

Model No. : LWC22K-380S380-W
Product Name : 22KW ON BOARD CHARGER LIGUID

| | | | | | |
|------|----------------|---------|-----|--------|---|
| Date | Jul.13th, 2020 | Version | V01 | Remark | 1. Model No. changed to LWC22K-380S380-W from AR-22K-380S14-W |
|------|----------------|---------|-----|--------|---|



22KW ON BOARD CHARGER

- 13 It is easy to test the international mainstream EMI standards.
- 14 The product design conforms to the international mainstream safety I standard.
- 15 Compatible with the following different types of AC charging posts, while allowing continued charging in the event of a grid phase failure
- 16 Meet the new national standard GBT18487.1-2015 AND SAE J1772
- 17 Compatible with charging power expansion, 40KW, etc.

★ Features

- 1 Charging Standard: IEC
- 2 Output Power : 22KW
- 3 Input Voltage : Three-phase 345~415VAC
single phase 220±15% VAC
- 4 Output Voltage : 250~450VDC
- 5 Dimensions : 443x346x155mm
- 6 Weight: ≤30KG
- 7 Cooling System : Water
- 8 Protection Level : IP67 (except fan)
- 9 Communication Method : CAN
- 10 Enclosure: Aluminum alloy made
- 11 Software: Digital software design
- 12 The volume and weight of automotive grade products: down more than 20%.
- 13 Real-time monitoring, real-time control and functional control are performed on the hardware by a separate "core"

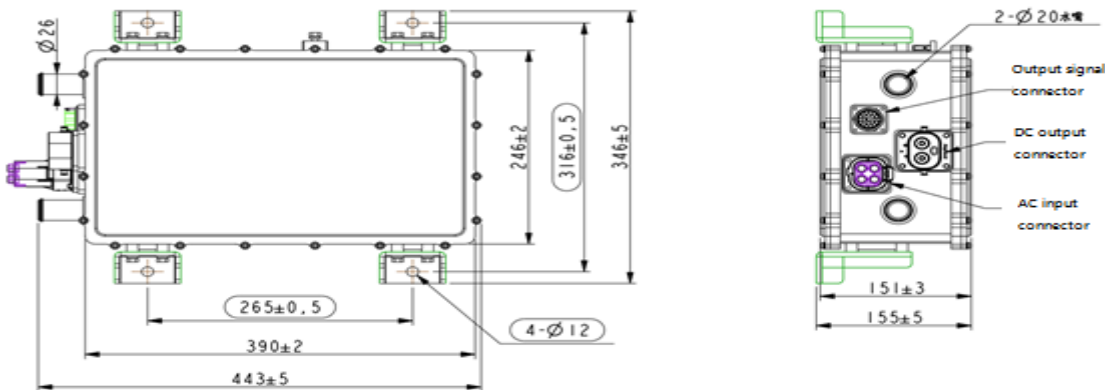
Specification

| Description | | Technical specifications | Remark |
|------------------------------------|-----------------------|---|-------------------------|
| Environmental characteristics | Operating temperature | -40~65°C | Long-time working |
| | Vibration/noise | Meet the QC/T 895-2011 standard | |
| | Salt spray experiment | Meet the QB/T 2423.17-2008 standard | |
| Output Power | | 21KW | |
| Input voltage range | | Three-phase 345~415VAC (line-to-line voltage, three-phase four-wire) Single phase 200~240VAC | |
| Output voltage range | | 250~450VDC | |
| Low voltage input auxiliary source | | 13.8VDC (2Amax) | |
| Activation method | | PP/CP/hard wire | |
| Voltage accuracy | | ±1% | |
| Output maximum current | | Three phase: 56±2A, single phase: 20±2A | |
| Voltage ripple factor | | ≤±1% | |
| Current accuracy | | ±3% | Half load or more |
| Efficiency | | ≥94% | Rated voltage Full load |
| Parallel function | | Networking is performed by internal CAN communication, and up to 8 modules can be connected in parallel. | |
| Output response time | | The rise time of the output voltage of the car charger should be less than 300ms, and the overshoot should be less than 10%. After receiving the shutdown command, the current drops below 10% within 300ms and drops to 0A within 500ms. | |
| Other protection features | | Input overvoltage, input undervoltage, output overvoltage, output undervoltage, short circuit, output overcurrent, overtemperature, reverse connection protection, potential equalization and ground protection, power failure protection. | |
| Over temperature protection | | When the temperature reaches 85 °C, the output power is reduced by half. The temperature is <80 °C in 10 minutes, and the full load is automatically restored. After 10 minutes, the temperature is >80 °C, then it is turned off. When the temperature is >90 °C, it will be shut down directly. | |
| CAN byte speed | | 250Kbps/500Kbps | |

