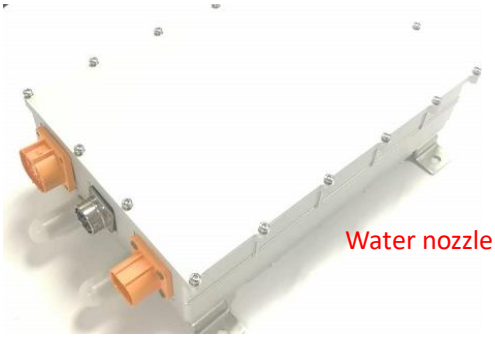
安仁國際股份有限公司
ANNREN TECHNOLOGIES CO., LTD.
eMail： sales@annren.com
https://annren.en.taiwantrade.com
Tel：+886-6-313-0155 Fax：+886-6-313-0225
No.196-19, Zhonghua Rd., Yongkang Dist., Tainan City 71069, Taiwan

11KW ON BOARD CHARGER

Model No.: AR11K3S-400580L



Features

Product Name	11KW ON BOARD CHARGER
Model No.	AR11K3S-400580L
Standard	GB/T / IEC
Power	11KW
Input Voltage	Three-phase 304~456VAC/single phase 90~264VAC
Output Voltage	400~750VDC
Output Current	Three phase: 32A, 6.6KW single phase: 20A
Efficiency	≥95%
Module Low Voltage (VDC)	13.8VDC（4Amax）
Size (mm)	345x224x100mm
Cooling System	Liquid Cool
IP Rating	IP67
Scope	Various new energy vehicles
Hardware	Small size, light weight and stable performance
Firmware	Full digital software design, redundant protection function design
Weight	Net: 10KG Gross: 12KG

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This charger has several advantages, including:

1. The volume and weight of automotive grade products: down more than 20%.
2. Real-time monitoring: real-time control and function control are performed on the hardware by a separate “core”

□ It is easy to test the international mainstream EMI standards.

□ The product design conforms to the international mainstream safety and standard.

□ It can be compatible with the following different types of AC charging piles, while allowing continuous charging in the case of grid disconnection

3. Meet the new national standard GBT18487.1-2015.
4. Reserve hardware interfaces for interconnection between the Internet of Vehicles, mobile Internet and car chargers.
5. Retain the hardware interface for the secondary development of ASIL functional safety in the future.
6. Compatible with charging power expansion 22KW, 40KW, 80KW, etc.

Specification

Specification			Remark
Environmental characteristics	Operating temperature	-40~85℃	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		Three phase 11KW / single phase 6.6KW	
Input voltage range		Three-phase 304~456VAC (line-to-line voltage, three-phase four-wire) Single phase 90~264VAC	
Output voltage range		400~750VDC	
Low voltage input auxiliary source		13.8VDC（4Amax）	
Activation method		CP/CC/hard wire	
Voltage accuracy		±1%	
Output maximum current		11KW Three phase: 32A, 6.6KW single phase: 20A	
Voltage ripple factor		≤±1%	
Current accuracy		±3%	≧Half load
Effectiveness		≥95%	Rated voltage Full load

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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.	
Dielectric strength	Input to the outer casing	2000VDC /60S 10mA Max	
	Input to output	1500VAC /60S 10mA Max	
	Input to output	3000VAC /60S 10mA Max	
Insulation resistance	Input to the outer casing	≥20MΩ	
	Input to the outer casing	≥20MΩ	
EMC	Electromagnetic immunity	GB/18487.3-2001 Class B	Cooperate with the whole vehicle
	Electromagnetic disturbance	GB/18487.3-2001 Class B	Cooperate with the whole vehicle

