

# Switch Mode Technology Battery Charger

# Superb SM

## 12-24 VDC 10-300A

EnSmart Superb SM battery charger is designed with the most advanced Switch mode HF digital technology which makes it ripple-free, compact, light weight and silent. Heavy-duty EnSmart Superb SM battery chargers are for domestic, marine, industrial vehicle use. Any battery, either AGM, GEL, Lead acid, traction or Lithium can be connected to the Superb SM and charged quickly and completely. Usage: Vessels and Yachts, ForkLifts, Rail Systems, Automobile Services, Electrical Devices.



## Smart Charging

- Proven switched mode HF Technology
- Automatic Charging with Voltage and Current Control
- Powerful Battery Charger, suitable for any type of Battery

## High Efficiency & High Protection

- 1 Phase & 3 Phase Wide Power Range
- High Efficiency, up to 30% Energy Saving
- Can be used as DC Power Supply
- Over/Under Voltage, Over Current
- Short Circuit Protection
- Reverse Connection Protection

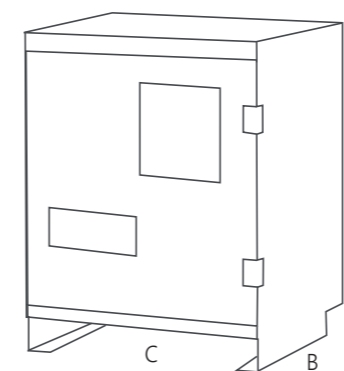
## Compact and Easy

- Robust enclosure for bulk head or table top mounting
- Extremely Compact and Light
- Functional LCD Front Display



## Technical Specifications

MODEL	
<b>INPUT</b>	
Input Phase	1 Phase - 2 Phase - 3 Phase (Special Design)
Input Voltage Tolerance	±10%
Input Frequency	50 - 60 Hz
Power Factor	0.98
THDi	<%10
<b>OUTPUT</b>	
Output Current	10A - 300A
Output Voltage	12V - 24V
Ripple	≤1 Ripple
<b>GENERAL</b>	
Cooling	Air Cooling
Isolation Voltage	1500 VAC Input / Chassis Bridge, 500 VAC Output / Chassis Bridge, 500 VAC Between Input and Output
Insulation Class	IP 20 - RAL 7032 (Special Design)
Efficiency	90%
Operating Temperature	-20/50°C
Operating	Ability to set Charge Mode for all Battery Types
Input/Output Connections	Serial Connector - W Otomation
<b>PROTECTION</b>	
Heat Protection	Input / Output Overtemperature Protection
Measure	Output Overcurrent Protection - DC High Low - DC Leakage - Mains Failure
<b>TECHNOLOGY</b>	
IGBT	Switch Mode Technology
Standard	ISO 9001 - LVD - EN 62040 -1 - EMC
<b>INDICATORS</b>	
LCD Panel	2 x 16 - 4 x 16 Line
PLC	S71200 - S7300
Otomation	Modbus / Profibus / ProfiNET / RS 232 / RS 485



## Dimensions

CODE	A (mm)	B (mm)	C (mm)
ENS 1	340	240	150
ENS 2	340	240	200
ENS 3	290	260	370
ENS 4	340	280	400
ENS 5	400	320	450
ENS 6	580	390	500

## Options

- DC +/- Ground Leakage Protection
- Modbus RTU Communication
- Individual Outputs for Battery and Load
- Deep Discharge Protection (LVD)
- Output Dropper Diode
- Additional Battery Fuse
- Temperature Comp. Battery Charge Voltage
- Power Fault Detection Dry Contact
- Battery Management, Test
- Rackmounted Chassis/Integrated Battery Racks/ (IP31/IP42/IP54/IP65)
- Input Isolation Transformer / 6 Pulse Structure

## Highlights



**SAFE AND RELIABLE**  
Fully protected against short circuit, over current etc



**COST EFFICIENT**  
Simple and Low Cost  
High Efficiency



**USER FRIENDLY**  
Compact, Front LCD Panel and Auto Start