

ISO-U(A)PO: DC V/I Signal Isolated Amplifier IC
(Photoelectricity Isolation)



General characteristic:

- Low cost,small size,SIP 12 anti- fire UL94V-0 package
- Can adjust "Zero"and "Gain"
- Three-port (power/input/output) isolation:3000VDC
- Assistant power:5VDC/12VDC/15VDC/24VDC
- 0-5V/0-10V/0-±100mV/voltage signal or 0-10mA/0-20mA/4-20mA/ current signal isolation and transfer
- Temperature range: -45~+85 °C
- with good anti-jamming EMC and high frequency signal capability

Applications:

- DC current/voltage signal isolated/transfer/amplifier
- No distortion in long distance signal transmission
- Analog signal data acquisition
- 4-20mA(0-20mA)/0-5V signal isolation and transfer
- Equipment and sensor signal acquisition
- Signal transmit no-distortion
- Electric power,distant control,isolated safe bar
- 4-20mA sensor analog signal transmission
- Ground interference control

Specification:

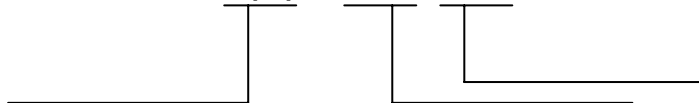
ISO series DC voltage isolated amplifier is a kind of IC that can convert DC voltage to output current or voltage that according to comparison with no relationship with load. It's widely used in Electric power, distant control, instrument, medical instrument, and industrial control industries.

This photoelectricity isolation is with good anti-jamming capability

Efficiency grade0.1, 0.2, 0.5 ,0-10mA/0-20mA/4-20mA isolated signal of international standard signal input and output.Output voltage signal: 0-5V/0-10V/1-5V;Output current signal0-10mA/0-20mA/4-20mA.With high load capability. Extremely high linearity in whole process (nonlinearity<2%).

Part number and description:

ISO- U(A)□ - P□ -O□



Input signal	Accessorial power supply P	Output
U1:0-5V	P1:DC24V	O1:4-20mA
U2:0-10V	P2:DC12V	O2:0~20mA
U3:0-75mV	P3: DC5V	O3:4-12-20mA
U4:0-2.5V	P4:DC15V	O4:0~5V
U5: User-defined	P5: User-defined	O5:0~10V
A1:0-1mA		O6:1~5V
A2:0-10mA		O7:User-defined
A3:0-20mA		
A4:4-20mA		
A5: User-defined		

Example:

Example 1: Input 0-5V ; power supply:24VDC ,Output 4-20mA

Part number: ISO-U1-P1-O1

2.Input:4-20mA, power supply:24VDC,Output:4-20mA

Part Number:ISO-A4-P1-O1

General parameter:

Parameter	Test Condition	Mix	Type	Max	Unit
Isolated voltage	1min	3000			V(rms)
G.Adj			1		V/V
G.Adj temperature drift			100		ppm/°C
Non-linearity			0.1	0.2	%FSR
Input signal	Voltage	0		50	V
	Current	0		30	mA
Input maladjusted voltage			2	5	mV
Input impedance	Voltage	0.3	1		M
	Current		250		Ω
Output signal	Voltage	0		10	V
	Current	0		20	mA
Load capability	Voltage	Vout=10V	2	*	kΩ
	Current		350	*	Ω
Frequency response	-3DB		200		Hz
Signal output ripple	No-filter		10	20	mVRMS
Signal voltage temperature drift				0.2	mV/°C
Assistant power	Voltage	User-defined	3.3	12	VDC
	Power loss		0.5	1	W
Operating temperature		-45		85	°C
Storage temperature		-55		105	°C

Input parameter:

Input item	Input impedance	Input over load
0~1mA	≥1KΩ	1.5 times of rated:Continuous
0~10mA	250 ohm(if need other impedance,such as 100 ohm,pls note)	3.0 times of rated: 1S
0~20mA		
4-20mA		
Voltage signal	≥1MΩ	2.0 times of rated:Continuous
User-defined	User-defined	User-defined

