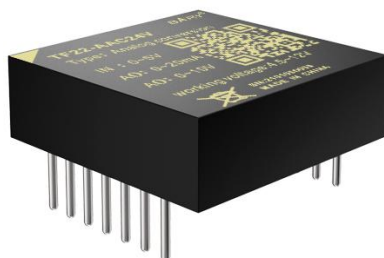




TF22-AAC24V User Manual

0~5V To 0~20mA/0~10V

Analog Signal Conversion Module



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Chengdu Ebyte Electronic Technology Co.,Ltd.

1.Product introduction

1.1. Brief introduction

TF22-AAC24V is an active module with pre-stage voltage/PWM signal input and post-stage voltage/current signal output. The module integrates a high-efficiency micro-power power supply, which can supply power to the internal signal processing circuit and also supply power to the peripheral. The circuit outputs a 24Vdc/50mA power supply.

1.2. Characteristic

- Ultra-small size: 25.4*25.4*8mm;
- Fast transmission response;
- Wide operating voltage range;
- Independent dual channel 2 into 2;
- Low operating temperature and fast heat dissipation;
- Low temperature drift ($\leq 50\text{PPM}/^{\circ}\text{C}$, within the range of -40°C to $+85^{\circ}\text{C}$)
- One Road 24V/50mA power output 1.2W;
- Working temperature: $-40 \sim +85^{\circ}\text{C}$;

2.Specification parameter

2.1. Limit parameter

Order number	Limit parameter	Minimum	Maximum	Remarks
1	Input voltage	4.5	15	Vdc (about 6V output when no load)
2	Output voltage	24	24.5	V
3	Maximum output current	0	50	mA
4	Operating temperature	-40	+85	°C
5	Voltage/PWM signal	0	5	V
6	Current signal output	0	23	mA

2.2. Working parameters

Order number	Main parameter	Min	Main parameter	Maximum	Remarks
Input	Input Voltage	4.5	-	12.5V	Vdc(It is not recommended to input more than 5.25V)
	Input ripple	-	-	<350	mV
	Input power	3	-	-	W It is recommended to be greater than 3W
	Voltage signal input	0	-	5	V
	PWM signal input	0	-	100	%(5V Level)
Output	Current signal output	0	-	20	mA
	Voltage signal output	0	-	10	V(5V = 250R, 10V = 500R)
	Power Output	24	24.2	25	V Maximum current 50mA
	Power Output	0	-	50	mA
Environm ent	Operating temperature	-40	25	+85	°C
	Working humidity	20	-	90	% no condensation
	Storage temperature	-40	+25	+85	°C Dry storage at room temperature
	Storage humidity	20	-	90	% Dry storage at room temperature
Other	Size	25.4*25.4*8mm			
	Weight	-	7.5	-	g

