安仁國際股份有限公司
ANNREN TECHNOLOGIES CO., LTD.

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No.196-19, CHUNGHWA RD. ,YUNGKANG DISTRICT, TAINAN CITY 71069, TAIWAN

Model No.：LWC22K-380S540-W

Product Name：22KW ON BOARD CHARGER LIGUID

Date	Jul.13th, 2020	Version	V01	Remark	1. Model No. changed to LWC22K-380S540-W from AR-22K540S27-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：400-650VDC
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℃	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		400-650VDC	
Low voltage input auxiliary source		27VDC（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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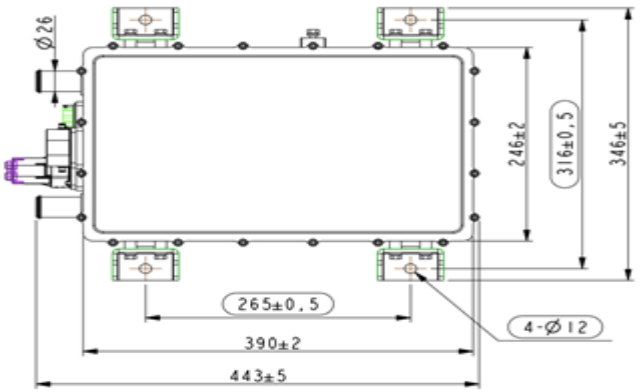
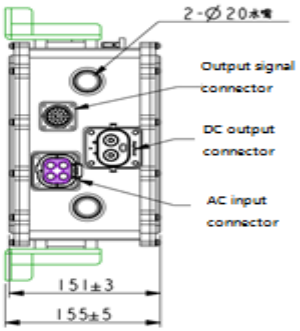
Dielectric strength	Output to the outer casing	2000VDC /60S 10mA Max	
	Input to the outer casing	1500VAC /60S 10mA Max	
	Input to output	3000VAC /60S 10mA Max	
Insulation resistance	Input to output	≥20MΩ	
	Input to the outer casing	≥20MΩ	
Electromagnetic compatibility	Radiation emission	GBT 18387：2008 · EN 55022 CLassB	
	Conducted emission	GBT 18387：2008 · EN 55022 CLassB	
	Radiation immunity	GBT 18387：2008 · EN 55022 CLassB	

Structural parameters

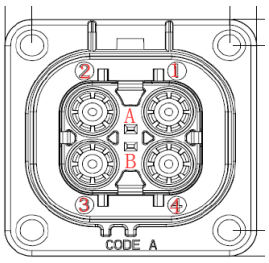
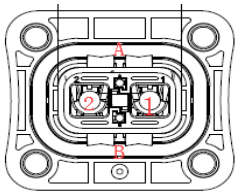




Connector information (can be customized)

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	Whole machine housing terminal
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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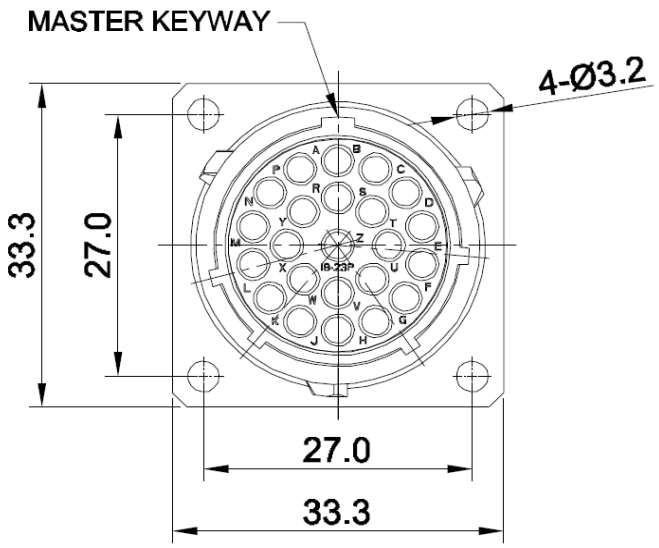
Control terminal
RT001823PSN03

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)



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Label