ISO Series RTD Isolated Signal Transducer (DIP24 PIN)

Characteristics	Applications
●Three-wire, four-wire or two-wire PT100/Cu50 thermal resistance signal input ● Accuracy, Linearization error grade:0.2（Relative Temperature） ● Built-in linear processing and long-term compensation circuit ● Isolation Voltage: 3000VDC Three port: input/power/output ● Auxiliary Power Supply：5V、12V、15V or 24VDC ● International standard signal output：4-20mA/0-5V/0-10V etc ● Small size, low cost, easy use and high reliability ● Standard DIP 24/SIP12 Pin, UL94V-0 package ● Industrial temperature range: - 45℃ ~ + 85 ℃	● Temperature signal isolation, acquisition and transfer ● Industry site high-precision temperature measure ● Terminal resistance signal isolation and temperature control ● Ground interference suppression ● Temperature sensor signal converter to standard signal ● Oil temperature measure and Alarm ● Signal remote without distortion transmission ● Power monitoring, medical equipment, temperature control isolation barrier

Description

ISO W-Z Series is a mixed integrate circuit that thermal resistance signal as temperature high/low isolation converter to linearity standard signal to temperature. It integrated a set of isolated DC/DC converters, Linearization disposal and long line compensate circuit, can bring two group of each other isolated power to input port for magnifying circuit, modulating circuit powered and output port demodulation. They can meet industrial wide temperature, humidity, shaky poor operation condition.

ISO W-Z Series temperatures signal isolation amplifier is very convenient, with minimal external components, can be realized Pt100 RTD signal isolation transmitter. And can achieve the industrial site temperature control signal into two, into four functions.

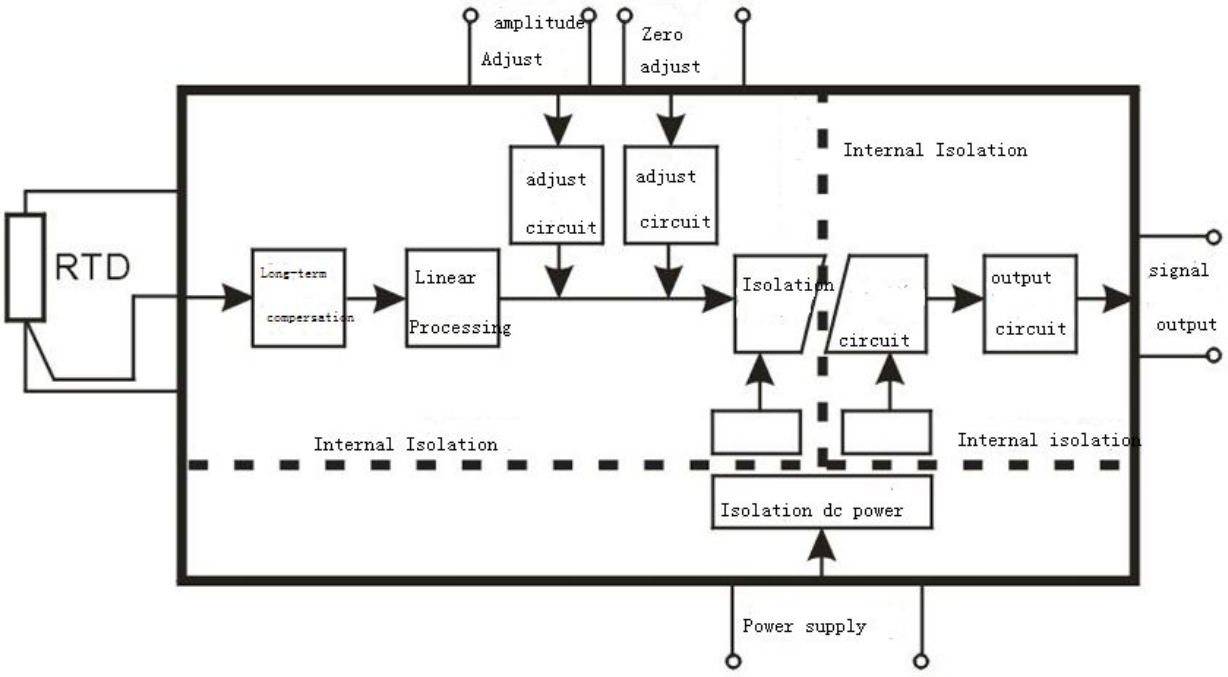


Fig. 1 ISO Z-W Series isolation transducer functional block diagram

Max work range：If work over above the range, will cause products damaged permanently

Continue isolation voltage value ：	3000VDC
Input power voltage range：	±10%Vin
Welding temperature（10Secs）：	+300℃
Vout signal load(MIN)：	2KΩ

Product Model Selection and Definition：

ISO Z□ - W□ - P□ - O□- D□

RTD
- Z1: Pt100 Z2: Pt10
- Z3: Cu100 Z4: Cu50

Input temperature range
- W1: -20-100℃
- W2: 0-100℃
- W3: 0-150℃
- W4: 0-200℃
- W5: 0-400℃
- W8: User-define

Power supply
- P1: DC24V P2: DC12V
- P3: DC5V P4: DC15V P8: User define

Output signal
- O1: 4-20mA O2: 0-20mA O4: 0-5V O5: 0-10V
- O6: 1-5V O8: User-define

Packaging type
- **D:** Dip 24Pin

Technical Parameters:

Parameter		Test Condition	Min	Typical	Max	Unit
Isolated voltage		1min	1500	3000		VDC
Non-linearity(to				0.2	0.5	%FSR
Output signal	Voltage			5	10	V
	Current			20		mA
Frequency response				10		mS
Load capability	Voltage	Vout=10V		2		kΩ
	Current	Iout=20mA		500	650	Ω
Signal output ripple		No-filter		10		mV
Output temperature drift				50		ppm/℃
Assistant power	Voltag	User-define	3.3	12	24	VDC
	Curre	VD=12V		42		mA
Power consumption			0.3	0.5	1	W
Operating temperature			-45		85	℃
Storage temperature			-55		125	℃

Model Selection Examples.:

1： Input：Pt100，Temperature range: -20-100℃； Signal Output：4-20 mA； Power supply：24V。 SIP 12Package。
Product Model： ISO Z1-W1-P1-O1-S

2： Signal input：Cu50，temperature range 0-100℃； signal output: 0-5V； Power supply：12V。 DIP 24Package。
Product Model： ISO Z4-W2-P2-O4-D

Product Calibration：

Calibration Instrument：one resistance box corrected to 0.01ohm，one DC power supply source and one Four and a half Multimeter.
Calibration Step:

1、 Connect the products according the application diagram or install the product in your designed pcb board.
2、 Connect the power according the power supply value, install the regulator potentiometer, the output connect to the multimeter.
3、 Check the reference tables according to the input temperature range gain the corresponding resistance value Rlow~ Rhigh.
4、 Power-on, starting up for 15 minutes.
5、 Adjust the resistance box resistance value to Rlow value, adjust the “zero” potentiometer, make the output is the corresponding output of zero (e.g.: 4mA).
6、 Adjust the resistance box value to Rhigh, Span the amplitude potentiometer, make the output value is the corresponding of Span.(e.g. 20mA)
7、 Repeat five to six times of the step to improve the output precision.
8、 Finished Calibration.

ISO Z-W-S/D Application Profile

ISO Z-W-S/D Series signal transmitter and ISO EM series signal transducer is easy to realize RTD single signal input，Multi-channel output. The theory of Single input, multi-channel output：Make ISO Z-W-S/D isolation transmitter output signal connect to the input port of ISO EM，ISO EM will output a group of signal fully isolated with input port, then it realize one RTD signal input, dual isolated standard signal output. Similarly， make ISO Z-W-S/D output signal connect to input port of multi ISOEM transducer, each ISOEM transducer will output one group signal that fully isolated with input port, then it realizes one RTD signal input, multi isolated standard signal output.

