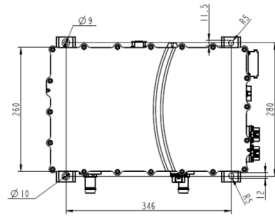


Model No. : ATD12K-3682S280350-W
Product Name : 12KW DC/DC Converter-Liquid



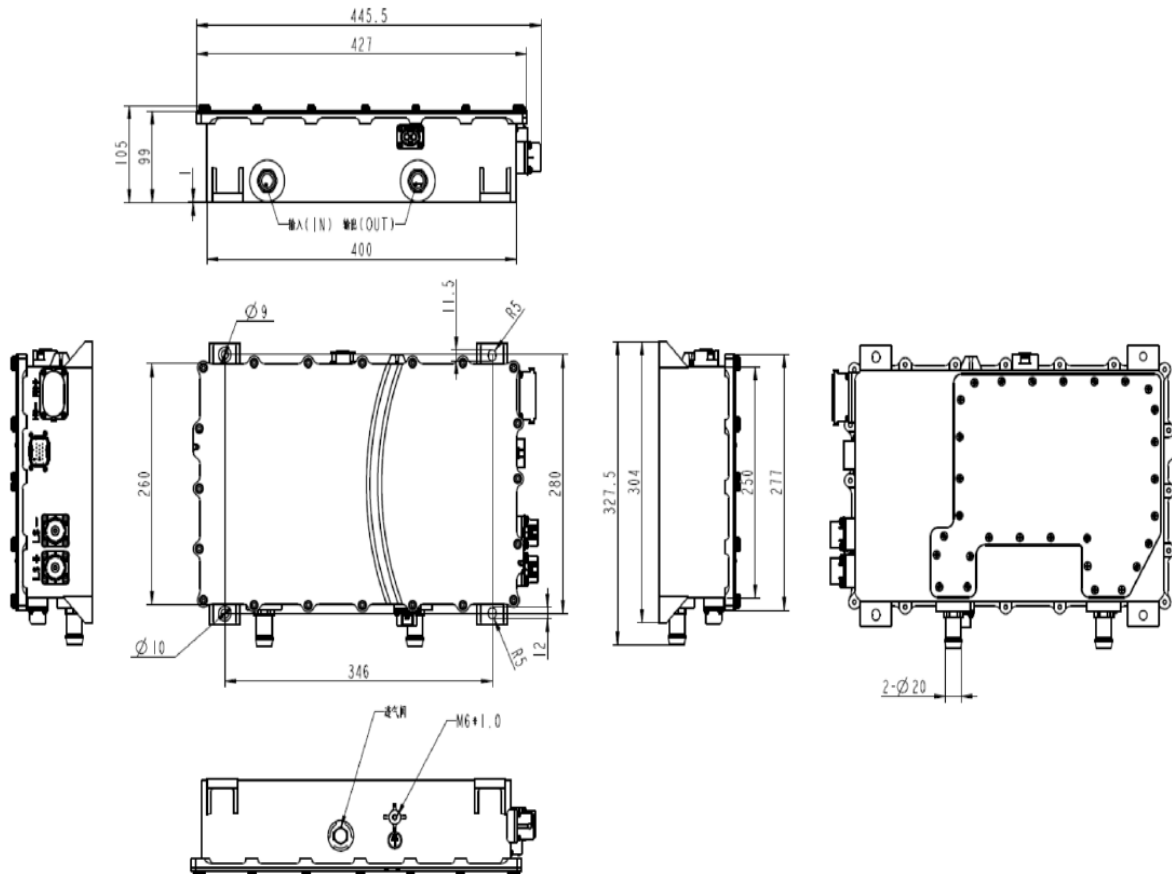
Features

- 1 Input Power : 12KW
- 2 Input Voltage : 30~100Vdc
- 3 Output Voltage : 250-400VDC
- 4 Dimensions(L*W*D) : 400*250*98mm
- 5 Cooling System : Liquid, flow rate 6L/min
- 6 Protection Level : IP67
- 7 Communication Method : CAN 2.0B 250kbps
- 8 Enclosure: Aluminum alloy made
- 9 Software: Digital software design
- 10 Non Isolated

