

**1224V to 36V48V DC DC Step-Up Converter Specification**

**Revision Record**

Version	Description	Effective Date	Edited by
00	First release	20150810	Frank
01	Remove iron shell series products	20170411	Frank

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## 1. Product Overview

### 1.1 Description

Model No.	Description	Interface material	Remark
ADS1224T36-01PC	1224Vdc to 36Vdc 1A	Plastic shell	58x40x22mm
ADS1224T36-02AL	1224Vdc to 36Vdc 2A	Aluminum alloy shell	74x74x32mm
ADS1224T36-04AL	1224Vdc to 36Vdc 4A	Aluminum alloy shell	74x74x32mm
ADS1224T48-01PC	12Vdc to 48Vdc 2A	Plastic shell	58x40x22mm
ADS24T48-03AL	24Vdc to 48Vdc 3A	Aluminum alloy shell	74x74x32mm
ADS24T48-10AL	24Vdc to 48Vdc 10A	Aluminum alloy shell	100x80x39mm
ADS24T48-20AL	24Vdc to 48Vdc 20A	Aluminum alloy shell	150x127x63mm
ADS24T48-30AL	24Vdc to 48Vdc 30A	Aluminum alloy shell	150x127x63mm
ADS24T48-40AL	24Vdc to 48Vdc 40A	Aluminum alloy shell	220x127x63mm
ADS36T48-04AL	36Vdc to 48Vdc 4A	Aluminum alloy shell	74x74x32mm

The ADS series dc converter (dc power supply) is consist of Bridge drive switch, PWM pulse circuit, power transformer and rectifier filter circuit, topological structure design guarantee a safety application and high transfer efficiency.

The DC converters are widely used in Military, Avionics, Boat, Yacht, Bus, Vehicles, Golf Cart , Forklift, e-sweeper, all kind of automotive, posts and telecommunications, communications, electricity, solar system, coal, aerospace, defense, surveillance systems, railway signals, medical equipment, instruments and meters, LED displays, cable TV ,AGV, Robot, IoT and other fields. If you can not find a suitable model, we can customize it for you

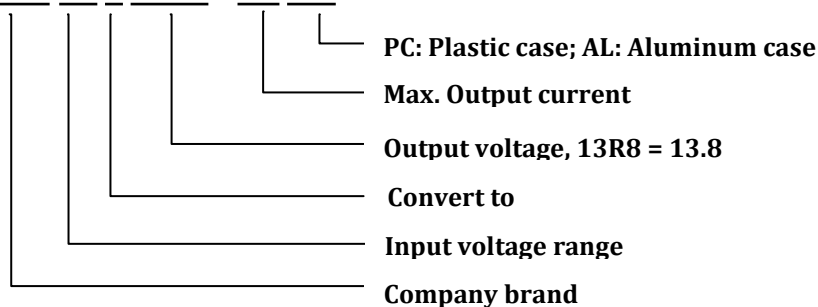
## 1.2 Features

1. Conversion efficiency > 93%
2. Pouring Sealed inside, Die-cast aluminum shell
3. Non-isolated between input and output
4. Anti-Quake and dust
5. Protection level: IP67
6. Famous key components brand
7. PWM technology and IRF high power transistor
8. Sufficient power with synchronous rectification technology.
9. Over-voltage, over current, short-circuits, over-temperature protection and auto recovery function.
10. Easy installation, Convenient for using and transportation
11. Warranty: 2 Year