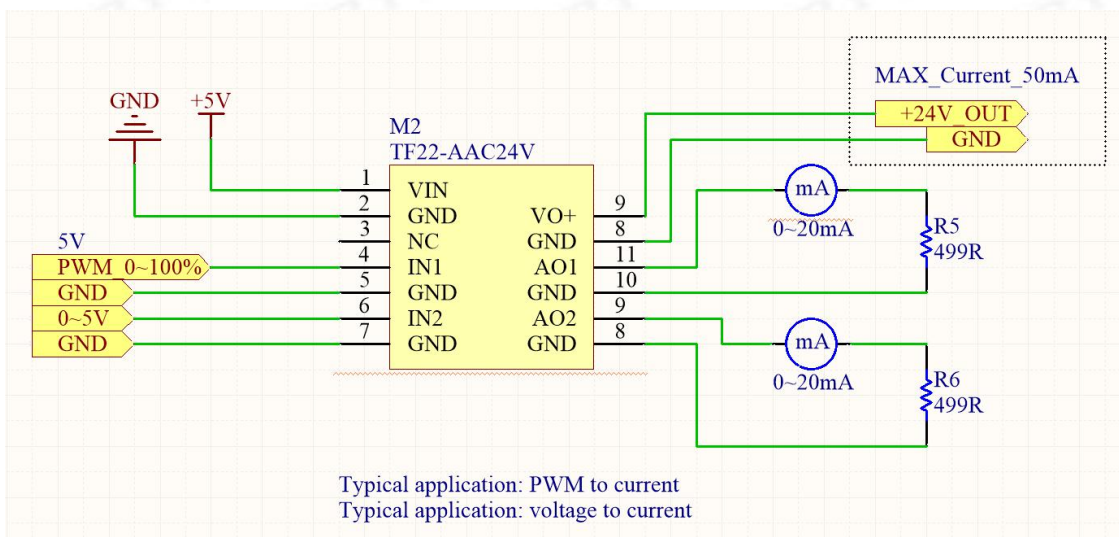
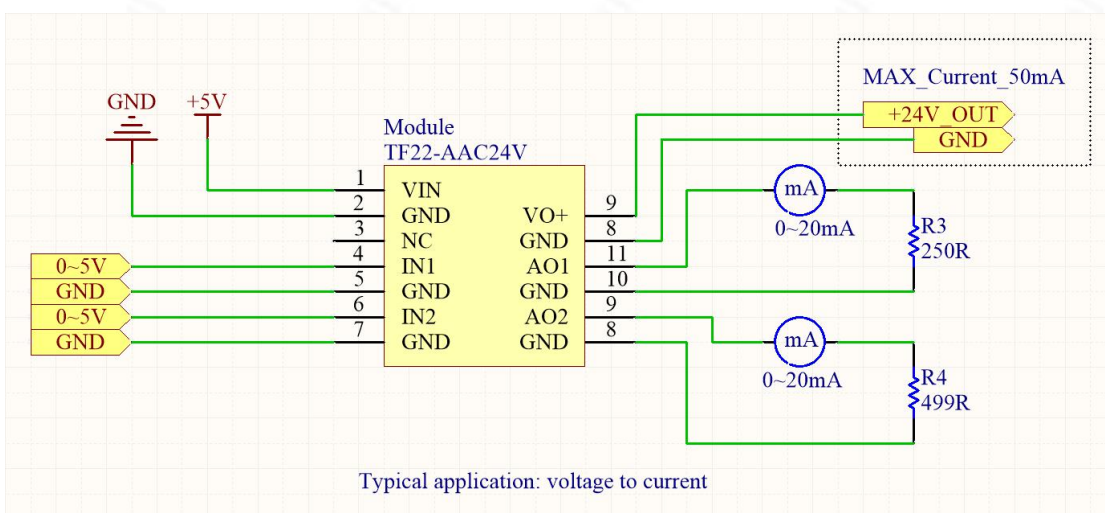
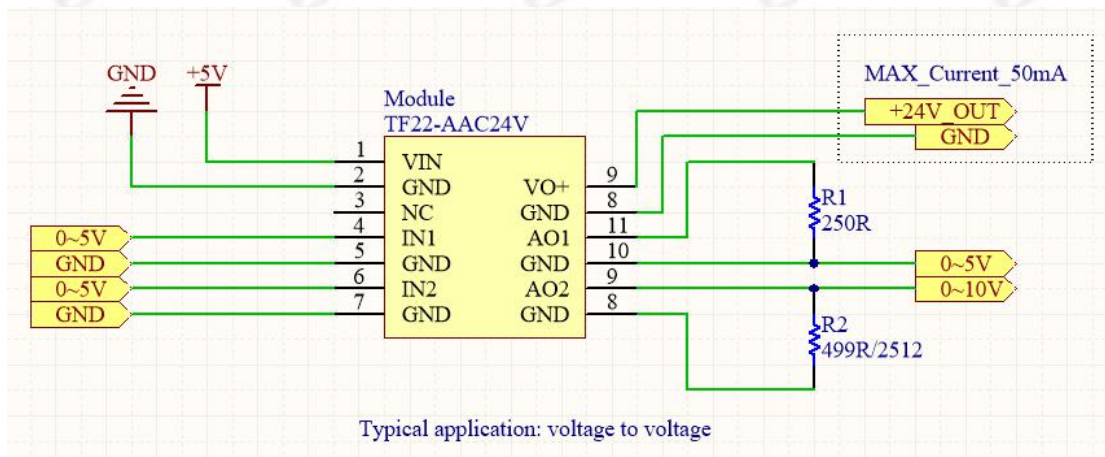
3.basic operation

