



### Features:

- ◆ Small size, low cost, international standards DIN35mm rail mounting
- ◆ Two-wire, Three-wire, four-wire Pt100 or (PT1000, PT10, Cu50, Cu100) thermal resistance signal input
- ◆ International standard signal output (0-3.3V/0-5V/0-10V/1-5V/4-20mA/0-20mA options)
- ◆ Internal Built-linear circuit, long-term compensation circuit
- ◆ Passed CE Certificate
- ◆ High accuracy (0.1% F.S, 0.2% F.S)
- ◆ High linearity (0.1% F.S)
- ◆ High isolation voltage (3000VDC/60S)
- ◆ Three-port isolation between input, output and power supply
- ◆ Low temperature drift (100 PPM/°C)
- ◆ Industrial temperature range (-45~+85°C)
- ◆ High reliability (MTBF> 50 Wan hour)
- ◆ Power supply (5VDC/12VDC/15VDC/24VDC/9-36VDC/220VAC options)

### Application:

- ◆ Temperature signal isolation, acquisition and conversion
- ◆ industrial field precision temperature measurement
- ◆ thermal resistance signal isolation and temperature control
- ◆ ground interference suppression
- ◆ temperature sensor signal change into standard signal
- ◆ oil temperature measurement and alarm
- ◆ signal transmission distance without distortion
- ◆ power monitoring, medical equipment ,temperature control, isolation safety barrier

### General Description:

Jieshengda Technology **JSD TARZ-1001** series thermal resistance temperature signal isolation transmitter convert and isolate the thermal resistance signal from Pt100 or (PT1000, PT10, Cu50, Cu100) inputting at high temperatures from low, and transmit a standard output signal or user-specified special signal to the control room、PLC、PC or DCS systems. However, Thermal Resistance temperature signal input and analog signal output is linear.

Jieshengda Technology **JSD TARZ-1001** series thermal resistance temperature signal isolation transmitter integrates a set of multi-channel high-isolation DC/DC power supply, a few high-performance signal isolators and RTD linearization, long-term compensation, interference suppression circuit, especially for (Pt100 RTD signal isolation converted into a standard signal, temperature signal remote transmission with no distortion, industrial fields temperature signal acquisition and isolation, high-precision temperature measurement on-site measurements, oil temperature measurement and alarm), the thermal resistance signal isolation transmitter adopts with optical isolation technology, so that the isolation transmitter has high isolation voltage 3000VDC and strong anti-electromagnetic EMC interference capability, improved product reliability and stability by SMD Chip and modular technology designed to make products satisfy harsh industrial environments.

Jieshengda Technology **JSD TARZ-1001** series thermal resistance isolation transmitter is easy to use and needn't external components, can achieve thermal resistance signal isolation transmitter and conversion.

**If 1-in-2-out/2-in-2-out/isolation transmitter please purchase JSD TARZ-1002 or JSD TARZ-2002 series.**

**Product Selection Parameter List:**

Thermal resistance code		Input temperature range		Power supply code		output signal code	
1:	PT1000	1:	-20-100℃	W:	9-36VDC	1:	4-20mA
2:	PT100	2:	0-100℃	1:	24VDC	2:	0-20mA
3:	PT10	3:	0-150℃	2:	15VDC	3:	0-10mA
4:	Cu100	4:	0-200℃	3:	12VDC	4:	0-5V
5:	Cu50	5:	0-400℃	4:	5VDC	5:	0-10V
				5:	220VAC	6:	1-5V
						7:	0-3.3V
U:	user-define	U:	user-define	U:	user-define	U:	user-define
<b>Note:</b> When ordering ,please determine input、 output and power , special can customize							

**Selection Example:**

Example 1:Input:Pt100; temperature range:0~150℃; power:12VDC; output:4-20mA; Model: JSD TARZ-1001-2331

Example 2:Input:Cu50; temperature range:0~400℃; power:24VDC; output:0-10VDC; Model: JSD TARZ-1001-5515