## 1.3 Product Name Definition

### ADS12T13R8 -20 PC



## 2. Technical Specifications

Model	ADS1224T36-01PC		
Input	Rated voltage	V	1224
	Voltage range	V	9-36
	Conversion efficiency	%	93
	Positive cable	cm	Red @ 22 or DC connector
	Negative cable	cm	Black @22 or DC connector
Output	Voltage	V	36
	Voltage range	V	35.9~36.1
	Working current	A	1
	Peak current	A	1.5
	Rated power	W	36
	Power consumption	mA	5.0
	Ripple & noise	mV	40
	Positive cable	cm	Yellow @ 22 or DC connector
	Negative cable	cm	Black @ 22 or DC connector
Protection function	Input instant over voltage		Yes
	Output over current		Yes
	Output short-circuit		Yes
	Chip over temperature		Yes
	Input reverse connect		No, can customize
	Output reverse connect		No, can customize
	Automatic recovery		Yes
	Water-proof		Yes
	Quake-proof		Yes
	Dust-proof		Yes
	Protection level		IP67
Environment	Working Temperature	°c	-40 ~+85
	Working humidity	RH	< 90
	Storage temperature	°c	-50~+ 90
General	Shell material		Flame Retardant Plastic case
	Sealed material		Epoxy filled and sealed
	Dimension	mm	58*40*22
	Weight	g	97

Model	ADS1224T36-02AL		
Input	Rated voltage	V	1224
	Voltage range	V	9-36
	Conversion efficiency	%	93
	Positive polarity		Red @ 18
	Negative polarity		Black @18
Output	Voltage	V	36
	Voltage range	V	35.9~36.1
	Working current	A	2
	Peak current	A	4
	Rated power	W	72
	Power consumption	mA	25
	Ripple & noise	mV	40
	Positive polarity		Yellow @ 18
	Negative polarity		Black @18
Protection function	Input instant over voltage		Yes
	Output over current		Yes
	Output short-circuit		Yes
	Chip over temperature		Yes
	Input reverse connect		No, can customize
	Output reverse connect		No, can customize
	Automatic recovery		Yes
	Water-proof		Yes
	Quake-proof		Yes
	Dust-proof		Yes
	Protection level		IP67
Environment	Working Temperature	°c	-40 ~+85
	Working humidity	RH	< 90
	Storage temperature	°c	-50~+ 90
General	Shell material		Aluminum alloy case
	Sealed material		Heat organic silicone filled and sealed
	Dimension	mm	74*74*32
	Weight	g	300

Model	ADS1224T36-04AL		
Input	Rated voltage	V	1224
	Voltage range	V	9-36
	Conversion efficiency	%	93
	Positive polarity		Red @ 18
	Negative polarity		Black @18
Output	Voltage	V	36
	Voltage range	V	35.9~36.1
	Working current	A	4
	Peak current	A	5
	Rated power	W	144
	Power consumption	mA	25
	Ripple & noise	mV	40
	Positive polarity		Yellow @ 18
	Negative polarity		Black @18
Protection function	Input instant over voltage		Yes
	Output over current		Yes
	Output short-circuit		Yes
	Chip over temperature		Yes
	Input reverse connect		No, can customize
	Output reverse connect		No, can customize
	Automatic recovery		Yes
	Water-proof		Yes
	Quake-proof		Yes
	Dust-proof		Yes
	Protection level		IP67
Environment	Working Temperature	°c	-40 ~+85
	Working humidity	RH	< 90
	Storage temperature	°c	-50~+ 90
General	Shell material		Aluminum alloy case
	Sealed material		Heat organic silicone filled and sealed
	Dimension	mm	74*74*32
	Weight	g	300

Model	ADS1224T48-01PC		
Input	Rated voltage	V	1224
	Voltage range	V	9-45
	Conversion efficiency	%	93
	Positive cable	cm	Red @ 22 or DC connector
	Negative cable	cm	Black @22 or DC connector
Output	Voltage	V	48
	Voltage range	V	47.9~48.1
	Working current	A	1
	Peak current	A	1.5
	Rated power	W	48
	Power consumption	mA	5.0
	Ripple & noise	mV	40
	Positive cable	cm	Yellow @ 22 or DC connector
	Negative cable	cm	Black @ 22 or DC connector
Protection function	Input instant over voltage		Yes
	Output over current		Yes
	Output short-circuit		Yes
	Chip over temperature		Yes
	Input reverse connect		No, can customize
	Output reverse connect		No, can customize
	Automatic recovery		Yes
	Water-proof		Yes
	Quake-proof		Yes
	Dust-proof		Yes
	Protection level		IP67
Environment	Working Temperature	°c	-40 ~+85
	Working humidity	RH	< 90
	Storage temperature	°c	-50~+ 90
General	Shell material		Flame Retardant Plastic case
	Sealed material		Epoxy filled and sealed
	Dimension	mm	58*40*22
	Weight	g	97