3.1. Notes

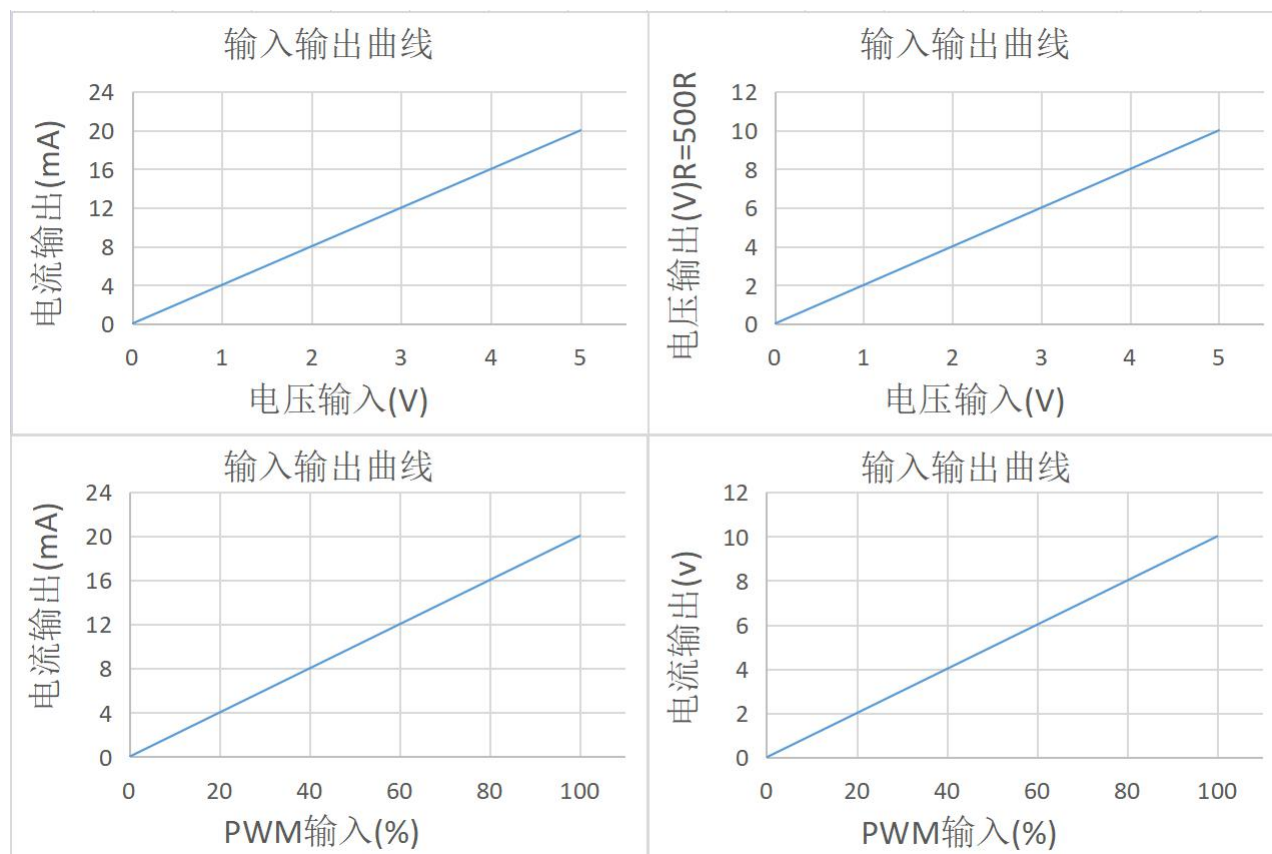
- Before use, please read the technical manual carefully, if you have any questions, please contact our company's technical support
- The maximum input voltage of the power supply voltage shall not exceed 13Vdc, otherwise the module will be permanently damaged;
- The voltage signal/PWM signal input is not recommended to exceed 5V;
- The maximum current output signal is 23mA, $V_{in} = 5.3V$;
- In daily maintenance, the input power supply should be disconnected first;
- Please do not install the product in a hazardous area;
- The power supply of the product adopts DC power supply, and the use of AC power supply is strictly prohibited;
- It is strictly forbidden to disassemble the product without permission to prevent the equipment from failing or malfunctioning;
- The operation of this module requires certain professional skills, and a rigorous non-professional life can operate it!
- This product has no power reverse connection protection, please pay attention to the positive and negative poles, the reverse connection of the positive and negative poles will cause permanent damage to the module;
- The products have been strictly inspected and quality controlled before leaving the factory. If there is abnormal work or suspected internal module failure, please contact the nearest agent or our company's technical support in time.

