

ISOEM 1001 AC current signal(or DC current dual signal) isolated amplifier (Electromagnetic Isolation)

General characteristic:

- Low cost,small size,DIP24 anti- fire UL94V-0 package
- Can connect potentiometer for ZA and G.adj.
- Three-port (power/input/output) isolation:3000VDC
- Assistant power:5VDC/12VDC/15VDC/24VDC
- 0-2.5V/0-5V/0-10V/0-±100mV/0-±5V/0-±10V isolation and amplifier
- Industrial Temperature range: -45~+85 °C
- In EMC(electromagnetism disturb) circumstance need adopt shield measure.

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:

SUNYUAN ISOEM 1001 series is electromagnetic isolation mixed IC,it is made of isolated DC/DC converters and electromagnetic isolation signal amplifier,adopts magnetolectricity coincidence, ,it is ideally suited for no special need about EMC(electromagnetism disturb) Compare to photoelectrical isolation,it can not be used in strong electromagnetism,so clients need adopt shield measures,it can reach 5000VDC insulated voltage. Sunyuan ISO EM 1001 series it is very easy to use,can adjust ZERO and G.adj.

- ★ Products style:weldable to PCB directly and DIN 35 Rail-Mounted
- ★ 0-2.5V/0-5V/0-10V/0-±100mV/0-±5V/0-±10V isolated signal of international standard signal input and output
Accuracy grade:0.1/0.2,Extremely high linearity in whole process(non-linearity<0.1%)

Part number and description:

ISOEM 1001 - U□ - P□ - O□

Input Signal

- U1: 0-5V
- U2: 0-10V
- U3: 0-75mV
- U4: 0-2.5V
- U5: 0-±5V
- U6: 0-±10V
- U7: 0-±100mV
- U8: User-defined

Power Supply

- P1:DC24V P2:DC12V
- P3:DC5V P4:DC15V P5: User-defined

Output signal

- O4: 0-5V O5: 0-10V O6: 1-5V
- O7: 0-±5V O8: 0-±10V O10: User-defined

Max operation range:

If over above range,maybe cause products damaged permanently.

Continue isolation voltage value	3000VDC
Power Vin range:	± 10%Vin
Jointing temperature(10sec.)	+300°C
Vout signal load(MIN)	2K Ω

Examples:

(1)Input:0-5V Output:0-5V Power:24VDC
 Model:ISOEM 1001-U1-P1-O4

(2)Input: 0±5V Output: 0±5V Power:24VDC
 Model: ISOEM 1001-U5-P1-O7

Note: when output is current signal,please choose our ISOEM U - P - O or ISOEM A - P - O series

Technic parameter:

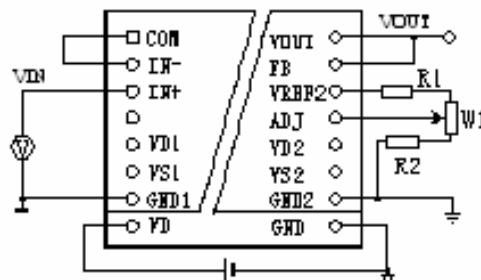
Parameter	Test Condition	Mix	Type	Max	Unit
Isolated voltage	AC,50Hz,1min		3000		VDC
G.Adj			1		V/V
G.Adj temperature drift			25		ppm/°C
Non-linearity			0.1	0.2	%FSR
Input signal	Voltage	-10V		10	V
Input maladjusted voltage			2	5	mV
Input impedance	Voltage		1		M
Output signal	Voltage	-10		10	V
Load capability	Voltage	Vout=10V	2		kΩ
	Current		350	650	Ω
Frequency response	-3DB		3		KHz
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

Note:If need special load capability of voltage/current signal,please explain.

Output	Output load capability	Response Time
0±5V	> 2KΩ	<0.4mS
0±10V		
1-5V		

Use explain:

The following is wiring diagram,input and output amplifiers both are follow mode.If are the same circuit, needn't connecting ZA circuit.
 Example:0-5V input, 0-5V output or 0±5V input, 0±5V output.



Wiring Diagram

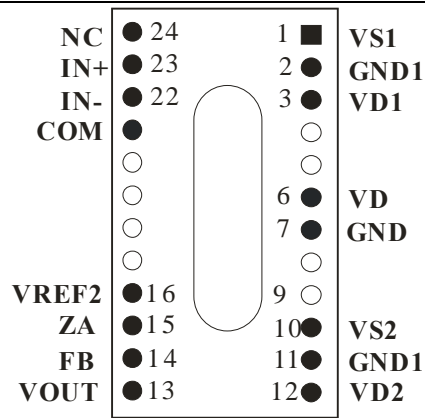


Figure 1

Physical Dimensions and Pin Description: (Figure 1)

VS1	GND1	VD1	VD	GND	NC	VS2 (-2.5V)	GND 2	VD2	VOUT	FB (10K)	ZA	VREF (+5V)	NC	NC	COM	IN+	IN-	NC
1	2	3	6	7	8	10	11	12	13	14	15	16	17, 18	19, 20	21	22	23	24

PCB size DIP24