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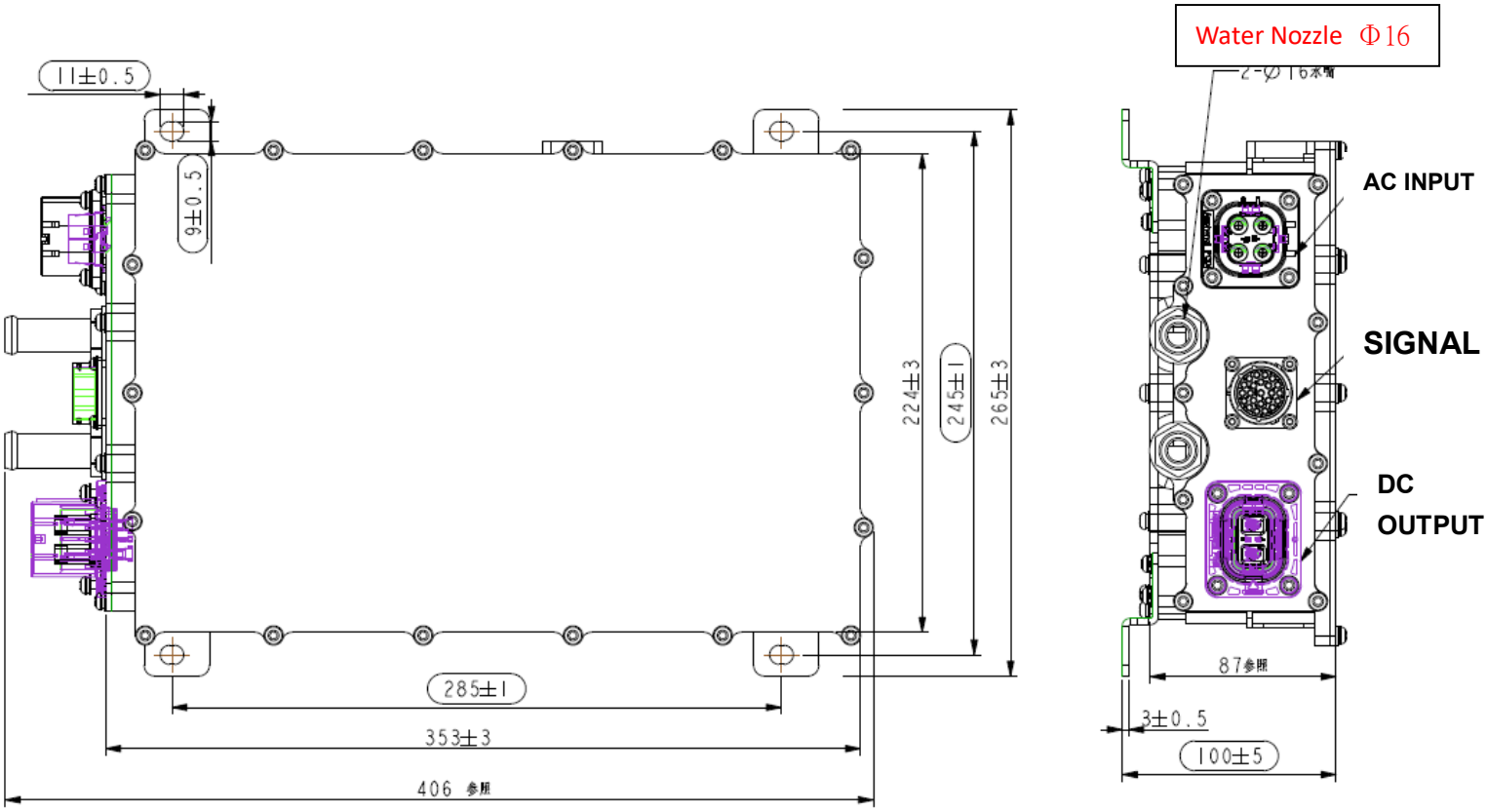
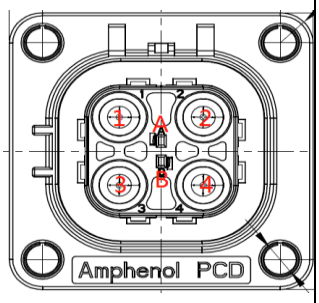
Structural parameters

Pinout	Receptacle Model no.	Function	Maker	Plug Model No.	Terminal Model No.	Stopper Model No.
A	HVSL364024A	AC input	Amphenol	HVSL364064A104I	C310026001	\
B	HVSL630022A	DC output	Amphenol	HVSL630062A	C310003623	\
C	RT001823PN03	Signal	Amphenol	RT061823PNHEC03	SS16M1F	AT13-204-2005



MAKER	Model No.	Description			Remark
AC input Amphenol	HVSL364024A	1	Fire line L1	L1	
		2	Fire line L2	L2	
		3	Fire line L3	L3 (single fire line fixed input)	
		4	N	Neutral/midline	
		A	NC	NC	
		B	NC	NC	
	casing	N	Ground line	Product enclosure	Whole machine housing terminal