ISO Z-W-S/D single RTD signal input, dual signal output please refer below application

DIP 24Pin Typical application Diagram

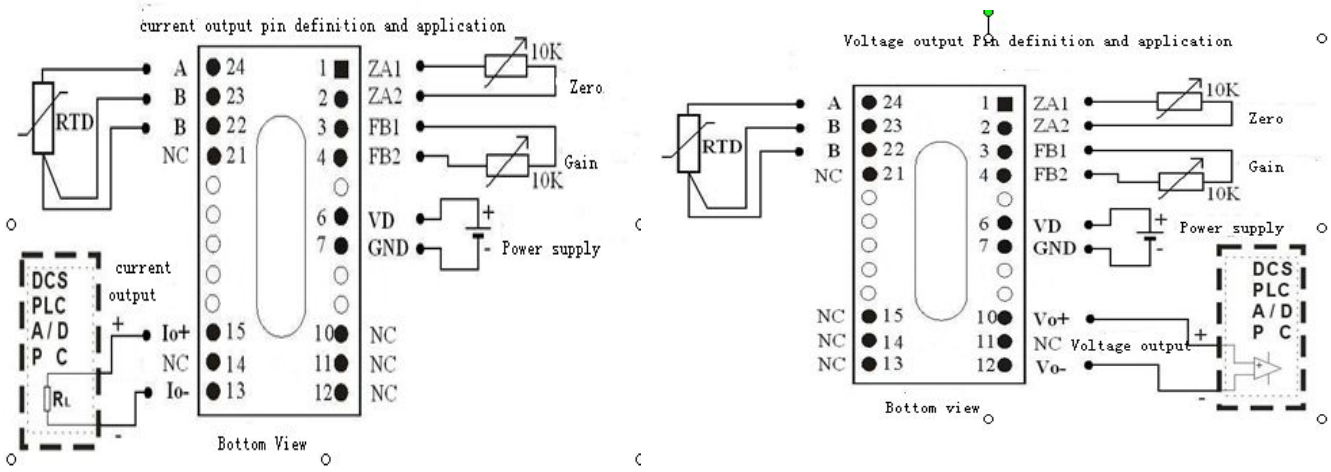


Fig. 7 DIP 24Pin Typical Applications

1. DIP 24Pin Voltage output Pin Definition

Zero adjust1	Zero adjust 2	Amplitude adjust 1	Amplitude adjust 2	Power +	Power -	Vout+	NC	Vout -	NC	RTD input B port	RTD input B port	RTD input A port
ZA1	**ZA2**	**FB1**	**FB2**	**VD**	**GND**	**Vo+**	**NC**	**Vo-**	**NC**	**B**	**B**	**A**
1	**2**	**3**	**4**	**6**	**7**	**10**	**11**	**12**	**13,14,15,21**	**22**	**23**	**24**

2. DIP 24Pin Current output definition

Zero 1	Zero adjust 2	Amplitude adjust 1	Amplitude adjust 2	Power +	Power -	NC	Current output -	NC	Current output +	NC	RTD input B port	RTD input B port	RTD input A port
ZA1	**ZA2**	**FB1**	**FB2**	**VD**	**GND**	**NC**	**Io-**	**NC**	**Io+**	**NC**	**B**	**B**	**A**
1	**2**	**3**	**4**	**6**	**7**	**10,11,12**	**13**	**14**	**15**	**21**	**22**	**23**	**24**

Note：1. All NC pin do not connect with other pins or GND, keep NC pin stand alone.

2. When two-wire RTD input, short connect of Pin 22 and Pin 23(RTD input B port).；When four-wire RTD input, connect pin24 with any RTD A port.

3. Detection of RTD disconnection：**a.** Output Max value：disconnect pin 22 and pin24；**b.** Output Min value：disconnect of Pin 23.

DIP 24Pin Application Profile：

DIP Application 1：One RTD signal input, dual voltage signal output

Converter ISO Z1-W3-P1-O4-D and converter ISO EM-U1-P1-O5 realize one Pt100/Cu50 signal input （Temperature range :0-150℃），Dual isolated voltage signal output，one 0~5V signal output，one 0~10V output signal。Connect the output port of ISO Z1-W3-P1-O4-D to the input of ISO EM-U1-P1-O5 in parallel.

DIP Application example 2：One RTD signal in, dual current signal output

ISO Z1-W2-P1-O1-D and ISO EM-A4-P1-O1realize one Pt100/Cu50 signal input（Temperature range 0-100℃），Dual isolated 4-20mA current signal output. Connect the output port of ISO Z1-W2-P1-O1-D to the input port of ISO EM-A4-P1-O1in series，then output 4-20mA current signal，meanwhile ISO EM-A4-P1-O1 also output 4-20mA isolated current signal.

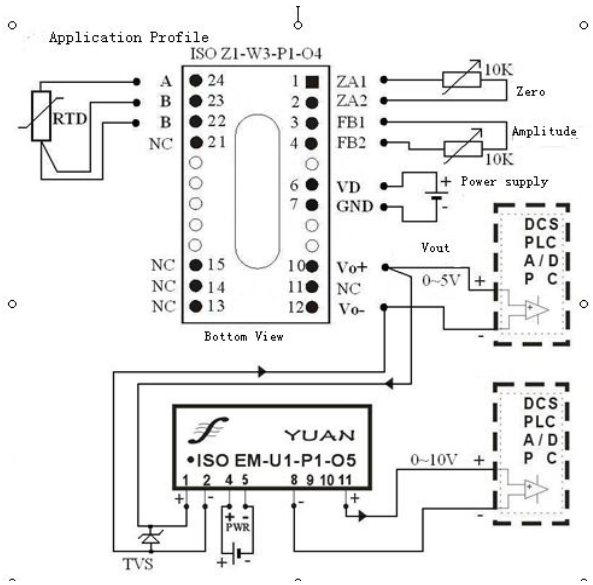


Fig. 8 One RTD signal input, dual voltage signal output(DIP)

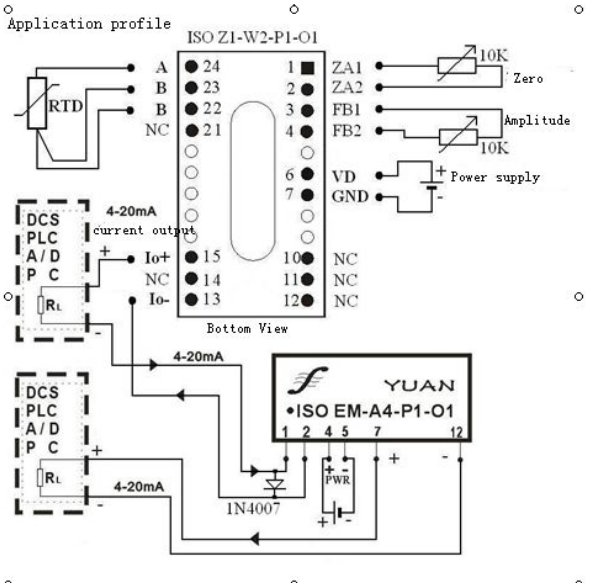


Fig. 9 One RTD signal input dual current signal output(DIP)

Product dimension overview (Standard DIP24pin)

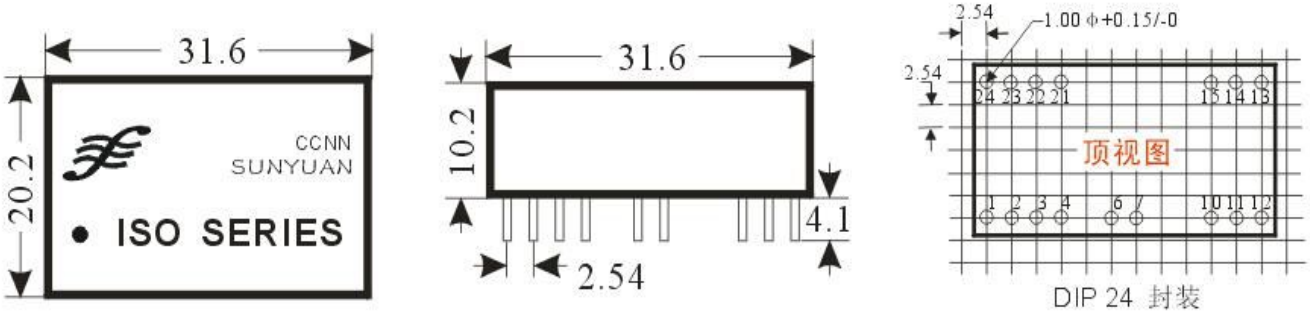


Fig. 10 Standard DIP 24Pin product dimension

Note: The specification is subject to change without notice.

