

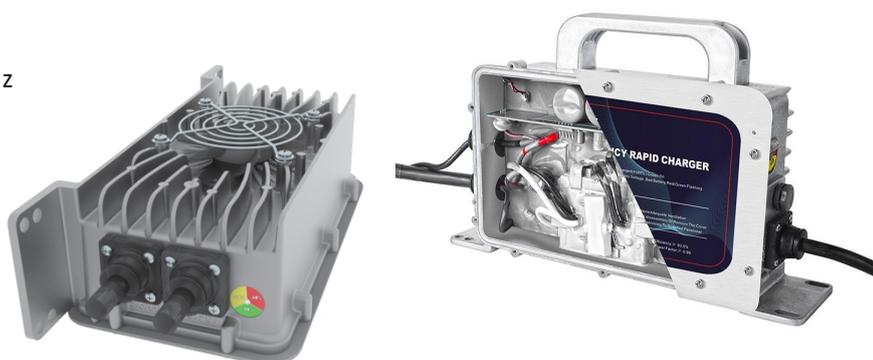
# 4813ZMBF SEAL CHARGER

The charger adopts a sealed structure design; suitable for flooded lead-acid batteries, sealed (gel) lead-acid batteries, lithium batteries, nickel-metal hydride batteries, nickel-cadmium batteries, etc. Which can be used for electric cars, sightseeing cars, police cars, forklifts, Battery packs for communications, electricity, ships, etc. cyclically charged or floated charged.

Input voltage(Vac)	Input current(A)	Power factor	Product efficiency	Input voltage(V)	Maximum output power(W)
85~270	≤ 15	≥0.99	≥95%	48	750

## 1.1 TECHNOLOGY PARAMETERS

- ◆ AC Input Voltage Range: 85~270VAC; 50/60Hz
- ◆ AC Input Max Current: 7.5A @120VAC;
- ◆ Power Factor:≥0.99
- ◆ Efficiency:≥MAX 93.0%
- ◆ Noise:≤45dB
- ◆ Protection level:IP67



## 1.2 PRODUCT CHARACTERISTICS

### SAFETY

Active PFC and LLC techniques are applied for a quick response on a fault; Active software and reliable passive hardware self-protection on voltage&current; Advanced charging strategy is integrated as a safeguard for battery system.

### RELIABILITY

Shell is shaped by integrated die casting technique, and filled with special glue. Active cooling fan is also designed with a potting structure for a longer life. Series of chargers had been operating in all kinds of industrial environment (Wet, Hot, Cold, high altitude) for more than ten years for verification.

### FUNCTIONS

Three-color indicator light can be connected; charging lock (the vehicle power system can be locked through the dry contact of the relay during the charging process). Meet the charging needs of various occasions.

## 1.3 SIZE AND WEIGHT&TEMPERATURE

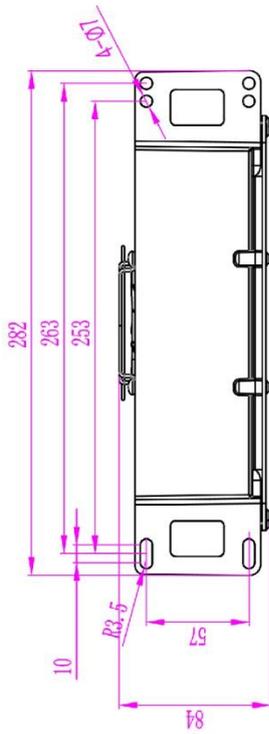
- ◆ Net Weight:2kg
- ◆ Operating Temperature:-30℃~65℃
- ◆ Storage Temperature:-40℃~95℃

