ISO series Frequency Signal to Voltage/Current Signal Transmitter

ISO F/V Series

General characteristic:

- ●Accuracy Grade:0.2/0.5
- ●Extremely high linearity in whole process(nonlinearity<0.1%)
- ●Three-port isolation:2500VDC power supply/input/ouput
- ●Power supply:5VDC/12VDC/24VDC etc.
- ●Input frequency signal:0-1KHz/0-5KHz/0-10KHz
  Output voltage: 0-2.5V/0-5V/0-10V or current signal:
  0-10mA/0-20mA/4-20mA
- ●It can supply input superior draw power:5VDC/10mA
- ●Low cost,small size,SIP 12 anti- fire UL94V-0 package
- ●Industrial temperature range: -20~+85 ℃
- ●Ceramic base,SMD

Applications:

- ●Sine wave,square wave,sawtooth wave etc. signal isolated amplifier and converter
- ●Transducer(FA) frequency signal data acquisition
- ●Generator,electromotor etc. cirumgyrate systems inspect
- ●Equipment and sensor signal acquisition
- ●Non-electricitymete signal transfer

Specification:

SunYuan ISO series frequency signal isolated transmitter is a mixed IC that frequency signal convert to standard signal pro rata. It is made of multiway high isolated DC/DC converters and a high speed frequency signal isolation and transmitter,suitable to any frequency signal isolated transform.Its isolated power not only provide power supply to internal transform,but also supply a isolated DC current to input port.It can meet industrial level for the extremely poor temperature,hunidity and shaking conditions. It is very easy to use,only a few external components are required.

Part number and description:

DIN 1X1 ISO- F□- P□- U(A)□

Input signal	Accessorial power supply	Output rated voltage（or current）
F1:0-5KHz	P1:DC24V	O1:4-20mA
F2:0-5KHz	P2:DC12V	O2:0-20mA
F3:0-10KHz	P3:DC5V	O4:0-5V
F4:User-defined	P4:DC15V	O5:0-10V
	P5:User-defined	O6:1-5V
		O7: User-defined

Continue isolation voltage value	2500VDC
Power Vin range:	±10%Vin
Jointing temperature(10sec.)	+300℃

If over above range,maybe cause products damaged permanently.

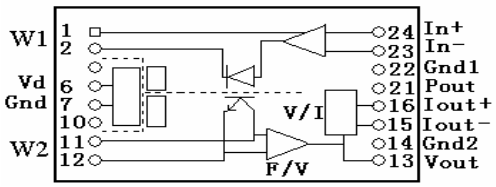


Figure 1

Technic parameter:

Parameter		Test Condition	Mix	Type	Max	Unit
Isolated voltage		AC,50Hz,1m	1000	2500		V(rms)
Input signal	Frequency		0	1000	20000	Hz
	Voltage		2.5	5		Vp-p
G.Adj	Voltage	5K		1		KHZ/V
	Current	5K		1/4		KHZ/mA
G.Adj temperature drift				100		ppm/℃
Non-linearity				0.1		%FSR
Input maladjusted voltage				5	7	mV
Output signal				5	10	V
Load capability		Vout=10V	1			kΩ
Signal output ripple		No-filter		5	7	mV
Signal voltage temperature drift				25		μ V/℃
Reference voltage source		Iout<50mA		5		V
Assistant power	Voltage	User-defined	3.3	12	24	VDC
	Current	VD=24V		50		mA
Power output ripple		No-filter	10			mV
Operating temperature			-20		85	℃
Storage temperature			-40		125	℃

Application Examples:

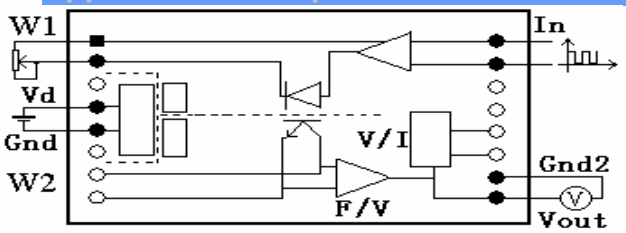


Figure 2

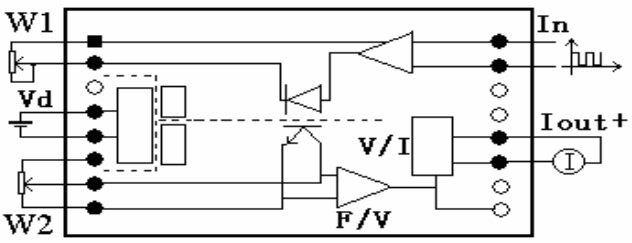


Figure 3

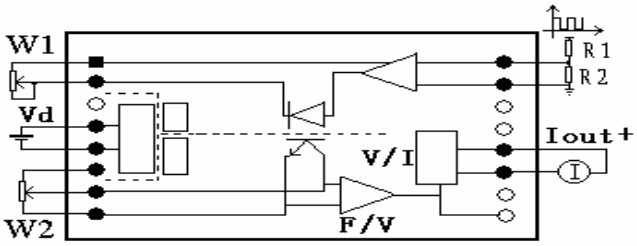


Figure 4

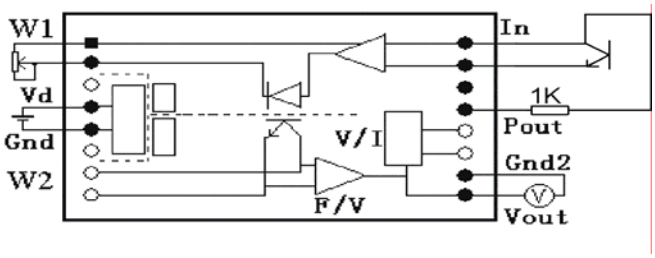


Figure 5

Example 1:(refer to figure 2)

Figure 2:Test low voltage frequency signal,voltage output stype

Input:0~10KHz/3~10VAC frequency signal,output:0~5VDC isolated signal.Don't make "ZERO" adjustment.W1=5K(multiturn potentiometer),adjust W1,make 10KHz corresponding to 5V output.