RTD Thermal Resistance Signal Transducer (SIP12 PIN)

SY Z-W Series

Features	Applications
● Three-wire, four or two-wire PT100/Cu50 signal input. ● Accuracy, Linearization error grade:0.2 (Relative Temperature). ● Built-in linear processing and long-term compensation circuit. ● Isolation Voltage: 3000VDC between power and singal I/O. ● Auxiliary Power Supply: 5V, 12V, 15V or 24VDC. ● International standard signal output: 4-20mA/0-5V/0-10V,etc. ● Small size, low cost, easy use and high reliability. ● Standard DIP 24/SIP12 Pin, UL94V-0 package. ● Industrial temperature range: - 45℃ ~ + 85 ℃.	● Temperature signal isolation, acquisition and transfer. ● Industry site high-precision temperature measure. ● Terminal resistance signal isolation and temp. control. ● Ground interference suppression. ● Temperature sensor signal converter to standard signal. ● Oil temperature measure and alarm. ● Signal remote without distortion transmission. ● Power monitoring, medical equipments, temperature control isolation barrier

SY Z-W Series is a mixed integrate circuit that thermal resistance signal as temperature high/low isolation converter to linearity standard signal to temperature. It integrated a set of isolated DC/DC converters, Linearization disposal and long line compensate circuit, can bring two group of each other isolated power to input port for magnifying circuit, modulating circuit powered and output port demodulation. They can meet industrial wide temperature, humidity, shaky poor operation condition.SY W-Z Series temperatures signal isolation amplifier is very convenient, with minimal external components, can be realized Pt100 RTD signal isolation transmitter. And can achieve the industrial site temperature control signal into two, into four functions.

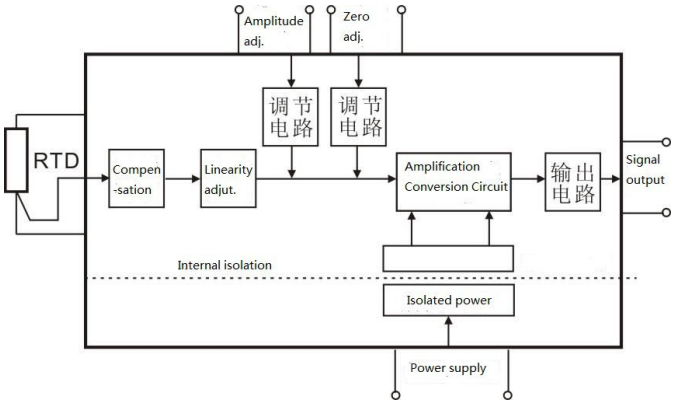


Fig. 1 SY Z-W Series isolation transducer functional block

Max work range: If work over above the range, will cause products damaged permanently.

Continue isolation voltage value:	3000VDC
Auxiliary power supply range:	±25%Vdd
Junction Temperature	- 45℃ ~ + 85℃
Lead temperature (10Secs):	+300℃
Vout signal load(MIN):	2KΩ

General Technical Parameters

Accuracy, linearity error grade ---------- 0.1, 0.2	Hysteresis error ---------- < 0.5%
Auxiliary power---------- 5V, 12V, 15V, 24VDC.	Isolation ---------- auxiliary power and signal I/0.
Operating Temp. ---------- -20 ~ +70℃	Insulation Resistance ---------- ≥20MΩ
Operating Humidity ---------10~90% (no condensation)	Withstand Voltage ---------- 3KV(60HZ/S), leak current 1mA
Storage Temp.---------- -45 ~ +85℃	Impact Resistance Volt. ---------- 3KV, 1.2/50us (peak value)
Storage Humidity -------10 ~ 95% (no condensation)	

Product Model Selection and Definition

SY Z□ - W□ - P□ - O□

RTD input
- Z1: Pt100 Z2: Pt10
- Z3: Cu100 Z4: Cu50

Input temperature range
- W1: -20-100℃
- W2: 0-100℃
- W3: 0-150℃
- W4: 0-200℃
- W5: 0-400℃
- W8: User-define

Power supply
- P1: DC24V P2: DC12V
- P3: DC5V P4: DC15V P8: User define

Output signal
- O1: 4-20mA O2: 0-20mA O4: 0-5V O5: 0-10V
- O6: 1-5V O8: User-define

Model Selection Examples

E.g.1: Input: Pt100, Temperature range: -20-100℃; Signal Output:4-20 mA; Power supply:24VDC
Product Model: SY Z1-W1-P1-O1

E.g.2: Input: Cu50, temperature range 0-100℃; signal output: 0-5V; Power supply:12VDC
Product Model: SY Z4-W2-P2-O4

Technical Parameters

Parameter		Test Conditions	Min.	Typical	Max.	Unit
Isolated voltage		1min	1500	3000		VDC
Non-linearity(to				0.2	0.5	%FSR
Output signal	Voltage			5	10	V
	Current			20		mA
Frequency response				10		mS
Load capability	Voltage	Vout=10V		2		kΩ
	Current	Iout=20mA		500	650	Ω
Signal output ripple		No-filter		10		mV
Output temperature drift				100		ppm/℃
Auxiliary power supply	Voltage	User-define	3.3	12	24	VDC
	Current	VD=12V		42		mA
Power consumption			0.3	0.5	1	W
Operating temperature			-45		85	℃
Storage temperature			-55		125	℃

Typical Application Diagram

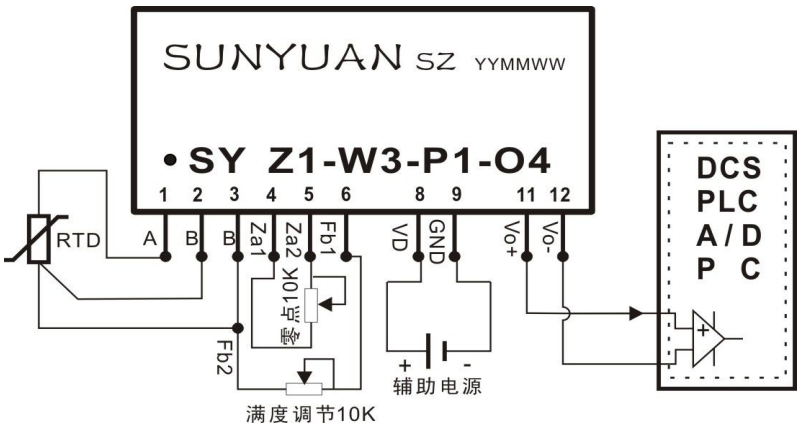


Fig. 2 SY Z-W Series voltage output typical application

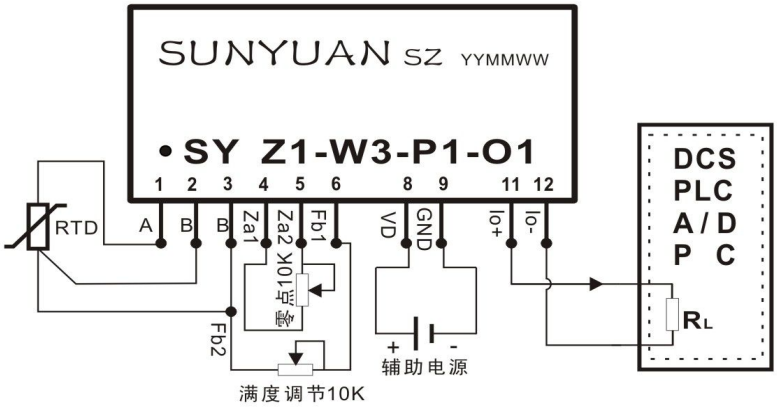


Fig. 3 SY Z-W Series current output typical application

SY Z-W Series Function Description

RTD input A Port	RTD input B Port	RTD input B Port and ADJ (Gain) 2 port	"Zero" adjust 1Port	"Zero" adjust 2 Port	(Gain)ADJ 1Port	NC	Power +	Power GND	NC	Vout+	Vout -
A	**B**	**B / FB2**	**ZA1**	**ZA2**	**FB1**	**NC**	**VD+**	**GND**	**NC**	**Out+**	**Out-**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**

Note: 1. If it is two-wire RTD input, short connect PIN2 and PIN3(RTD input B Port); if four-wire RTD input, short connect pin1 and RTD A port. 2. Detection of RTD disconnection: **a.** Output Max. Value, there is disconnection in the wire which is connected to Pin1 or Pin 3; **b.** Output Min value：there is disconnection in the wire which is connected to Pin 2.

