

Date	Jul.17th, 2020	Version	V01	Remark	Model No. changed to LWD1K5-380/540S14-W from AR-1K5-380/540S14-W-AR01
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Product Name	1.5KW DC/DC CONVERTER
Model No.	LWD1K5-380S14-W LWD1K5-540S14-W
Power	1.5KW
Input Voltage	250~450VDC/400~750VDC
Output Voltage	13.8VDC
Output Current	73A
Efficiency	≥95%
Module Low Voltage (VDC)	\
Module Low Current (A)	\
Size (mm)	268x220x75mm
Cooling System	Water
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

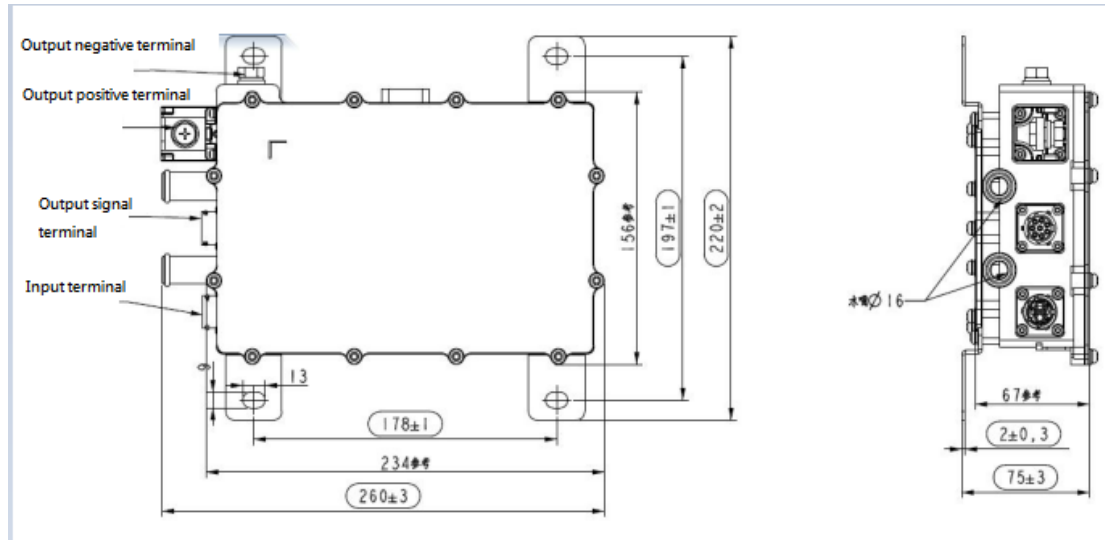
Features

- ◆ **Output power: 1.5KW**
- ◆ **Input voltage: 250~450VDC/400~750VDC**
- ◆ **Output voltage: 13.8VDC**
- ◆ **Communication method: CAN**

Main technical parameters

Item		Technical specifications	Remark
Operating temperature		-40~85℃	85~100℃. Can be derated to 40% of work
Rated output power		1.5KW (continuous operation at full load)	Peak power 1.8KW
Input voltage range		250~450VDC/400~750VDC	
Output rated voltage		13.8VDC	9~16 Adjustable
Rated output current		73A	
Auxiliary power VCC		6~18VDC	
Efficiency		≥95%	Rated voltage Full load
Output voltage ripple		≤500mV _{PK-PK}	
Protection characteristics		Input over-voltage, output over-voltage, input anti-reverse connection, output over-current and short-circuit protection, over-temperature self-recovery	
Over temperature protection		The bottom plate temperature reaches 85℃ and starts derating output. The temperature exceeds 100℃, shutting down; the temperature is lower than 95℃, which can be self-recovery.	
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	

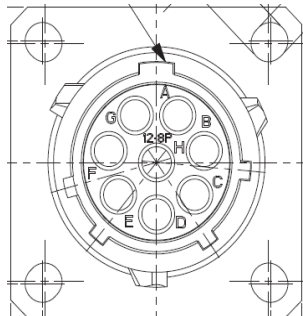
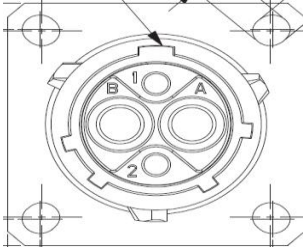
Structural parameters



Connector information:

Position	Socket model	Function	Brand	Plug model
A	RT00128PN03	Control terminal	Amphenol	RT06128SNHEC03
B	RT00122PN03	DC high voltage terminal	Amphenol	RT06122SNHEC03
C	ACTB117-C	Output positive	Connet	M8 specification copper ear
D	M8 Bolt lock housing	Output negative	/	M8 specification copper ear

Interface definition:

Vendor	Model	Description		Remarks
Amphenol	RT00128PN03	A	CAN-H	
		B	CAN-L	
		C	KEY (high effective) reservation	
		D	VCC+	
		E	GND	
		F	NC	
		G	NC	
		H	NC	
Amphenol	RT00122PN03	A	Input positive	
		B	Input negative	
		1	Interlock 1 connection 2	
		2	Interlock 2 connection 1	

Label