Example 2:(refer to figure 3)

Figure 3: Test low voltage frequency signal,current output stype

Input: 0~10KHz/3~10VAC frequency signal,output:0~20mADC isolated signal. Don't make "ZERO" adjustment. W1=5K(multiturn potentiometer),adjust W1,make 10KHz corresponding to 20mADC output.Refer to Figure 5.

Example 3:(refer to figure 4)

Figure 4: Test high voltage frequency signal,current output stype

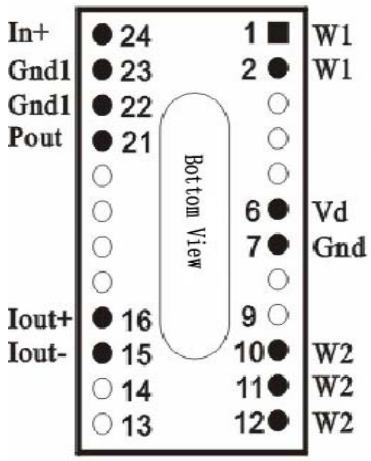
Input:0~10KHz frequency breadth value >10V,output:4~20mADC isolated signal.W2=10~20K potentiometer,adjust W1,make 10KHz corresponding to 20mADC.

Example 4:(refer to figure 5)

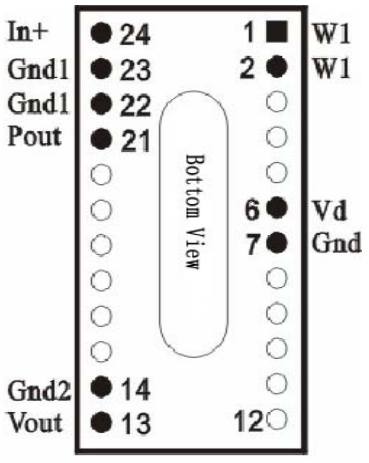
Figure 5:Test open collector input frequency signal,output voltage

Input:0~10KHZC frequency signal,output:0~5VDC isolated signal.Don't need "ZERO"adjustment. W1=5K(multiturn potentiometer),adjust W1,make 10KHz corresponding to 5V output.

PIN Function:



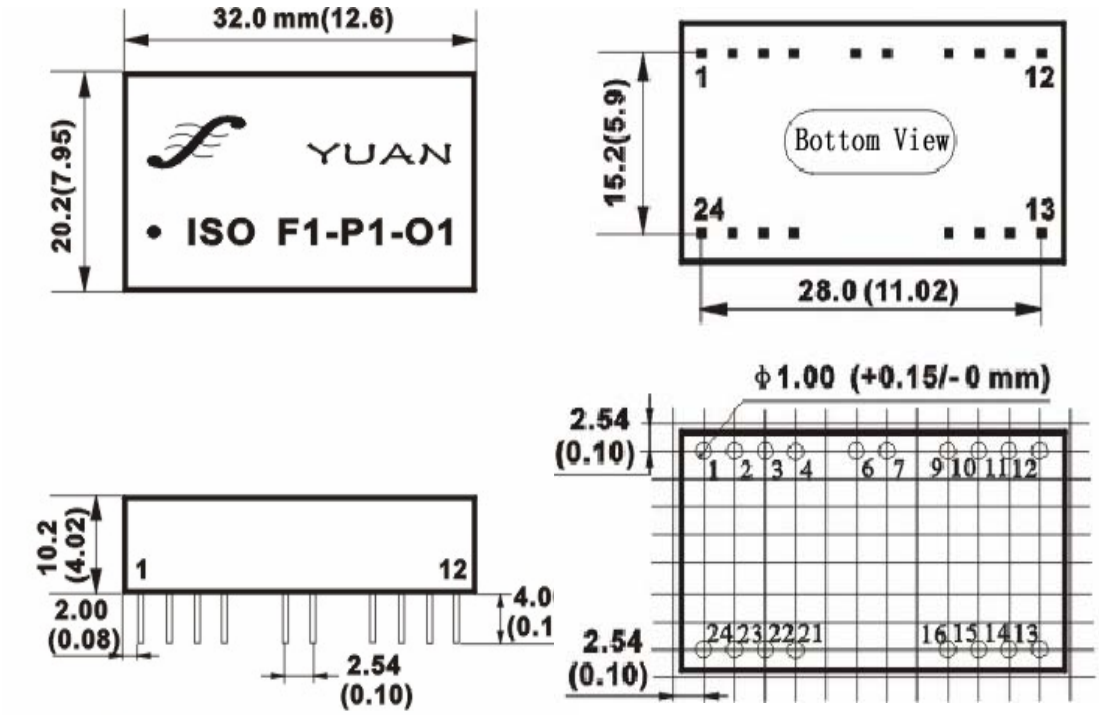
current output PIN



voltage output PIN

Output ground **Gnd2**	Output G.adj **5K**	power "+"	power "-"	Output "ZERO" **10K**	Vout "+"	Output ground **Gnd2**	Iout "+"	Iout "-"	Pin "+"	Input ground **Gnd1**	Frequency input
W1	**W1**	**Vd**	**Gnd**	**W2**	**Vout**	**Gnd2**	**Iout+**	**Iout-**	**Vref**	**Gnd1**	**In+**
1	**2**	**6**	**7**	**10 11 12**	**13**	**14**	**15**	**16**	**21**	**22 23**	**24**

PCB reference size(Standard DIP 24Pin)



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