Product Calibration

Calibration instruments: a standard resistance box with 0.01ohm accuracy, one DC power supply source and one Four and a half Multimeter.

Calibration Steps:

1. Connect the product according to the application diagram or install the product in your PCB.
2. Connect the power according to the power supply value, install adjustable potentiometer, connect the output to the multimeter.
3. Check the reference tables according to the input temperature range and get the corresponding resistance value **Rlow~ Rhigh**.
4. Let Power-on, starting up for 15 minutes.
5. Adjust the value of resistance box to **Rlow** value, adjust the "zero" potentiometer, make the output correspond to the output value of zero (e.g.: 4mA).
5. Adjust the resistance box value to **Rhigh**, adjust the amplitude potentiometer, make the output value correspond to the output value of Span. (e.g. 20mA)
6. Repeat seveal times of the 5-6 steps to improve the output precision.
7. Finished Calibration.

SY Z-W Series Application Cases

SY Z-W Series signal transmitter and SY EM U/A-P-O series signal transducer is easy to realize RTD single signal input, multi-channel output (If there is strong interference in industrial site, please order ISO Z-W Seres).

The theory of Single input, multi-channel output: Make SY Z-W Series isolation transmitter output signal connect to the input port of SY EM Series products，SYEM Series will output a group of signal fully isolated with input port, then it realize one RTD signal input, dual isolated standard signal output. Similarly, make SY Z-W Series output signal connect to input port of multi SYEM transducer, each SYEM transducer will output one group signal that fully isolated with input port, then it realizes one RTD signal input, multi isolated standard signal output.

SY Z-W Series single RTD signal input, dual signal output please refer below applications:

Application E.G. 1: one RTD signal in, dual voltage signal output:

Choose SY Z1-W3-P1-O4 and SY EM-U1-P1-O5 to realize one Pt100/Cu50 signal input (temperature range: 0-150℃), Dual isolated voltage signal output, one 0-5V signal and one 0-10V signal. Connect the output port of transducer SY Z1-W3-P1-O4-S to the input port of transducer module SY EM-U1-P1-O5 (If there is strong interference in industrial site, please order ISO Z-W Seres).

Application E.G. 2: one RTD signal input，Dual current signal output

Choose SY Z1-W2-P1-O1-S and SY EM-A4-P1-O1to realize one Pt100 input (temperature range: 0-100℃), dual non-isolated 4-20mA signal output. Connect the output port of SY Z1-W2-P1-O1-S to the input port of SY EM-A4-P1-O1, then output 4-20mA signal, meanwhile, the SY EM-A4-P1-O1 also output one-channel 4-20mA current signal.

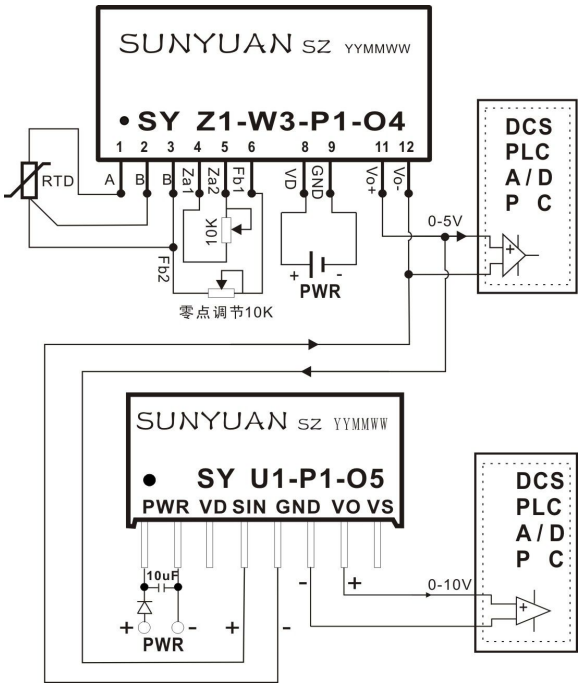


Fig. 4 One RTD signal input dual voltage output

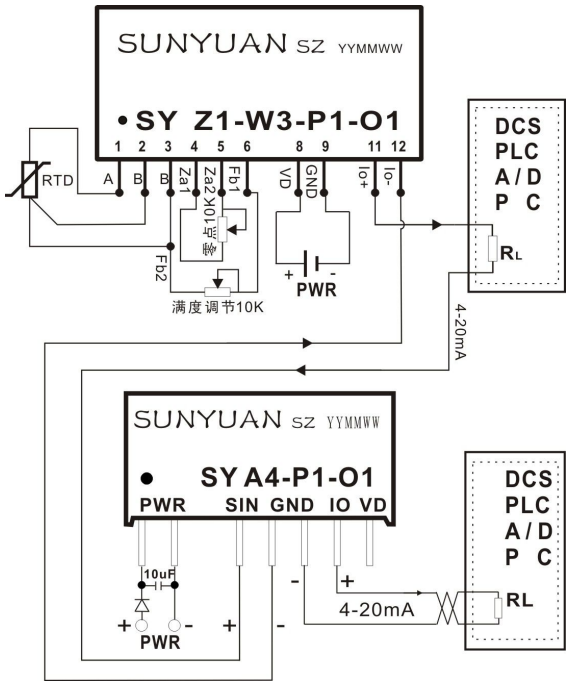
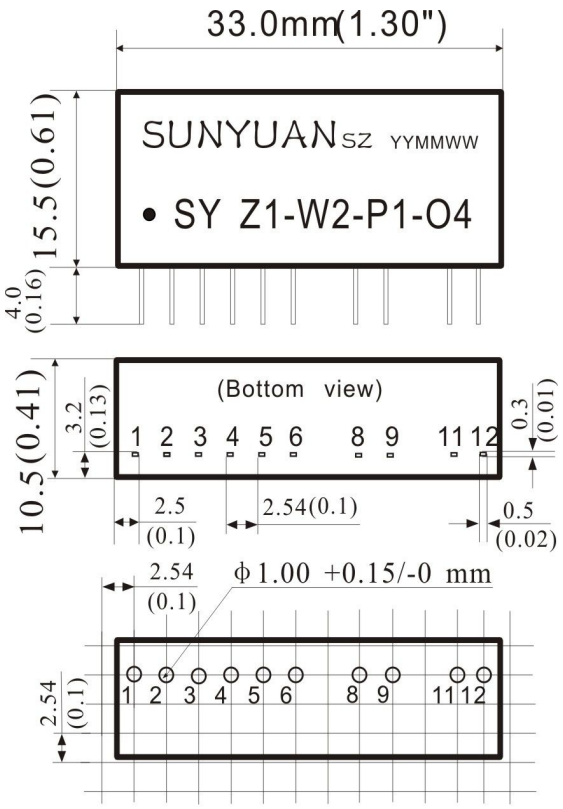


