

杭州奥蒂电控有限公司 Hangzhou AODI Electronic Control Co.,Ltd.	文件编号	
	文件版次	V00
QR Series Battery Charger Specs	生效日期	2021年7月1日
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# Specifications

Industrial Battery Charger  
Model: QR48150,QR48300



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## I Charger Features

**AODI QR Series** is a high reliable, durable, high efficiency charger with modular power supply design. Adopting three-phase four-wire input, and comes with CAN communication function, USB storage memory function. It is specially designed for heavy duty industrial and widely applied in material handling equipment with wall-mount or free-standing design.

- **High Efficiency, Cost Saving**  
Highest charging efficiency throughout the entire charge cycle, up to 93%;  
The independent power modules, installed in parallel, allows the user to add individual modules, easy maintenance and lower cost;
- **Opportunity Charge Ready**  
Always ready for opportunity charging, which reduces and sometimes eliminates the need to change batteries during a shift or workday.
- **USB Function**  
Update the software, upload, and download the charging data; Easy to diagnose if any faults to save the after-sales service cost;
- **Intelligent Charging Mode**  
Auto-recharge for low voltage (lower than 36VDC for 48VDC batteries pack) in maintenance mode, could be more intelligent at the lift trucks fleets.
- **Variable Configuration Architecture**  
It provides built-in redundancy that ensures the charger will keep running until the defective module is replaced in the event of a module failure. The faulted module can simply be unplugged and a new module plugged in, replace the door, re-energize the charger, and it is back to work.
- **Programmable Function**  
Pre-configured more than 20 charging profiles, able to program the custom charging profiles to suit any lead acid batteries and lithium-ion batteries, optimized to prolong the battery life and performance;
- **Multi-Function LED Display Screen**  
Multi-function LED display screen will help monitor the charging status
- **Communication Interface**  
Optional wired CAN bus communication for machine integration or lithium BMS;
- **WIFI and 5G Function Reserved**  
Future use
- **Voice Broadcast Function**  
Voice reminder if battery over or low voltage, fully charging, over or low temperature etc.
- **Mechanical**  
Dimensions: 500\*454\*215mm  
Weight:30KGS  
Enclosure: IP20  
Cooling: Fan Cooling
- **Protection**  
Shock &Vibration Protection;  
Reverse Polarity Protection;  
Short-Circuit Protection;  
Overheat Protection (Auto-recover);  
Low Input Voltage & High Voltage Protection;  
Charging Lock Function;  
Hardware failure protection;
- **Application**  
Heavy duty trucks, forklifts, electric lifts etc.

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## II Spec

### DC Output

Nominal Output	48Vdc	
Output Voltage Range	36-63Vdc	
Current	150A (x1 module)	300A (x2 modules)
Deep Discharge Recovery	5Vdc	
Max Power	6KW	12KW
Battery Type	Lead-acid (Wet/AGM/Gel), Li	
Charging Curves	Customized charging profiles according to the batteries' model, refer the manufacturer's operating manual	
Can Drive Voltage	5V	
BMS Power Supply	12V/0.3A	
USB Power Supply	5V/0.5A	

### AC Input

Nominal Input Voltage	380VAC 3 phase	480VAC 3 phase
Input Voltage Range	260-530VAC	
Max Current	20A	
Frequency	50-60Hz	
Power Factor	0.99	
Capacitance discharge capacity	5S (Drops lower than 60V within 10s)	

### Regulatory

Efficiency	95% at peak input voltage; ≥93% at 350-480VAC	
North America	USA UL1564, Canada CSA107.2 FCC Part15, ICES 003 CLASS A, CEC	
CE	IEC60335-2-29, EN55011, EN 61000-6-4 61000-3-2(GB17625.1-2012),EN61000-3-3(GB17625.2-2007),EN 61000-6-2(GB17799.2),EN61000-4-2/3/4/5/6/11	
China Mainland	GB4706.18-2014, GB4706.1-2005, GB4824-2013	
Australia	AS/NZS60335	
Health and Safety	Rohs,REACH Compliance	