3.2. Analog signal input and output curve

3.3. Typical application

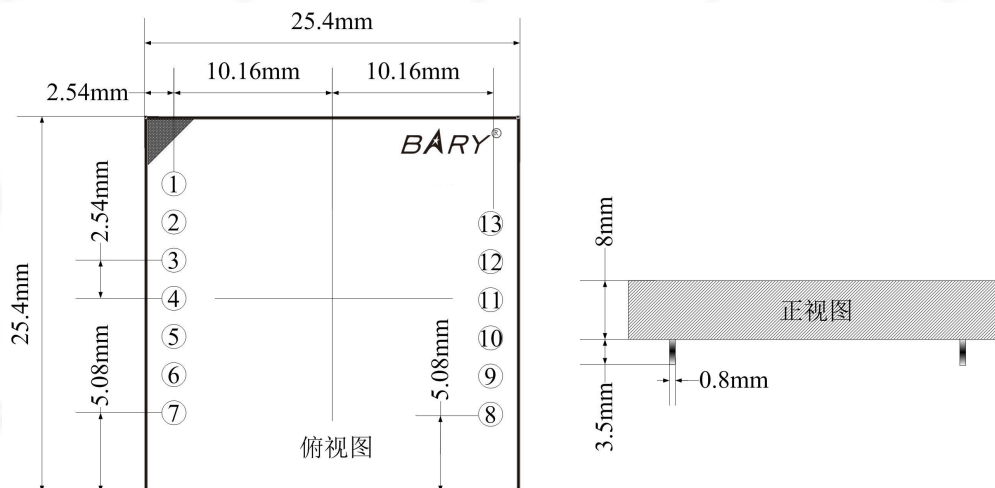


3.4. Schematic diagram of the corresponding relationship between signal input and signal output



4. Mechanical characteristics and pin definition

4.1. Product size



4.2. Pin definition

Order number	Pin name	Direction	Use
1	VIN	Input	DC Positive power input
2	GND	Input	DC Power input negative
3	NC	null	Reserved, not linked to circuit
4	IN1	Input	1-channel analog voltage or PWM input positive
5	GND	Input	1-channel analog voltage input reference ground

6	IN2	Input	2-channel analog voltage or PWM input positive
7	GND	Input	2-channel analog voltage input reference ground
8	GND	Output	2-channel analog signal output reference ground
9	AO2	Output	2-channel analog voltage/current output positive
10	GND	Output	1-channel analog signal output reference ground
11	AO1	Output	1-channel analog voltage/current output positive
12	GND	Output	Module output power reference ground
13	VO+	Output	Module power output is positive

5.Product selection

Product model	Input voltage	Output voltage	Output current	Installation mode
TF22-AAC24V	4.5~12V	24V	50mA	Plastic-package plug-ins

Revision history

Order number	Vision	Modification date	Revision notes	Maintain person
1	V1.0	20211228	First edition, first public release	LJ

About US



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