Fig. 5 One RTD signal input dual current signal output

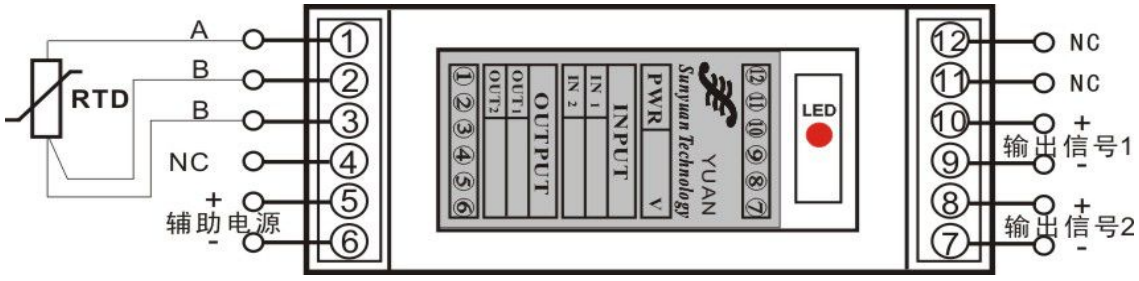
SY Z-W Series Dimension



IC封装SIP12PinPCB布板参考

Multi-channel Standard 35mm DIN Rail-mounted DIN 1X1/1X2 SY Z-W-P-O Series Dimension & Wring Diagram

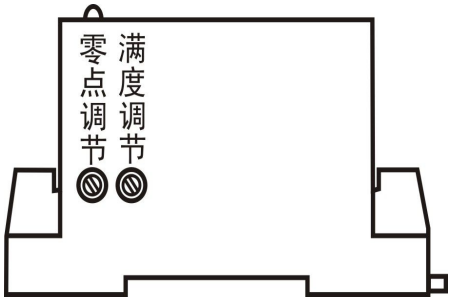
Sunyuan **I** Type standard DIN35 Rail-mounted multi-channel dual-isolation RTD thermal-resistance transmitter has several sets of SY Z-W-P-O series IC modules inside. The converters can be 1-input 1-output (DIN1X1),1-input 2-output (DIN 1X2) to achieve multi-channel RTD thermal resistance to analog signal conversion. Zero and full adjustment are available, user can adjust Zero and Span through the zero & span adjustment button in the left/right side of the transmitter. PCB size inside L*W: 79.5*32.5(mm).



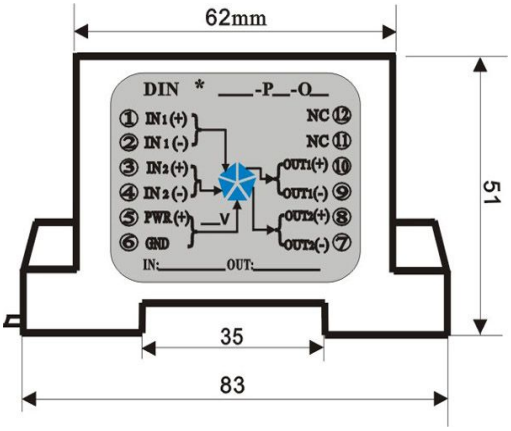
DIN 1X1 / 1X2 Rail-mounted Type Thermal Resistance Signal Dual Isolation Transmitter

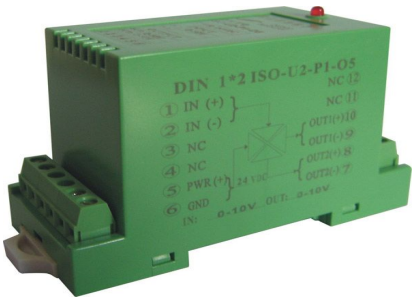
DIN Rail-mounted Type Dimension & Pin Functions Description

Pin	Pin Functions Description	
1	A	Thermal-resistance input #A
2	B	Thermal-resistance input #B
3	B	Thermal-resistance input #B
4	NC	No connection
5	Power in	Auxiliary power supply +
6	Power GND	Auxiliary power supply -
7	Out2 -	Output signal #2-
8	Out2+	Output signal #2+
9	Out1 -	Output signal #1-
10	Out1+	Output signal #1+
11	NC;	No connection
12	NC;	No connection



Zero Span





Note: ①If there is strong interference in industrial site, please order ISO Z-W Seres.

② The specification is subject to change without notice.

ISO Series RTD Isolated Signal Transducer (SIP12 PIN)

Characteristics：

- Three-wire, four-wire or two-wire PT100/Cu50 thermal resistance signal input
- Accuracy, Linearization error grade:0.2（Relative Temperature）
- Built-in linear processing and long-term compensation circuit
- Isolation Voltage: 3000VDC Three port: input/power/output
- Auxiliary Power Supply：5V, 12V, 15V or 24VDC, etc
- International standard signal output：4-20mA/0-5V/0-10V etc
- Small size, low cost, easy use and high reliability
- Standard DIP 24/SIP12 Pin, UL94V-0 package
- Industrial temperature range: - 45℃ ~ + 85 ℃

Applications：

- Temperature signal isolation, acquisition and transfer
- Industry site high-precision temperature measure
- Terminal resistance signal isolation and temperature control
- Ground interference suppression
- Temperature sensor signal converter to standard signal
- Oil temperature measure and Alarm
- Signal remote without distortion transmission
- Power monitoring, medical equipment, temperature control isolation barrier

Description：

ISO Z-W Series is a kind of mixed integrated circuit that converts thermal resistance signal into linear standard signal and isolates the signal based on the high/low temperature. It integrates a set of isolated DC/DC converters, linearization disposal and long line compensate circuit, which can bring two groups of each other isolated power to input port for magnifying circuit, modulating circuit powered and output port demodulation. They can meet industrial wide temperature, humidity, shaky poor operation condition.

ISO W-Z Series temperatures signal isolation amplifier is very convenient, with minimal external components, can be realized Pt100 RTD signal isolation transmitter. And can achieve the industrial site temperature control signal into two, into four functions.

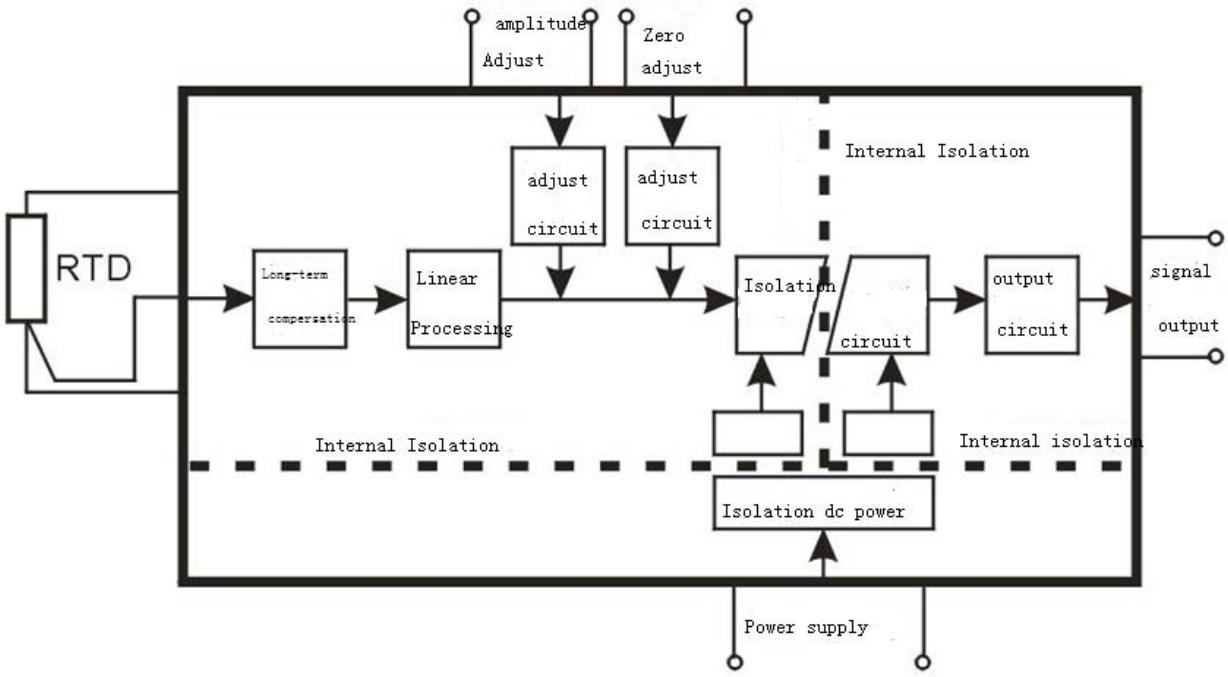


Fig. 1 ISO Z-W Series isolation transducer functional block diagram

Max work range： If it operates over above the range, will cause products damaged permanently

