





ESCH04 series Charger



Product overview and application scope :

- Charger integrates active power factor correction (PFC), can achieve zero pollution of the power grid and avoid the impact of large current grid.
- Wide input voltage range AC100V~AC265V available for worldwide requirements, convenient for the power grid fluctuation and vehicles exportation.
- High efficiency, above 93%, while the traditional charger can meet only about 80% efficiency.
- Intelligent temperature compensation function in the charging process, preventing damage to the battery caused by charge-off or charge due, greatly extending the lifespan of the battery.
- Shock resistance treatment made inside makes vibration-proof level up to SAEJ1378 that can fully meet the standard of automobile appliance usage.
- Use the LLC resonance technology, whole charging process working under soft switching condition, with the less heating of the whole machine.

Product features :

- Single Chip Microcomputer (SCM) according to the lead-acid batteries tolerance current capacity, life curve, gas analysis point and other information to complete the full charge of the whole process.
- With the environmental temperature compensation function, to ensure that the temperature of the weather conditions, can automatically resist over-charge and under-charge.
- With pulse charging function, the battery is filled with the premise of ensuring the best life of the battery.
- After three paint processing and dustproof design, the reliability of the operation is improved.
- With digital display function, can display online charging current, voltage, charging time.

Model	ESCH24V40A	ESCH24V50A	ESCH48V30A	ESCH48V50A
Dimensions	Long * wide * high 349*227*189(mm)			
Maximum output current (A)	40	50	30	50
Maximum power point (W)	1200	1500	1800	3000
Input voltage (VAC)	AC100V~264V			
Output voltage (VDC)	lead-acid battery: 63V; VRLA: 60V; Customizable			
Applicable battery voltage	48V lead acid battery pack, Customizable			
Maximum efficiency	97%			
Output voltage regulation precision	±1%			
Output current accuracy	±1%			
Working temperature	-30℃~45℃			
Classes of seismic measure	SAEJ 1378			
Cooling mode	Air blast cooling			
Over temperature protection	75℃±5			
Input over-voltage protection (VAC)	>264V			
Input under-voltage protection (VAC)	<185V			
Output over-voltage protection (VDC)	65v±1			
Output over-current protection (A)	>110%* Maximum charge current			
Output short circuit protection	When the output is short circuited, charger shutdown, and automatic recovery after short-circuit solved.			
Battery reverse protection	Charger shutdown and alarm when the wire is connected reversely, it will automatically resume after wiring correctly.			

ESCH01 series Charger



Product overview and application scope :

- Charger integrates active power factor correction (PFC), can achieve zero pollution of the power grid and avoid the impact of large current grid.
- It has wide AC input range and strong adaptability.
- The module has perfect protection functions such as protection for the input under-voltage or over-voltage, the lack of input phase, output over current, output over-voltage, output short circuit, output isolation protection, and module overheating.
- The soft-switching full-bridge PWM technology controlled by the latest mixed mode is adopted to overcome the shortcomings that traditional full-bridge phase-shift circuit circulation loss is great and secondary side diodes working condition is poor. The secondary side diodes realize soft recovery, enable the module to obtain higher efficiency in a wide range of input voltage and load range.
- The maximum efficiency is close to 97%, the electromagnetic interference is also greatly reduced, and the volume/weight is greatly reduced.
- Improved thermal design, more uniform thermal distribution.
- A more perfect circuit board using anti-dust and anti-moisture treatment.

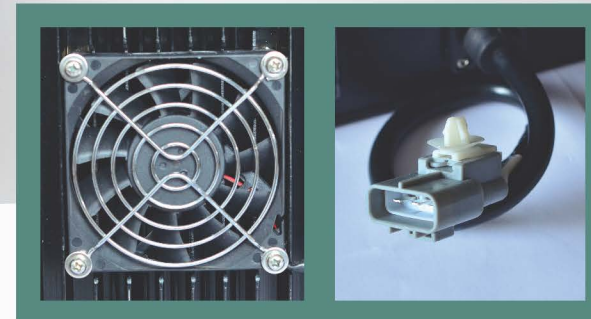
Product features :

- Single Chip Microcomputer (SCM) according to the lead-acid batteries tolerance current capacity, life curve, gas analysis point and other information to complete the full charge of the whole process.
- The battery having the environmental temperature compensation function to ensure that the temperature of the weather conditions, can automatically resist over-charge and under-charge.
- With pulse charging function, the battery is filled with the premise of ensuring the best life of the battery.
- The battery also has manual EQU charging function.
- After three paint processing and dustproof design, the reliability of the operation is improved.
- With digital display function, it can display online charging current, voltage, and charging time.
- The charger can be wall mounted.

Model	ESCH4865-AC380	ESCH4880-AC380
Dimensions	Long * wide * high 386*360*169(mm)	
Maximum output current (A)	65	80
Maximum power point (W)	3965	5040
Input voltage (VAC)	380V±15% Three phase three wire + safe ground wire	
Output voltage (VDC)	lead-acid battery: 63V; VRLA: 60V; Customizable	
Applicable battery voltage	48V lead acid battery pack, Customizable	
Maximum efficiency	97%	
Output voltage regulation precision	±1%	
Output current accuracy	±1%	
Working temperature	-30℃—45℃	
Classes of seismic measure	SAEJ 1378	
Cooling mode	Air blast cooling	
Over temperature protection	75℃±5	
Input over-voltage protection (VAC)	>456~476	
Input under-voltage protection (VAC)	<284~304	
Output over-voltage protection (VDC)	65v±1	
Output over-current protection (A)	>110%* Maximum charge current	
Output short circuit protection	When the output is short circuited, charger shutdown, and automatic recovery after short-circuit solved.	
Battery reverse protection	Charger shutdown and alarm when the wire is connected reversely, it will automatically resume after wiring correctly.	



