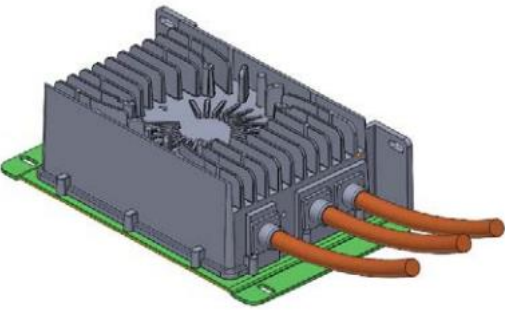# Specification

Model No. ATD1K-96S12-F
Part Name: 1KW DC-DC Converter

Revision	Date Issued (DD/MM/YY)	Description	Released by	Approved by
V0	30/5/2022	First Released	Shell Li	C.J.Chu

Model No. ATD1K-96S12-F

Features
1. Output Power：1KW
2. Input Voltage：82-114Vdc
3. Output Voltage：14.2V dc
4. Dimensions(L x W x D)mm：287 x 168 x 89
5. Cooling System：Fan
6. Communication Method：CAN-BUS
7. IP Rating: IP67
8. Enclosure: Aluminum alloy made
9. Software: Digital software design

Specification		Remark
DC Input		
Rated input voltage	96Vdc	/
Input voltage range	82/114Vdc	/
Input Current	≤12A Max	/
Rated input power	1100W±10%	Rated input and output
Efficiency	≥93%	Rated input and output
DC Output		
Rated output voltage	14.2V	/
Output voltage range	82-114V	Adjustable via communication
Rated output current	70(MAX)	/
Output Power	1000W	maximum output power
Current accuracy	±2%	/
Voltage accuracy	±2%	/
Ripple voltage	≤±1%Vo（p-p）	20MHz bandwidth/peak to peak
communication method	CAN	Communicate with battery BMS
communication protocol	/	Communication protocol with battery BMS

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Security Features

Item	Specifications	Remark
insulation voltage	Input to chassis 500 Vdc, 1min, leakage current <30mA	Remove the discharge tube test, no arcing, no breakdown
insulation voltage	Input to output 500 Vdc; 1min, leakage current <30mA	
insulation voltage	Output to chassis 500 Vdc; 1min, leakage current <30mA	
Insulation resistance	Input→Output≥1 MΩ; Output→Case>5 MΩ	500Vdc test; 25℃

Protection function

Item	Unit	Specifications	Remark
Input overvoltage protection (software, hardware)	Vdc	≥114.5	self-recovery
Input undervoltage protection (software, hardware)	Vdc	≤81.5	self-recovery
Output overcurrent protection (software, hardware)	A	≥110%Io	Self-recovery, more than 5s lock, need to power off and restart
Output undervoltage protection (software, hardware)	Vdc	≤13.2	self-recovery
Output overvoltage protection (software, hardware)	Vdc	≥15.2	self-recovery
Over temperature protection (software)	℃	≥80	Output side heat sink (test point)
Output short circuit protection (software, hardware)	/	≥110%Io	Self-recovery, more than 2s lock, need to power off and restart
Communication interruption	/	Yes	Communication is interrupted, and the output is turned off after a timeout of 5S

Environment

Item	Min	Typical	Max	Unit	Test Conditions
Operating temperature	-30	25	55	℃	
Storage temperature	-40	25	100	℃	
Relative humidity	5	/	95	%	
Protection class	/	IP67	/	/	
cooling method	/	Fan cooling	/	/	
working altitude	/	3000	/	m	
working noise	/	/	/	dB	