Continue isolation voltage value ：	3000VDC
Input power voltage range：	±10%Vin
Welding temperature（10Secs）：	+300℃
Vout signal load(MIN)：	2KΩ

Model Selection：

ISO Z□ - W□ - P□ - O□- S□

RTD
- Z1: Pt100 Z2: Pt10
- Z3: Cu100 Z4: Cu50

Input temperature range
- W1: -20-100℃
- W2: 0-100℃
- W3: 0-150℃
- W4: 0-200℃
- W5: 0-400℃
- W8: User-define

Power supply
- P1: DC24V P2: DC12V
- P3: DC5V P4: DC15V P8: User define

Output signal
- O1: 4-20mA O2: 0-20mA O4: 0-5V O5: 0-10V
- O6: 1-5V O8: User-define

Packaging type
- **S:** Sip 12Pin

Technical Parameters：

Parameter		Test Condition	Min	Typical	Max	Unit
Isolated voltage		1min	1500	3000		VDC
Non-linearity(to temperature)				0.2	0.5	%FSR
Output signal	Voltage			5	10	V
	Current			20		mA
Frequency response				10		mS
Load capability	Voltage	Vout=10V		2		kΩ
	Current	Iout=20mA		500	650	Ω
Signal output ripple		No-filter		10		mV
Output temperature drift				50		ppm/℃
Assistant power	Voltage	User-define	3.3	12	24	VDC
	Current	VD=12V		42		mA
Power consumption			0.3	0.5	1	W
Operating temperature			-45		85	℃
Storage temperature			-55		125	℃

Model Selection Examples.:

1. Input：Pt100，Temperature range: -20-100℃； Signal Output：4-20 mA； Power supply：24V, SIP 12Package。
   Product Model： ISO Z1-W1-P1-O1-S

SIP 12 PIN Package Typical Application Diagram：

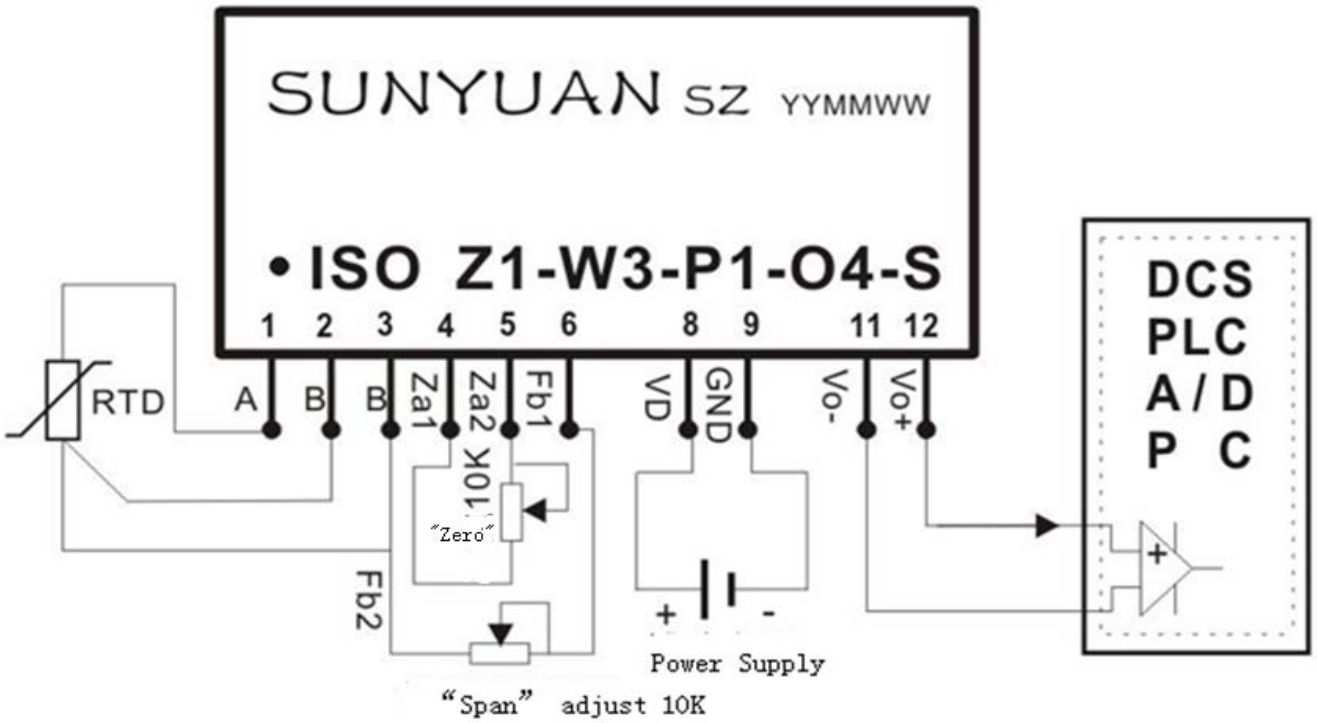


Fig. 2 ISO Z-W-S Series voltage output pin definition and typical application diagram

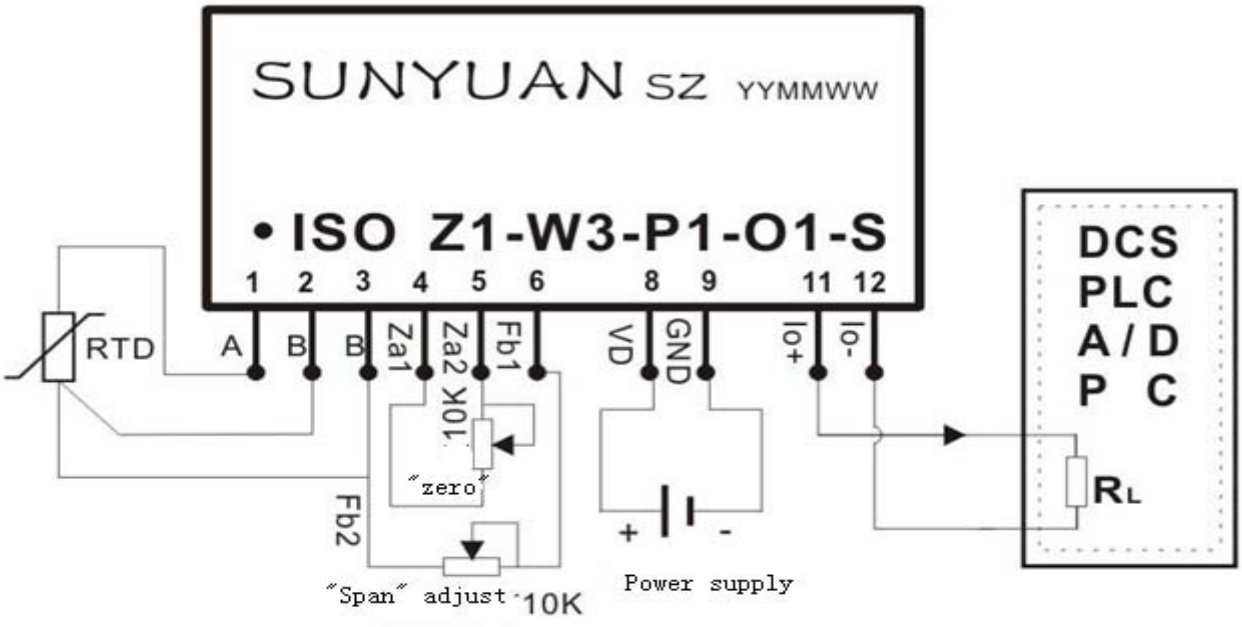


Fig. 3 ISO Z-W-S Series current output pin definition and typical application diagram

SIP 12Pin Package Pin Function Description：

1. SIP 12Pin voltage output pin definition and description

RTD input A Port	RTD input B Port	RTD input B Port and ADJ(Gain) 2 port	"Zero" adjust 1Port	"Zero" adjust 2 Port	(Gain)A DJ 1Port	NC	Power +	Power GND	NC	Vout -	Vout +
A	**B**	**B / FB2**	**ZA1**	**ZA2**	**FB1**	**NC**	**VD+**	**GND**	**NC**	**GND2**	**Vo+**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**

2. SIP 12Pin Current output definition description

RTD input A Port	RTD input B Port	RTD input B Port and ADJ(Gain) 2 port	"Zero" adjust 1Port	"Zero" adjust 2 Port	(Gain)A DJ 1Port	NC	Power +	Power GND	NC	Input current +	Output current -
A	**B**	**B / FB2**	**ZA1**	**ZA2**	**FB1**	**NC**	**VD+**	**GND**	**NC**	**Io+**	**Io-**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**

Note：1. When two-wire RTD input, do short connection between PIN2 and PIN3（RTD input B Port）; When four fire RTD input，make pin1 and RTD A port short connect.