Max operation range:

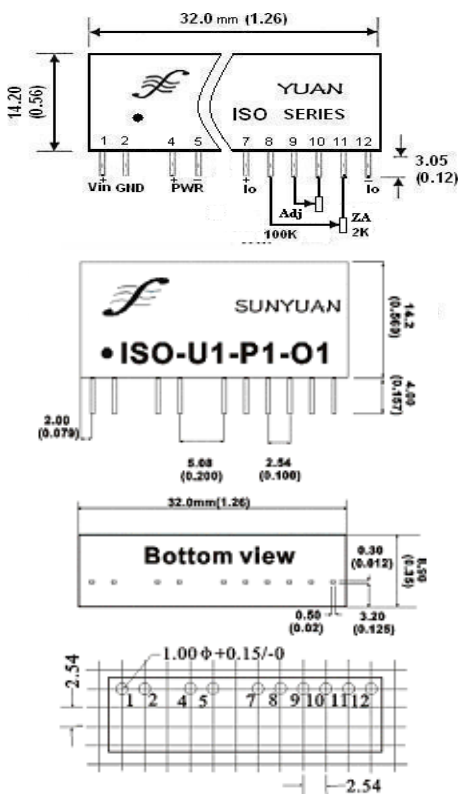
Continue isolation voltage value	3000VDC
Power Vin range:	±10%Vin
Jointing temperature(10sec.)	+300°C

Output parameter:

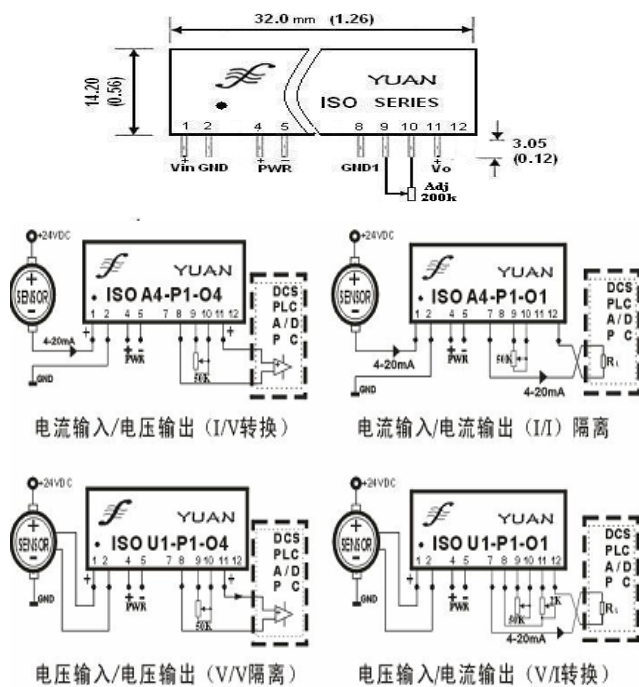
Output item	Input over load	Response time
4-20mA	$\leq 350 \Omega$ (If need others,such as 650 ohm,pls note)	$\leq 1\text{mS}$
0-20mA		
4-12-20mA		
0-5V	$> 2\text{Kohm}$	
0-10V		
1-5V		

Physical Dimensions and Footprint Description:

V1V1 Current signal output



V2V1 Voltage signal output



V1V1 Current output pin description:SIP 12

1	2	3	4	5	6	7	8	9	10	11	12
Vin+	GND	NO PIN	PW+	PW-	NO PIN	Io+	NO PIN	Adj	Adj	NO PIN	Io-

V2V1 Voltage output pin description :SIP 12

1	2	3	4	5	6	7	8	9	10	11	12
Vin+	GND	NO PIN	PW+	PW-	NO PIN	NO PIN	GND1	Adj	Adj	Vo+	NO PIN

Note:1.About current output,we do not design PIN 8 and PIN 11,so need not adjust ZERO,you can use it.but if need adjust ZERO,please choose our ISO1002.

2.About voltage output,because of high Input impedance,you'd better connect a 1MΩ resistance and 1uF capacitance.