Model	ADS24T48-03AL		
Input	Rated voltage	V	24
	Voltage range	V	18-35
	Conversion efficiency	%	93
	Positive cable	cm	Red @ 18
	Negative cable	cm	Black @18
Output	Voltage	V	48
	Voltage range	V	47.9~48.1
	Working current	A	3
	Peak current	A	5
	Rated power	W	144
	Power consumption	mA	25
	Ripple & noise	mV	40
	Positive cable	cm	Yellow @ 18
	Negative cable	cm	Black @18
Protection function	Input instant over voltage		Yes
	Output over current		Yes
	Output short-circuit		Yes
	Chip over temperature		Yes
	Input reverse connect		No, can customize
	Output reverse connect		No, can customize
	Automatic recovery		Yes
	Water-proof		Yes
	Quake-proof		Yes
	Dust-proof		Yes
	Protection level		IP67
Environment	Working Temperature	°c	-40 ~+85
	Working humidity	RH	< 90
	Storage temperature	°c	-50~+ 90
General	Shell material		Aluminum alloy case
	Sealed material		Heat organic silicone filled and sealed
	Dimension	mm	74*74*32
	Weight	g	300



Model	ADS24T48-10AL		
Input	Rated voltage	V	24
	Voltage range	V	18-32
	Conversion efficiency	%	93
	Positive cable	cm	Red @ 16
	Negative cable	cm	Black @16
Output	Voltage	V	48
	Voltage range	V	47.9~48.1
	Working current	A	10
	Peak current	A	12
	Rated power	W	480
	Power consumption	mA	25
	Ripple & noise	mV	40
	Positive cable	cm	Yellow @ 16
	Negative cable	cm	Black @16
Protection function	Input instant over voltage		Yes
	Output over current		Yes
	Output short-circuit		Yes
	Chip over temperature		Yes
	Input reverse connect		No, can customize
	Output reverse connect		No, can customize
	Automatic recovery		Yes
	Water-proof		Yes
	Quake-proof		Yes
	Dust-proof		Yes
	Protection level		IP67
Environment	Working Temperature	°c	-40 ~+85
	Working humidity	RH	< 90
	Storage temperature	°c	-50~+ 90
General	Shell material		Aluminum alloy case
	Sealed material		Heat organic silicone filled and sealed
	Dimension	mm	100*80*39
	Weight	g	500