2.Detection of RTD disconnection：**a.** Output Max value：Disconnection of Pin1 and Pin 3；**b.** Output Min value：disconnection of PIN 2

Product Calibration：

Calibration Instruments：one resistance box corrected to 0.01ohm，one DC power supply source and one Four and a half Multimeter.

Calibration Steps：

1、 Connect the products according the application diagram or install the product in your designed pcb board.

2、 Connect the power according the power supply value, install the regulator potentiometer, the output connect to the multimeter.

3、 Check the reference tables according to the input temperature range gain the corresponding resistance value Rlow~ Rhigh.

4、 Power-on, starting up for 15 minutes.

5、 Adjust the resistance box resistance value to Rlow value, adjust the "zero" potentiometer, make the output is the corresponding output of zero (e.g.: 4mA).

6、 Adjust the resistance box value to Rhigh, Span the amplitude potentiometer, make the output value is the corresponding of Span.(e.g. 20mA)

7、 Repeat five to six times of the step to improve the output precision.

8、 Finished Calibration.

ISO Z-W-S/D Application cases：

ISO Z-W-S/D Series signal transmitter and ISO EM series signal transducer is easy to realize RTD single signal input, Multi-channel output.

The theory of Single input, multi-channel output：Make ISO Z-W-S/D isolation transmitter output signal connect to the input port of ISO EM，ISO EM will output a group of signal fully isolated with input port, then it realize one RTD signal input, dual isolated standard signal output. Similarly，make ISO Z-W-S/D output signal connect to input port of multi ISOEM transducer, each ISOEM transducer will output one

group signal that fully isolated with input port, then it realizes one RTD signal input, multi isolated standard signal output.

ISO Z-W-S/D single RTD signal input, dual signal output please refer below application:

SIP 12PIN Type Application Case 1: one RTD signal in, dual voltage signal output:

Choose ISO Z1-W3-P1-O4-S and ISO EM-U1-P1-O5 to realize one Pt100/Cu50 signal input (temperature range: 0-150℃), Dual isolated voltage signal output, one 0-5V signal and one 0-10V signal. Connect the output port of transducer ISO Z1-W3-P1-O4-S to the input port of transducer module ISO EM-U1-P1-O5.

SIP 12PIN Application Case 2: one RTD signal input，Dual current signal output

Choose ISO Z1-W2-P1-O1-S and ISO EM-A4-P1-O1to realize one Pt100 input(temperature range: 0-100℃)， dual isolated 4-20mA signal output. Connect the output port of ISO Z1-W2-P1-O1-S to the input port of ISO EM-A4-P1-O1, then output 4-20mA signal, meanwhile, the ISO EM-A4-P1-O1 also output one isolated 4-20mA current signal.

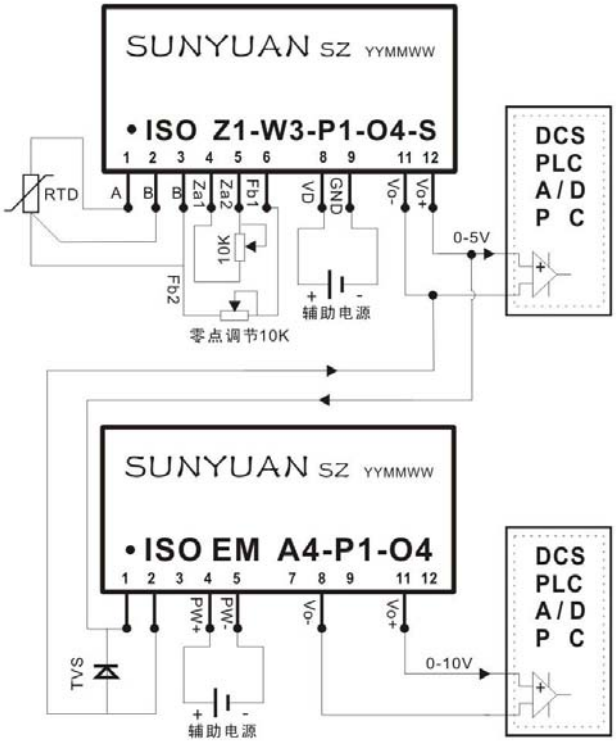


Fig. 4 One RTD signal input Dual voltage output(SIP)

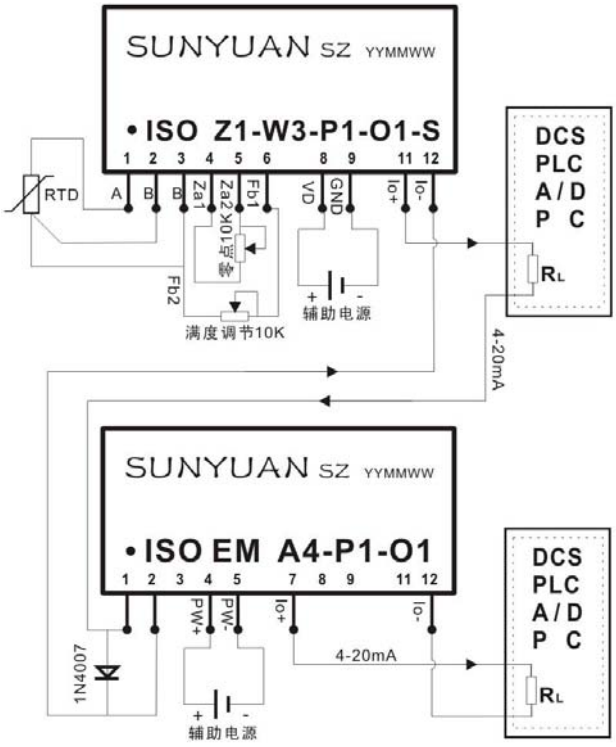
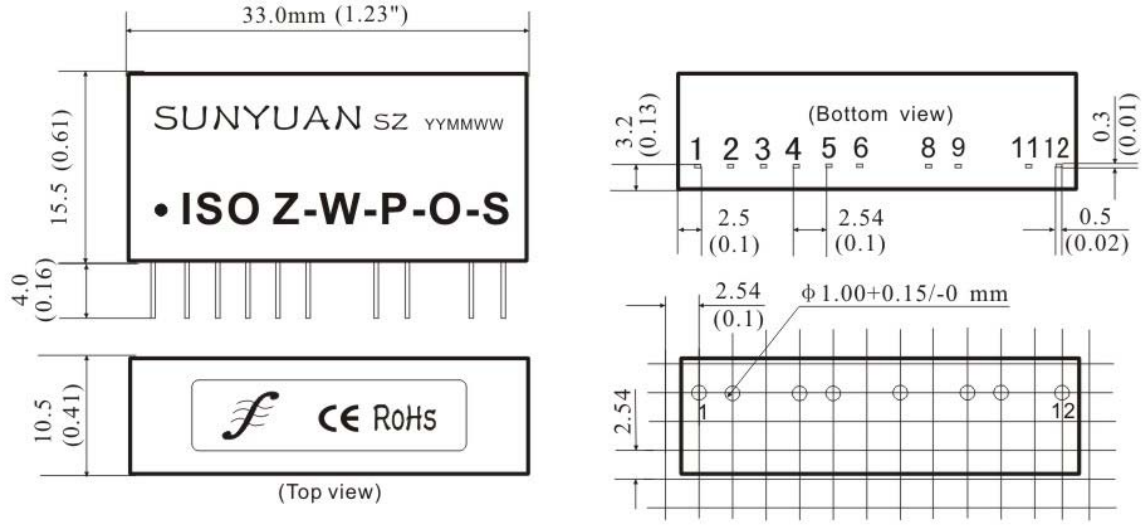