ESCH12 series Charger



Product overview and application scope :

- Input voltage range is very wide, AC185V-AC264V
- The efficiency is very high, can reach more than 95%, the traditional charger can only reach about 80%.
- The intelligent temperature compensation function of the charging process can avoid the damage caused by the over charge or under charge of the battery, and the service life of the battery can be prolonged.
- Do the internal charger seismic processing, seismic grade up to SAEJ1378, fully meet the electric vehicle-using standard.
- Use the LLC resonance technology, whole charging process working under soft switching condition, with the less heating of the whole machine.

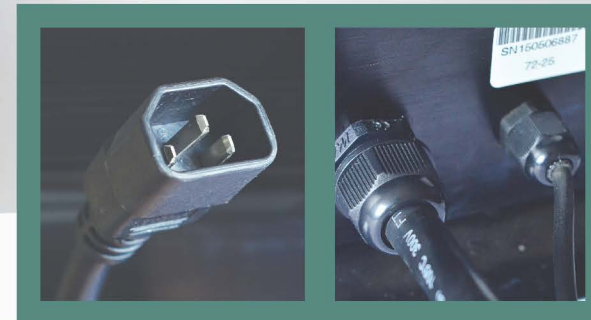
Product features :

- Single Chip Microcomputer (SCM) according to the lead-acid batteries tolerance current capacity, life curve, gas analysis point and other information to complete the full charge of the whole process;
- With the environmental temperature compensation function, to ensure that the temperature of the weather conditions, can automatically resist over-charge and under-charge;
- With pulse charging function, to ensure the best life of the battery under the premise of its full;
- After three paint processing and dustproof design, improve the reliability of the operation;
- This series of products with digital display function, can display online charging current, voltage, charging time;

Model	ESCH4825	ESCH6020	ESCH7216
Dimensions	Long * wide * high 282*167*114(mm)		
Maximum output current (A)	25	20	16
Maximum power point (W)	≤2200W		
Input voltage (VAC)	185V~264V		
Output voltage (VDC)	65V	89.8V	103.8V
Applicable battery voltage	48V lead acid battery	60V lead acid battery	72V lead acid battery
Maximum efficiency	95%		
Output voltage regulation precision	±1%		
Output current accuracy	±1%		
Working temperature	-30℃~45℃		
Classes of seismic measure	SAEJ1378		
Cooling mode	Self cooling		
Over temperature protection	75℃±5		
Input under-voltage protection (VAC)	Under-voltage point 185V		
Output over-voltage protection (VDC)	66V±1	91V±1	105V±1
Output over-current protection (A)	>110%*Maximum charge current		
Output short circuit protection	When the output is short circuited, charger shutdown, and automatic recovery after short-circuit solved.		
Battery reverse protection	Charger shutdown and alarm when the wire is connected reversely, it will automatically resume after wiring correctly.		



ESCH13 series Charger



Product overview and application scope :

- Input voltage range is very wide, AC100V-AC264V
- The efficiency is very high, can reach more than 95%, the traditional charger can only reach about 80%.
- The intelligent temperature compensation function of the charging process can avoid the damage caused by the over charge or under charge of the battery, and the service life of the battery can be prolonged.
- Do the internal charger seismic processing, seismic grade up to SAEJ1378, fully meet the electric vehicle-using standard.
- Use the LLC resonance technology, whole charging process working under soft switching condition, with the less heating of the whole machine.

Product features :

- Single Chip Microcomputer (SCM) according to the lead-acid batteries tolerance current capacity, life curve, gas analysis point and other information to complete the full charge of the whole process.
- With the environmental temperature compensation function, to ensure that the temperature of the weather conditions, can automatically resist over-charge and under-charge.
- With pulse charging function, to ensure the best life of the battery under the premise of its full.
- After three paint processing and dustproof design, improve the reliability of the operation.
- This series of products with digital display function, can display online charging current, voltage, charging time.

Model	ESCH4850	ESCH6040	ESCH7235
Dimensions	Long * wide * high 348*198*138(mm)		
Maximum output current (A)	50	40	35
Maximum power point (W)	≤3300W		
Input voltage (VAC)	185V~264V		
Output voltage (VDC)	65V	89.8V	103.8V
Applicable battery voltage	48V lead acid battery	60V lead acid battery	72V lead acid battery
Maximum efficiency	95%		
Output voltage regulation precision	±1%		
Output current accuracy	±1%		
Working temperature	-30℃~45℃		
Classes of seismic measure	SAEJ1378		
Cooling mode	Self cooling		
Over temperature protection	75℃±5		
Input under-voltage protection (VAC)	Under-voltage point 185V		
Output over-voltage protection (VDC)	66V±1	91V±1	105V±1
Output over-current protection (A)	>110%*Maximum charge current		
Output short circuit protection	When the output is short circuited, charger shutdown, and automatic recovery after short-circuit solved.		
Battery reverse protection	Charger shutdown and alarm when the wire is connected reversely, it will automatically resume after wiring correctly.		

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Zhe jiang Young Energy Technology Co.,Ltd.

Add:The Science and Technology Park No.1 building,Yanguang
Industrial Zone No.1 area,Anji,Zhejiang,China.
www.YoungEnergy.com

Sales Headquarters

Tel:86-572-5862668
Fax:86-572-5862667
Yao@youngenergy.com
Sales@youngenergy.com

Service Center

Tel:86-572-5856000
Fax:86-572-5862667
Yao@youngenergy.com
Service@youngenergy.com