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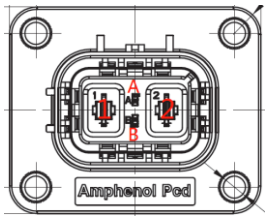
DC output Amphenol	HVSL630022A	1	positive	Output positive	
		2	negative	Output negative	
		A	Interlock 1	Connection interlock 5	
		B	Interlock 2	Connection interlock 6	
Signal Amphenol	RT001823PSN 03	A	CAN1-L	CAN LOW	
		B	VCC+	Normal input	
		C	VCU_EN	Hard-wire wake-up OBC, enable signal (active high)	
		D	CC	CC	
		E	CP	CP	
		F	WAKE_UP	VCU/BMS wake-up signal (100mA) 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	CC_OUT	CC status output, turn on low level	
		S	NC	NC	
		T	NC	NC	
		U	NC	NC	
		V	TB_R	Terminal resistance selection, short circuit to C pin, the resistance is effective	
		W	GND	GND	
		X	CAN2-L	Internal parallel CAN2 low	
		Y	CAN2-H	Internal parallel CAN2 high	
		Z	NC	NC	

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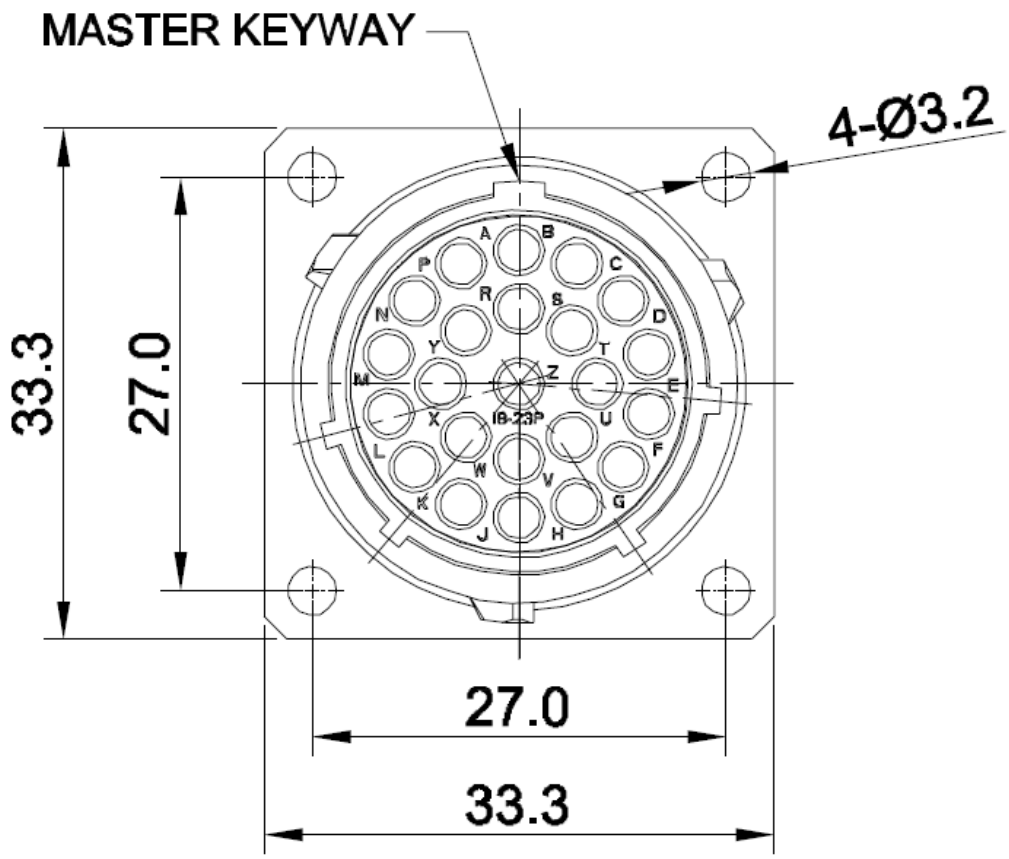

Label

Product Name	11KW ON BOARD CHARGER		
Product Part No.	E25. AR-11K3S-400580L		
Product Model	AR11K3S-400580L		
Serial number	2020XXXXXXXX		
Input Voltage	3 phase 304~456VAC 1 phase 90~264VAC	Output Voltage	400~750VDC
Output Current	3 phase: 32A 6.6KW 1 phase: 20A	Output power	11KW
Supplier	ANNREN TECHNOLOGIES CO., LTD.		