearly maintained, the air-flow slot which under the green plate must not be blocked, all dust and dirt substances must be cleaned. Check if the fan is operating properly during charging
- Make sure the wires are placed in such a way that they cannot be damaged easily.



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- If the charger is used for electric vehicles like cars or boats, the interlock connection can be used to prevent the propulsion motor from starting during charge
- The Lithium Battery must have a BMS protection with balancing the cells
- The Lithium version of the charger will not charge below 0 °C.
- Place the NTC temperature sensor close to the battery
- Never charge dead or damaged batteries
- Do not attempt to disassemble the charger