### Environmental

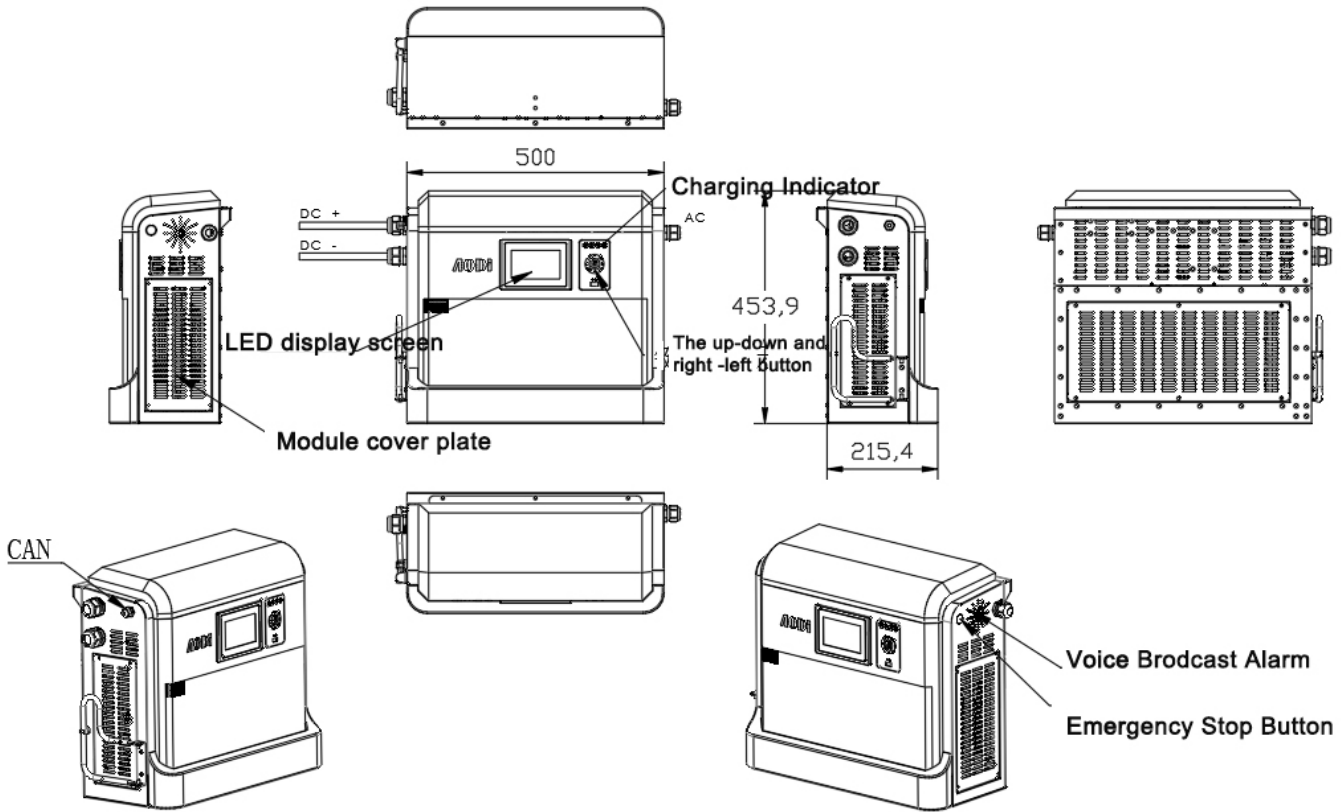
Operating Temperature	-25℃-75℃
Storage Temperature	-40℃-70℃
Enclosure Rating	IP22
Altitude	≤4000m
Noise	≤65dB
Relative Humidity	5%-95%

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Cooling	Fan cooling
Lifetime	10 years at 25°C ambient temperature
<b>Mechanical</b>	
Dimension	500*454*215mm
Weight	30KGS
AC Input Connector	Customized available
DC Output Connector	Customized available
USB Function	<ul style="list-style-type: none"> <li>◆ USB 2.0, ≤16G, FAT32 format;</li> <li>◆ Software update (update the software version and program a new charging profile);</li> <li>◆ Optional configuration 21 charging profiles;</li> <li>◆ Charging data logging;</li> <li>◆ Clear charging history;</li> <li>◆ Replace a new charging curve;</li> </ul>
Digital Display Tube (Multi-function menu)	<ul style="list-style-type: none"> <li>◆ Multi-function menu;</li> <li>◆ Supports multiple Languages;</li> <li>◆ Charging status display;</li> <li>◆ Charger failure alarm;</li> <li>◆ Select switch button;</li> <li>◆ Emergence stop function;</li> </ul>
Temperature Sensor (Optional)	<ul style="list-style-type: none"> <li>◆ Monitor the batteries temperature</li> <li>◆ Connected at the negative electrode of the battery, automatically compensated according to the detected battery temperature.</li> </ul>
CAN Function (Optional)	<ul style="list-style-type: none"> <li>◆ CAN ON/OFF Function CAN could operate normally if the battery voltage is &gt;12V, and the input AC or output DC is normal.</li> <li>◆ CAN Protocol: Lithium BMS</li> <li>◆ CAN Communication: CAN2.0B</li> </ul>
External Indicator (Optional)	<ul style="list-style-type: none"> <li>◆ Easy to monitor the charging status;</li> <li>◆ Charging: Slowly flashing the green light at the low charging state; Fast flashing the green lights at the high charging state;</li> <li>◆ Fully Charged: Solid green</li> <li>◆ Warning: Fast flashing red</li> <li>◆ Faults: Solid red</li> <li>◆ Power failure: short circuit (current less than 2A)</li> </ul>

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### III Drawing:



### IV User Notice

- ◆ Please do not modify or disassemble the product, otherwise it may cause electric shock;
- ◆ It is strictly forbidden to use the charger harness and cables as a handle;
- ◆ There are high-voltage and high-temperature places inside the product, which may cause electric shock or burns if touched;
- ◆ Please use the product within the range of technical parameters, if it is used outside the range, it may cause damage to the product;
- ◆ Hangzhou AODI Electronic Control Co.,Ltd has the final interpretation right of this product description, and it is not allowed to copy and reprint in any form without permission.