

Model No. : LWD2K-380S14-W

Product Name : 2KW DC/DC Converter Liquid Cooled System

Date	Jul.17th, 2020	Version	V01	Remark	Model No. changed to LWD2K-380S14-W from AR2K-250380S14L
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Features

- 1 Output Power : 2KW
- 2 Input Voltage : 250-450VDC
- 3 Output Voltage : 13.8VDC
- 4 Dimensions : 268x220x75mm
- 5 Cooling System : Liquid (water nozzle ϕ 16)
- 6 IP Rating : IP67
- 7 Communication Method : CAN
- 8 Enclosure: Aluminum alloy made
- 9 Software: Digital software design

2KW DC/DC Converter Liquid Cooled System

Applications



Electric Passenger Vehicles Electric Passenger Vehicles

Specification

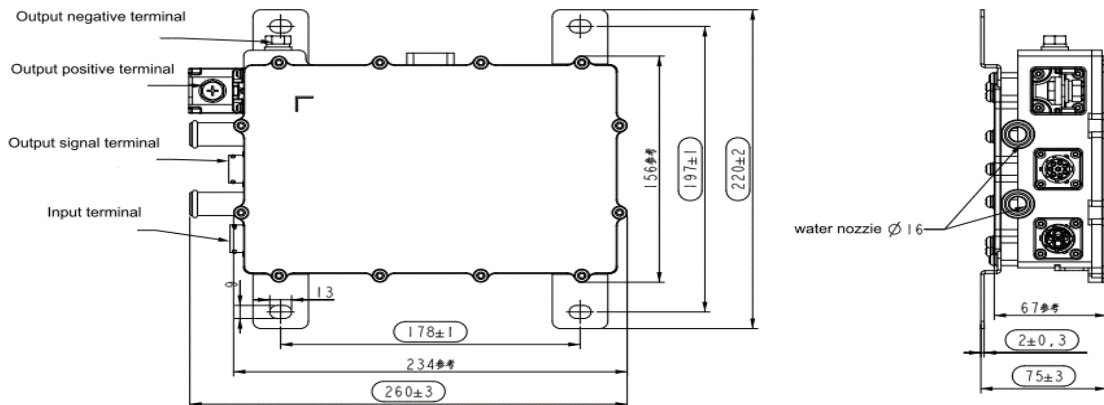
Description		Technical specifications	Remark
Operating temperature		-40~85°C	85~100°C · Can be derated to 40% of work
Rated output power		2KW (continuous operation at full load)	Peak power 2.5KW
Input voltage range		250-450VDC	
Output rated voltage		13.8VDC	9~16 Adjustable
Rated output current		145A	
Auxiliary power VCC		6-18VDC	
Efficiency		≥ 95%	Rated voltage Full load
Output voltage ripple		≤ 500mV _{PK-PK}	
Protection characteristics		Input over and under voltage, output over and under voltage, input anti-reverse connection, output over current and short circuit protection, over temperature self-recovery	
Over temperature protection		The baseplate temperature reaches 85 ° C and starts derating. If the temperature exceeds 100 ° C, it will be shut down. If the temperature is lower than 95 ° C, it can recover automatically	
Dielectric strength	Input to output	2500VDC/1min 1mA max	
	Input to the outer casing	2500VDC/1min 1mA max	
Insulation resistance	Input to output	≥ 20MΩ	
	Input to the outer casing	≥ 20MΩ	
Battery compatibility	Radiation emission	GB/T 18655-2010 Class 3	
	Conducted emission	GB/T 18655-2010 Class 3	
	Static immunity	GB/T 19951-2005	Air discharge : 15KV · Contact discharge 8KV
	Radiation immunity	GB/T 18655-2010 Class 3	
	High current injection	GB/T 17619-1998	
	Fast burst immunity	GB/T 17626.4-2008 1KV	
Weight	Net weight / Gross weight	4.5KG / 5.0KG	
CAN byte speed		250Kbps/500Kbps	



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Structural parameters



skills requirement

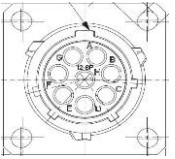
1. The inner dimensions of the frame are the key inspection dimensions, and the dimensions without tolerances are in accordance with GB1804-M.
2. Check whether the surface is clean, without obvious scratches, and without oil or dirt.
3. The input and output terminals are OT terminals and fixed with M8X16 screws.

Electrical Interface

Connector Table (customizable)

Item	Position	Receptacle model no.	Pinout definition	Maker	Plug model no.
1	A	RT00128PN03	Control terminal	Amphenol	RT06128SNHEC03
2	B	RT00122PN03	DC high voltage terminal	Amphenol	RT06122SNHEC03
3	C	ACTB117-C	Output positive	Connet	M8 Specification copper ear
4	D	M8 Bolt lock housing	Output negative	\	M8 Specification copper ear

Interface definition (for reference)

Maker	Receptacle model no.	Description	Connector picture
Amphenol	RT00128PN03	A CAN-H	
		B CAN-L	
		C KEY (Highly effective) Reserved	
		D VCC+	
		E GND	
		F NC	
		G Interlock 3	
		H Interlock 4	
Amphenol	RT00122PN03	A Input positive	
		B Input negative	
		1 Interlock 1 (connection interlock 3)	
		2 Interlock 2 (connection interlock 4)	

Label