Fig. 5 One RTD signal input dual current signal output (SIP)

SIP 12PIN Package PCB Installation and Dimension (Standard SIP 12PIN)：



ISO9001:2008

CE RoHS

DIN Rail-mounted Thermal Resistance Isolation Transmitter

Features:

- Three-wire,four-wire or two-wire PT100/PT1000 thermal resistance signal input
- Accuracy, Linearization error grade:0.2
- Linearization disposal and long line compensate circuit
- Isolation Voltage: 3000VDC input/power/output
- Auxiliary power: 5V/12V/15V/24VDC or 110VAC/220VAC
- International standard signal output: 4-20mA/0-5V/0-10V etc.
- Small size,low cost, standard DIN Rail-mounted :DIN 1x1 or DIN 1X2
- Industrial temperature range: - 45 ~ + 85 ℃

Model selection:

DIN1x1(2) ISO Z□ - W□ - P□ - O□

Input Type

Z1: Pt100 Z2: Pt10
Z3: Cu100 Z4: Cu50

Input Temp. Range

W1: -20-100℃
W2: 0-100℃
W3: 0-150℃
W4: 0-200℃
W5: 0-400℃
W8: User-defined

Power Supply

P1: DC24V P2: DC12V
P3: DC5V P4: DC15V P8: User-defined

Output Signal

O1: 4-20mA O2: 0-20mA O4: 0-5V O5: 0-10V
O6: 1-5V O8: User-defined

Examples:

E.g.1: Signal input: Pt100, temperature range:0~100℃; signal output:4-20mA; auxiliary power supply:24VDC

Model No.: **DIN1x1 ISO Z1-W1-P1-O1**

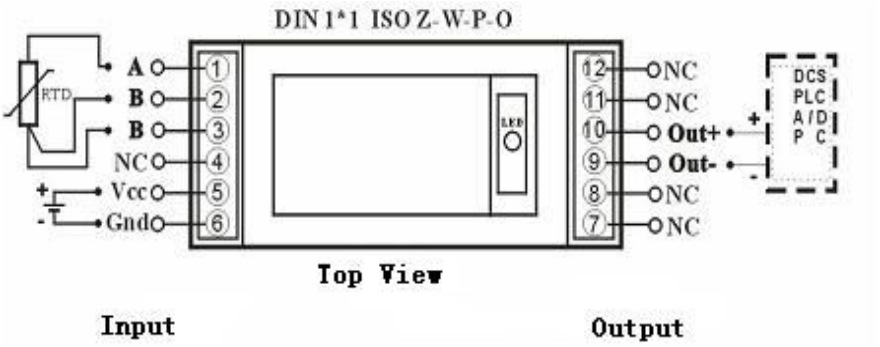
Technical parameters:

Accuracy, Linearization error grade:0.2	Frequency response: ≤10mS
Power: DC5V、12V、24V，±10% or AC110V、220V	Power loss: Single output: < 0.75W Dual Output: < 1.5W
Three-wire, four-wire or two-wire PT100 thermal resistance signal input	Load capability: voltage output: ≥ 2 k ohm Current output: ≤ 650 ohm
Temperature drift: 50ppm/℃	Isolation Voltage: 3000VDC input/power/output
Operating temperature: -25 ~ +70℃	Insulated resistance : ≥20MΩ
Storage Temperature: -45 ~ +80℃	Operation humidity: 10 ~ 90%
Storage humidity: 10 ~ 95%	Endure voltage: signal input/output 1/output 2/power 2500VDC, 1 munite, leak current:1mA
Endure impact voltage: 3KV,1.2/50us(peak value)	

Pin Description:

1. DIN 1X1 1-input, 1-output

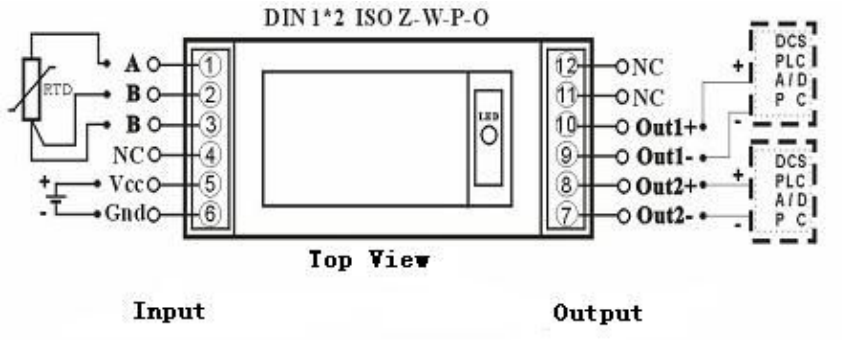
PIN	Function	
1	A	Input A
2	B	Input B
3	B	Input B
4	NC	
5	Vcc	Power+
6	GND	Power-
7	NC	
8	NC	
9	Out -	
10	Out+	
11	NC	
12	NC	



Wiring diagram

2. DIN 1X2 1-input, 2-outputs

PIN	Function	
1	A	Input A
2	B	Input B
3	B	Input B
4	NC	
5	Vcc	Power+
6	GND	Power-
7	Out2-	
8	Out2+	
9	Out1 -	
10	Out1+	
11	NC	
12	NC	



Wiring diagram

Note: when two-wire or four wires input,refer to Figure 1..

3. Break test

a. output Max: the line that connecting PIN1,3 is broken.

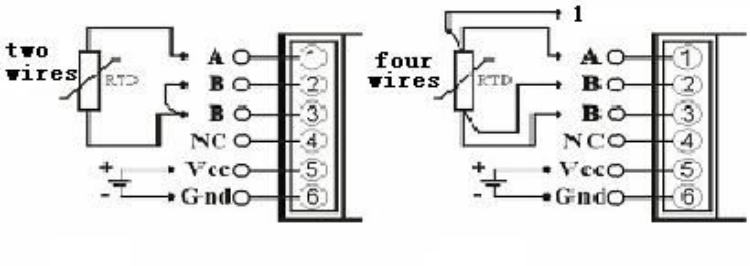
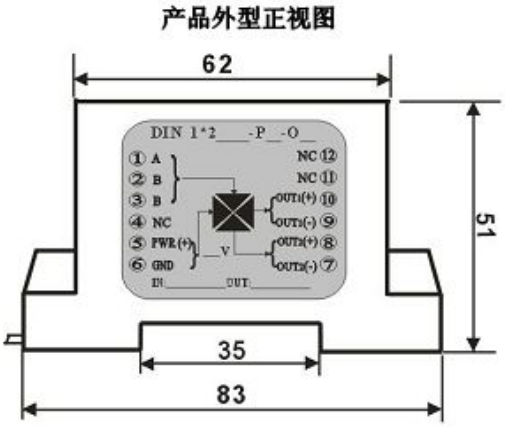


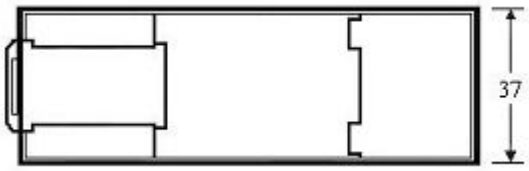
Figure 1

Note: Point “1” is not need to be connected or connect to PIN 4.

Dimension and external view:



Unit:mm



Front View

Bottom View

ISO9001:2008

CE RoHS