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|-------------------------------|----------------------------|------------------------------------|--|
| Dielectric strength | Output to the outer casing | 2000VDC /60S 10mA Max | |
| | Input to the outer casing | 1500VAC /60S 10mA Max | |
| | Input to output | 3000VAC /60S 10mA Max | |
| Insulation resistance | Input to output | ≥ 20MΩ | |
| | Input to the outer casing | ≥ 20MΩ | |
| Electromagnetic compatibility | Radiation emission | GBT 18387 : 2008 · EN 55022 ClassB | |
| | Conducted emission | GBT 18387 : 2008 · EN 55022 ClassB | |
| | Radiation immunity | GBT 18387 : 2008 · EN 55022 ClassB | |

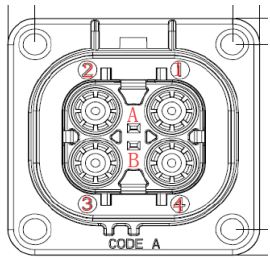
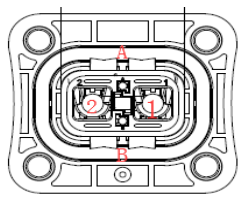
Structural parameters



Connector information (can be customized)

| Position | Socket model | Function | Brand | Plug model |
|----------|--------------|------------------|----------|---------------|
| A | HVC4P36MV306 | AC input | Amphenol | HVC4P36FS306 |
| B | HVC2P60MV100 | DC output | Amphenol | HVC2P60FS3116 |
| C | RT001823PN03 | Control terminal | Amphenol | RT061823PNH03 |

Interface definition

| Socket definition | Pin number | Interface definition | Description | Connector picture |
|---------------------------|------------|----------------------|-------------------------------------|---|
| AC input HVC4P36MV306 | 1 | FireWire 1 | L1 (single fire line fixed input) |  |
| | 2 | FireWire 2 | L2 | |
| | 3 | FireWire 3 | L3 | |
| | 4 | N | Neutral/midline | |
| | A | Interlock 1 | Connection interlock 5 | |
| | B | Interlock 2 | Connection interlock 3/micro switch | |
| | N | Ground wire | Product enclosure | |
| DC output HVC2P60MV100 | 1 | positive electrode | Output positive |  |
| | 2 | negative electrode | Output negative | |
| | A | Interlock 3 | Connection interlock 2/micro switch | |
| | B | Interlock 4 | Connection interlock 6 | |



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|-----------------------------------|--------|--|---|
| Control terminal RT001823PSN03 | A | CAN1-L | CAN low |
| | B | VCC+ | Normal input |
| | C | VCU_EN | Hard-wire wake-up OBC, enable signal (active high) |
| | D | CP | CP |
| | E | PP | PP |
| | F | WAKE_UP | VCU/BMS wake-up signal (1A) Isolated from input constants |
| | G | NTC1- | Temperature sensor 1 negative |
| | H | NTC1+ | Temperature sensor 1 positive |
| | J | NTC2- | Temperature sensor 2 negative |
| | K | NTC2+ | Temperature sensor 2 is positive |
| | L | CAN1-H | CAN high |
| | M | LOCK+ | Electronic locks |
| | N | LOCK+ | Electronic locks |
| | P | LOCK feedback | Electronic locks |
| | R | CP_OUT | CP status output, low level enable |
| | S | Interlock 5 | Interlock signal detection 1 |
| | T | Interlock 6 | Interlock signal detection 4 |
| | U | NC | NC |
| | V | TB_R | Terminal resistance selection, short circuit to C pin, the resistance is effective |
| | W | NC | |
| X | CAN2-L | Internal parallel CAN2 low | |
| Y | CAN2-H | Internal parallel CAN2 high | |
| Z | EN2 | Internal parallel enable (reserved) | |



MASTER KEYWAY

33.3
27.0
27.0
33.3
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Label

| | | |
|--|--|---|
|  安仁國際股份有限公司 ANNREN TECHNOLOGIES CO., LTD. | | OBC |
| Product Model LWC22K-380S380-W | |  |
| Code: LWC22K-380S380-W-AR01 | | |
| Serial Number: | | |
| Input Voltage: | <small>Three-phase 345~415VAC single phase 220±15% VAC</small> | Output Voltage: 250~450VDC |
| Output Current: | <small>Single phase : 20±2A Three phase: 56±2A</small> | Output Power: 22KW |