**Electrical Characteristics:**

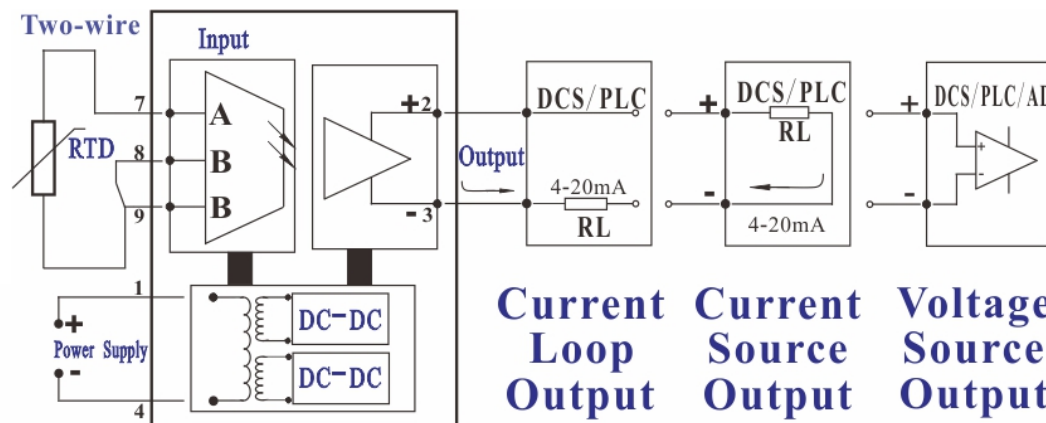
Signs	Item		Test condition	Min	Typ.	Max	Units
Isolation characteristics	Isolation voltage		AC,50Hz,tested for 1 minute, humidity<70% leakage current < 1mA		3000		V(rms)
Transmission characteristics	Gain drift					100	ppm/℃
	Non-linearity				0.1	0.2	%FSR
Input characteristics	Signal Input	Two-wire	PT1000,PT100,PT10,Cu100,Cu50 options ( Temperature range options :-200℃~+600℃)				
		Three-wire					
		Four-wire					
Output characteristics	Signal output	voltage		0	10		V
		current		0	20	24	mA
	Load capacity	voltage	Vout=10V		2		kΩ
		current		0	350	500	Ω
Power Input Characteristics	Power supply	Voltage		5	12	36	VDC
		Power loss			0.8	1	W
		Range		-10		+10	%
Other characteristics	Operating			-45		85	℃
	storage temperature			-55		105	℃
	weight			120			g
	Size			115x100x17.5			mm

**Pins function description:**

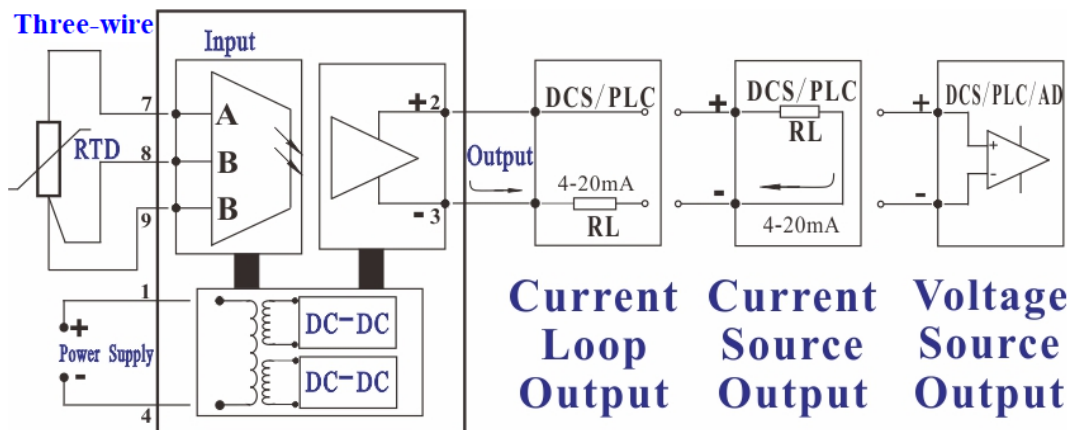
Output types	Pin	Function	Pin	Function	storage
Voltage/ Current output	1	Power +	7	A	Standard DIN35 Rail mounting
	2	Signal Out +	8	B	
	3	Signal Out -	9	B	
	4	Power -	10	NC	
	5	NC	11	NC	
	6	NC	12	NC	