Specification

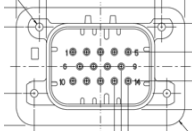
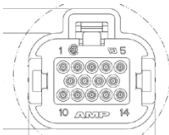
Description	Technical specifications	Remark
Operating temperature	-40~85°C	Coolant inlet temperature
Rated input power	12KW	
Input voltage range	30~100VDC	Can be set by software tool, support cold start voltage
Output voltage range	250-400VDC	Can be set by software tool
Rated output current	40A	
Efficiency	> 98%	
Output voltage ripple	≤1% FS	
Output current ripple	≤1% FS	
Input voltage ripple	≤1%	
Input current ripple	≤1%	
Output voltage sampling accuracy	±(0.5% Real-time +3V)	
Output current sampling accuracy	±(0.5% Real-time +2A)	
Communication method	CAN 2.0B 250kbps	
Protection characteristics	output OVP/UVP,OTP, input reverse protection, output short circuit protection, OCP, OTP	
EMC characteristics	GB/T24347-2009、GB/T18655-2010 Level 1	Test with the vehicle whole system
Dimensions(L*W*D)	400x250x98mm	
Cooling System	Liquid cooling, flow rate 6L/min	
Protection Level	IP67	
Weight	≤15KG	

Structural parameters (unit : mm)



Model No. : ATD12K-3682S280350-W
Product Name : 12KW DC/DC Converter-Liquid

Signal terminal definition

TE	776262-1						
Wire harness Model							
TE	776273-1						
Pin number	Cable	Function	signal type	Port	Maximum current	Reference wire diameter	Note
1	CANB-L	Debugging CAN	CANB-L			0.75mm ² Twisted pair	Comes with 120Ω terminal resistance
6	CANB-H		CANB-H			0.75mm ² Twisted pair	
7	CANA-L	Whole vehicle CAN	CANA-L	FCU		0.75mm ² Twisted pair	Short-circuit the CANA-R1 and CANA-R2 cables to configure a terminal resistance, such as 2 and 10 short-circuit to configure a 120Ω resistor
13	CANA-H		CANA-H	FCU		0.75mm ² Twisted pair	
2	CANA-R1		CANA-R			0.75mm ²	
10	CANA-R2		CANA-L			0.75mm ²	
3	CANA-GND		CANA-GND	FCU		Shield	
4	VCC	power supply	VCC	Low voltage power supply	4	0.75mm ²	Low-voltage power supply 9~36Vdc
8	GND		GND		4	0.75mm ²	
9							
11	HV-LK1	High voltage interlock		FCU		0.75mm ²	
12	HV-LK2			FCU		0.75mm ²	
5,14	Reserved						Do not wire

Pin 11 and pin 12 are high-voltage interlock signals, which provide the system with normally closed (NC) contacts (plug in state).

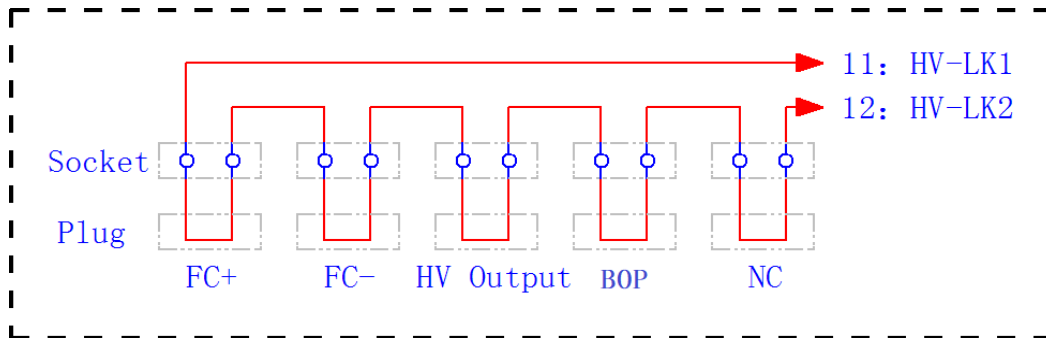


Figure 4 Internal wiring of high voltage interlock.

Power terminal definition

	Name	Connector supplier	Pin	Connector model (device end)	Connector model (harness end)	External wire diameter (mm ²)
1	FC Input+	Amphenol	/	PL00V-301-10M8	PL18V-301-70	70
2	FC Input-		/	PL00U-301-10M8	PL18U-301-70	
3	High voltage output+	Amphenol	1	HVSL S600022A1H6	HVSL S600062A116	16
4	High voltage output-		2			
5	BOP Aux Output +	Amphenol	1	PL082X-61-10	PL182X-61-10	10
	BOP Aux Output -		2			