## 1.4 PROTECTION FUNCTIONS

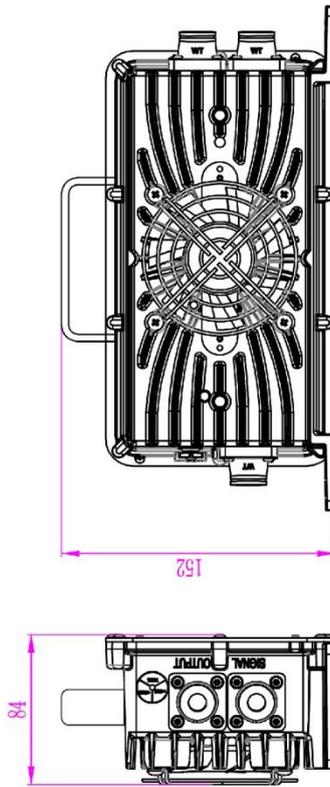
- ◆ Burnout Protection: If temperature of charger exceeds the limitation, the charger will low down the power load. If environment temperature exceeds 65℃, the charger will stop charging and switch itself to standby mode until the temperature goes down.
- ◆ Protection for Reverse Connection of Batteries: The circuit inside the charger shuts down when the batteries are connected reversely.
- ◆ NO-load Protection: There is no output when the battery is not connected.
- ◆ Short Circuit Protection: The circuit inside the charger will shut down when output is short-circuited.