## Application Wiring Diagram:

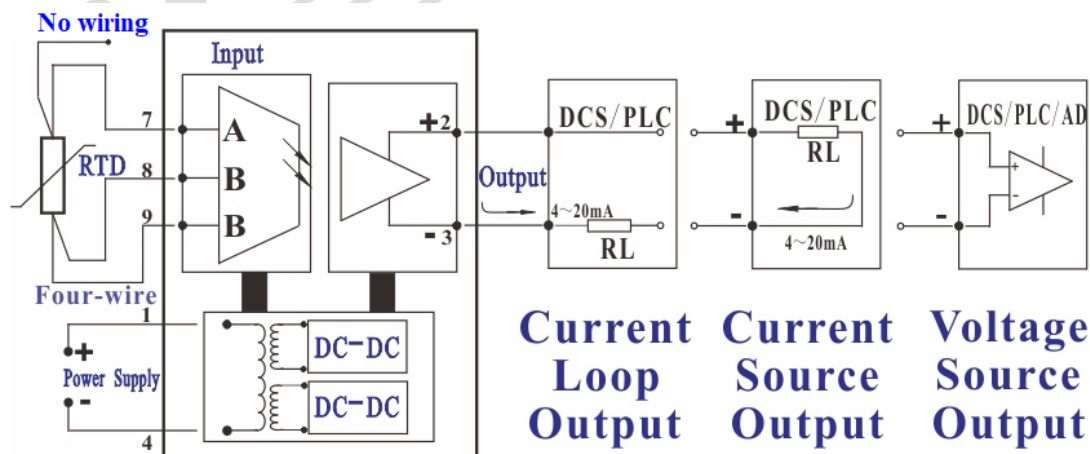
### Two-wire:



### Three-wire:



### Four-wire:

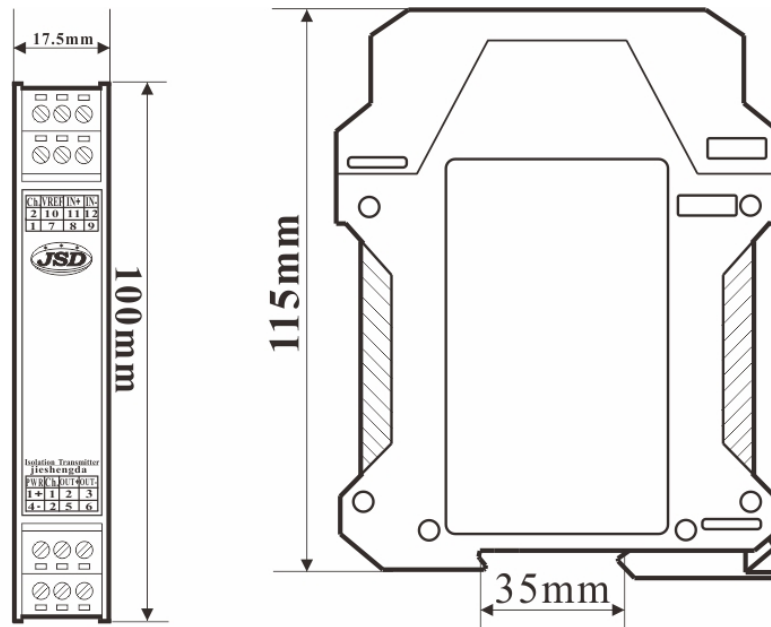


### Remarks:

1. For two-wire, three-wire or four-wire thermal resistance input, please refer to the wiring diagram respectively.
2. Three-wire thermal resistance disconnection detection: (a. Maximum output: the wire connected to pin 7 or 9 is broken; b. Minimum output: the wire connected to pin 8 is broken.)



**Product Dimensions:**



**Notes:**

- 1、 NC pin must not be connected to any external circuit, otherwise it will damage the product itself;
- 2、 Please read the user manual carefully before using. If any question please contact our technical support department.
- 3、 Please do not use this product in hazardous area. The power supply of this product should be DC power source. It is forbidden to use 220VAC power supply.
- 4、 Calculating from the date of delivery, during normal use of the product, any quality problems are free repair or replacement by Company during 3 years warranty
- 5、 the product is strictly forbidden demolish without permission for not damage
- 6、 All specifications measured at  $T_a=25^{\circ}\text{C}$ , humidity<75%, nominal input voltage and rated output load unless otherwise specified.
- 7、 In this datasheet, all the test methods of indications are based on corporate standards.

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