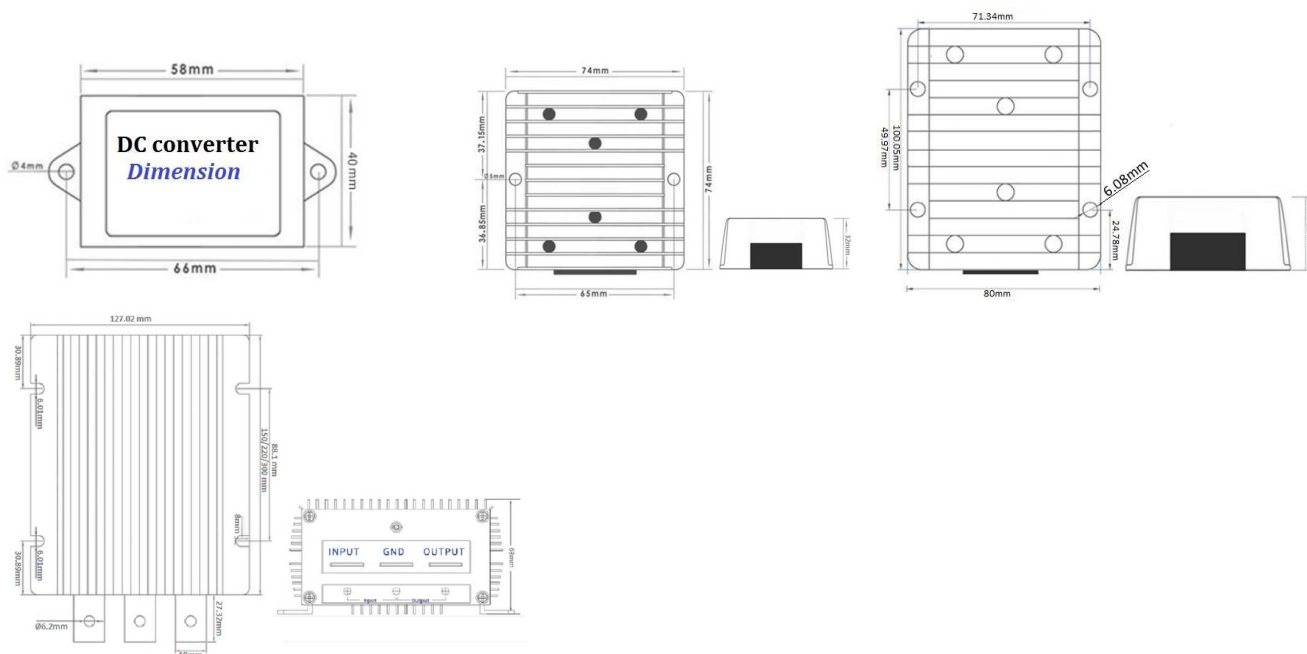
Model	ADS24T48-20AL		
Input	Rated voltage	V	24
	Voltage range	V	18-32
	Conversion efficiency	%	91
	Positive cable	cm	Left terminal mark with "INPUT"
	Negative cable	cm	Mid terminal mark with "GND"
Output	Voltage	V	48
	Voltage range	V	47.9~48.1
	Working current	A	20
	Peak current	A	22
	Rated power	W	960
	Power consumption	mA	70
	Ripple & noise	mV	200
	Positive cable	cm	Right terminal mark with "OUTPUT"
	Negative cable	cm	Mid terminal mark with "GND"
Protection function	Input instant over voltage		Yes
	Output over current		Yes
	Output short-circuit		Yes
	Chip over temperature		Yes
	Input reverse connect		No, can customize
	Output reverse connect		No, can customize
	Automatic recovery		Yes
	Water-proof		Yes
	Quake-proof		Yes
	Dust-proof		Yes
	Protection level		IP67
Environment	Working Temperature	°C	-40 ~+85
	Working humidity	RH	< 90
	Storage temperature	°C	-50~+ 90
General	Shell material		Aluminum alloy case
	Sealed material		Heat organic silicone filled and sealed
	Dimension	mm	150*127*63
	Weight	g	1600

Model	ADS24T48-30AL		
Input	Rated voltage	V	24
	Voltage range	V	18-32
	Conversion efficiency	%	91
	Positive polarity		Left terminal mark with "INPUT"
	Negative polarity		Mid terminal mark with "GND"
Output	Voltage	V	48
	Voltage range	V	47.9~48.1
	Working current	A	30
	Peak current	A	33
	Rated power	W	1440
	Power consumption	mA	70
	Ripple & noise	mV	200
	Positive polarity		Right terminal mark with "OUTPUT"
	Negative polarity		Mid terminal mark with "GND"
Protection function	Input instant over voltage		Yes
	Output over current		Yes
	Output short-circuit		Yes
	Chip over temperature		Yes
	Input reverse connect		No, can customize
	Output reverse connect		No, can customize
	Automatic recovery		Yes
	Water-proof		Yes
	Quake-proof		Yes
	Dust-proof		Yes
	Protection level		IP67
Environment	Working Temperature	°C	-40 ~+85
	Working humidity	RH	< 90
	Storage temperature	°C	-50~+ 90
General	Shell material		Aluminum alloy case
	Sealed material		Heat organic silicone filled and sealed
	Dimension	mm	150*127*63
	Weight	g	1600