# 1.5 Product Size overview (mm)

## 产品外形尺寸图

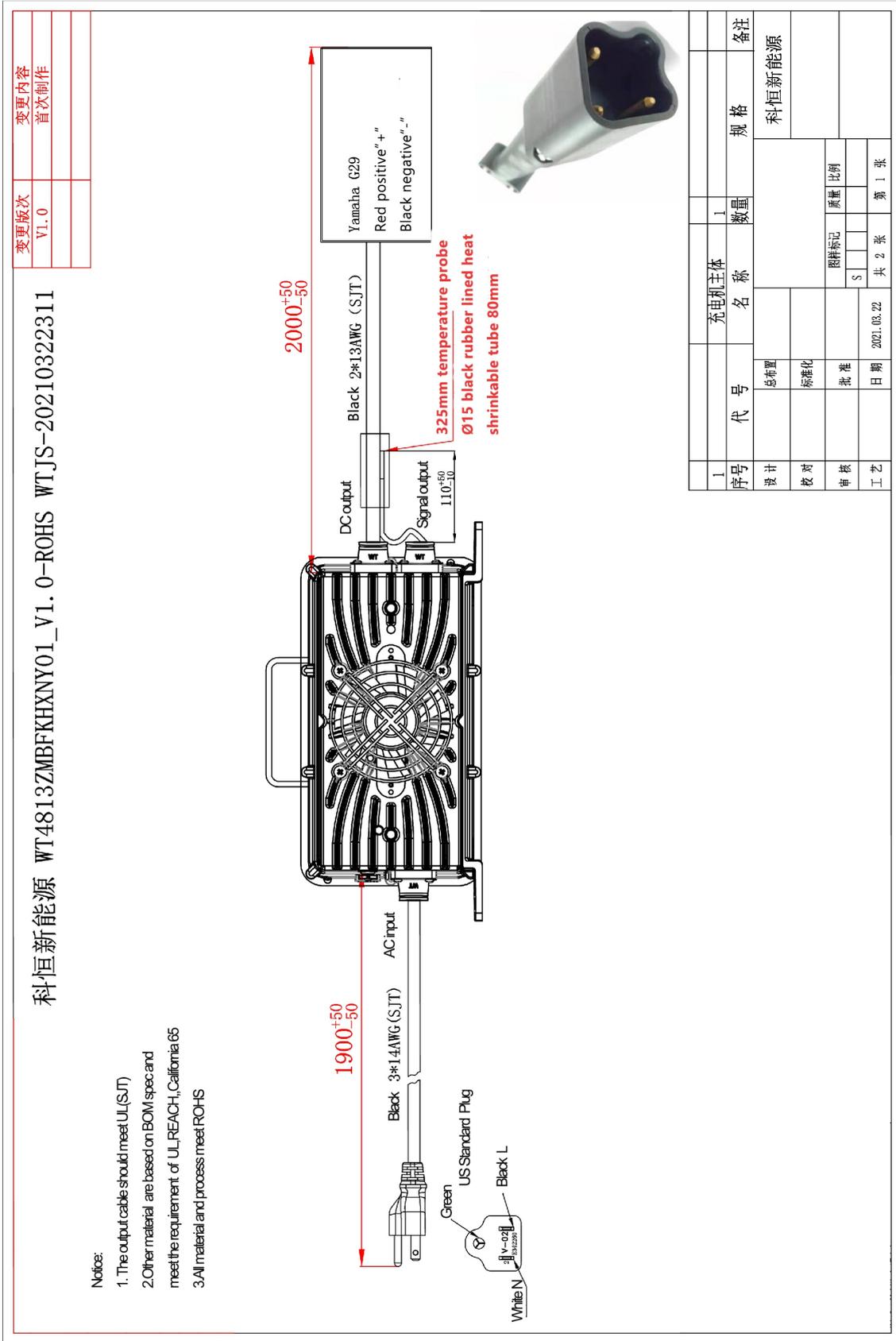


Product Maximum Dimension:  
 Length 281mm\*W84mm 152mm  
 Product Dimension Tolerance: ±2mm  
 Installation Hole Dimension Tolerance: ±0.5mm



序号	代号	名称	数量	规格	备注
设计	总布置				科恒新能源
校对	标准化				
审核	批准			图样标记	
工艺	日期			质量比例	
			共 2 张		第 2 张
				2021.03.22	

# 1.6 Product external wires diagram (mm)



## 1.7 Product Function

Output overvoltage protection function	When the charger detects that the output voltage exceeds the software's internal output overvoltage protection setting value, the test charger should immediately cut off the output relay and give an alarm signal;
Output overcurrent protection function	When the load current exceeds the output overcurrent protection value set in the charger, the charger immediately cuts off the output relay and sends out an alarm signal;
Input over/under protection	When the AC input voltage is lower than 200Vac, the charger will work according to the built-in formula; when the AC input voltage is lower than $165\pm 5\text{Vac}$ , the charger will output at the minimum current; when the AC input voltage is lower than $150\pm 5\text{Vac}$ , the charger will stop working and undervoltage alarm.
Temperature protection	When the internal temperature of the machine exceeds the internal set value, the charging current will automatically decrease; when the ambient temperature exceeds $65\pm 2^{\circ}\text{C}$ , the charger will stop and alarm, and when the ambient temperature drops to $55\pm 2^{\circ}\text{C}$ , the charger will resume charging; 2. Environment When the temperature is lower than $0\pm 2^{\circ}\text{C}$ , the charger will stop and alarm. When the ambient temperature recovers to $5\pm 2^{\circ}\text{C}$ , the charger will resume charging;  Note: If the external temperature probe is attached to the battery, it will detect the abnormal temperature of the battery.
Short circuit protection	When the charger output is short-circuited, there is no output from the charger, and an alarm will prompt;
No-load protection	When the charger fails to detect the battery voltage or the battery voltage is lower than the minimum threshold (1/3 of the rated voltage of the battery pack) set internally, the charger alarms without output, and the alarm prompts;
Battery reverse connection protection	The charger has no output when the battery is connected reversely;
Temperature controlled air cooling (optional)	The fan rotates when charging, and the fan stops when it is full.
Indicator light indicates charging status	Display power, charging power, full shutdown status (see instructions for details)
Automatic shutdown when the battery is full	Yes
Fault status indication	Yes

## 1.8 LED Indicator status description

Indicator label		
No-load indication	The traffic lights flash alternately.	
Battery capacity indicator	Under Charging: the red light flashes; Full-charged : the green light is always on.	
Error indication	Over-voltage (Current) fault	RED GREEN RED - - -
	The ambient temperature is too high or too low	RED GREEN RED GREEN - -
	The charger is overheating	GREEN RED - - - -
	Output undervoltage	RED GREEN - - - -
	Abnormal input AC power	RED GREEN RED GREEN RED -
	Synthetic error	GREEN RED GREEN - - -
Full-charge shutdown indication	Steady green	