Model	ADS24T48-40AL		
Input	Rated voltage	V	24
	Voltage range	V	18-32
	Conversion efficiency	%	91
	Positive polarity		Left terminal mark with "INPUT"
	Negative polarity		Mid terminal mark with "GND"
Output	Voltage	V	48
	Voltage range	V	47.9~48.1
	Working current	A	40
	Peak current	A	42
	Rated power	W	1920
	Power consumption	mA	70
	Ripple & noise	mV	200
	Positive polarity		Right terminal mark with "OUTPUT"
	Negative polarity		Mid terminal mark with "GND"
Protection function	Input instant over voltage		Yes
	Output over current		Yes
	Output short-circuit		Yes
	Chip over temperature		Yes
	Input reverse connect		No, can customize
	Output reverse connect		No, can customize
	Automatic recovery		Yes
	Water-proof		Yes
	Quake-proof		Yes
	Dust-proof		Yes
	Protection level		IP67
Environment	Working Temperature	°C	-40 ~+85
	Working humidity	RH	< 90
	Storage temperature	°C	-50~+ 90
General	Shell material		Aluminum alloy case
	Sealed material		Heat organic silicone filled and sealed
	Dimension	mm	220*127*63
	Weight	g	2300

Model	ADS36T48-04AL		
Input	Rated voltage	V	36
	Voltage range	V	28-45
	Conversion efficiency	%	93
	Positive polarity		Red @ 18
	Negative polarity		Black @18
Output	Voltage	V	48
	Voltage range	V	47.9~48.1
	Working current	A	4
	Peak current	A	5
	Rated power	W	192
	Power consumption	mA	25
	Ripple & noise	mV	40
	Positive polarity		Yellow @ 18
	Negative polarity		Black @18
Protection function	Input instant over voltage		Yes
	Output over current		Yes
	Output short-circuit		Yes
	Chip over temperature		Yes
	Input reverse connect		No, can customize
	Output reverse connect		No, can customize
	Automatic recovery		Yes
	Water-proof		Yes
	Quake-proof		Yes
	Dust-proof		Yes
	Protection level		IP67
Environment	Working Temperature	°c	-40 ~+85
	Working humidity	RH	< 90
	Storage temperature	°c	-50~+ 90
General	Shell material		Aluminum alloy case
	Sealed material		Heat organic silicone filled and sealed
	Dimension	mm	74*74*32
	Weight	g	300

### 3. Dimension



#### 4. Use Attention

1. In strict accordance with the polarity to connect, input positive is Red (+), negative is Black (-), reverse connect will damage the converter, output positive is Yellow (+), negative is Black (-), reverse connect will damage the using facility.
2. In order to ensure the converter can get high efficiency output voltage and power, please make sure the sufficient input current and voltage supply.
3. If the multi-output application, please balance each of the load, please don't tie the entire load together.
4. If the load long time work over 80% of rated power, need to lock the converter tightly with extend metal for heat dissipation, if the load power under or equal 80%, shall be more reliable and safe.
5. The converter is Non-isolated one, if you look for the converter input voltage higher than output 40V, please select the isolated converter.
6. The converter can't use to charge battery

#### 5. Customer services

Warranty is 2 year, free maintenance service will be offered when there is quality problem since the date of purchase.

If maintenance or adjustment is needed within guarantee period and in the scope of our warranty, please contact our service center

The expense will be absorbed by customer side if any of the following situations happens:

1. Fault was due to maintenance or adjustment without checking or permission of our factory.
2. Fault was caused by manmade, or disassemble by customer side or use of overload, or other natural disasters within the warranty period.
3. Converter was burnt because of incorrect usage of power supply or too high current.

All products have been checked and packaged with ESD bag in good condition before dispatch, in case the item was damaged, please feedback us within 30 days of receipt, we will provide the free replacement, no refunds are offered.

Please contact us through email : [services@charger-connector.com](mailto:services@charger-connector.com) , we will response you within 24-48 hours.

##### **OEM:**

1. LOGO and Label can be customized, please offer us the model number and logo original file.
2. Parameters and functions can be customized, please offer the details
4. Package can be customized, please provide us the original file.

##### **Payment Terms :**

T/T in advance, PayPal, Alipay

##### **Lead Time:**

1. Customized samples will be delivered from our factory within 20 working days.
2. General orders will be delivered from our factory within 3~7 working days.
3. Big orders(over 10Kpcs) will be delivered from our factory within 10~25 working days