

1-in-1-out thermocouple signal isolation transmitter

Feature:

- Small size, low cost, standard DIN35mm rail installation
- Three-terminal isolation (input, output, power supply and mutual isolation between channels)
- ♦ High precision grade (0.1% F.S, 0.2% F.S) and
- ◆High linearity (0.1% F.S)
- ◆High isolation withstand voltage (3000VDC/60S)
- ♦low temperature drift (40PPM/°C)
- ◆Reliable product performance (MTBF>500,000 hours)
- power supply (5/12/15/24 VDC and other single power supply)
- International standard thermocouple signal input: K, E, S, B, J, T, R, N, WRe3-WRe25 and WRe5-WRe26, etc.
- ◆International standard signal output: 0-3.3V/0-5V/0-10V/1-5V/4-20mA/0-20mA/0-10mA etc.

Application:

- ◆Temperature signal measurement and monitoring
- ◆Equipment operation monitoring
- ◆Measurement of sensor signal
- Analog mV small signal amplification, isolation and conversion
- ◆Industrial field signal isolation and long-distance long-distance transmission without distortion
- ◆Analog signal ground wire interference suppression
- ◆Instrumentation and sensor signal transmission and reception
- Small signal collection, measurement, amplification and distortion-free remote transmission of
- various temperature in industrial site
- Building automation control

General Description:

The JSD TTC-1001 series of JSD Technology is a thermocouple signal isolation transmitter with one input and one output. This product is an isolation transmitter that uses a thermocouple sensor to measure temperature (the thermocouple sensor needs to be equipped by the user). Mainly used to measure the temperature around -270°C~+2800°C. The thermocouple isolation transmitter JSD TTC-1001 is a digital circuit structure with a cold junction compensation function, and adopts advanced technologies such as ambient temperature self-compensation and zero point automatic calibration. It is calibrated according to the thermocouple national standard graduation table before leaving the factory, so it can It is guaranteed that the accuracy is within the specified range for many years, without frequent calibration. The product has functions such as online fault self-diagnosis, and is an intelligent temperature transmitter product.

JSD TTC-1001 series of JSD TTC-1001 are completely isolated (three isolation) between input, output and working power supply. The product adopts SMD and wide creepage design, which can make the product withstand 3000VDC isolation withstand voltage. The equipment adopts DIN35 international standard guide rail installation method, which is small in size, high in accuracy, stable in performance, and cost-effective. It can be widely used in petroleum, chemical, electric power, instrumentation and industrial control industries.

For Single channel input dual-channel output thermocouple signal isolation transmitter Please choose: JSD TTC-1002 series; dual-channel thermocouple signal isolation transmitter Please choose JSD TTC-2002 series.



Selection List:

Product Selection Parameter List:						
signal input code:		Power supply:	signal output code: :			
Input type	Temperature range	Power(VDC)	current (mA)	voltage(VDC)		
1: B type	600-1800°C	W: 18-32V	1: 4-20mA	4: 0-5V		
2: E type	-270-1000°C	1: 24V	2: 0-20mA	5: 0-10V		
3: J type	-210-1200°C	2: 15V	3: 0-10mA	6: 1-5V		
4: K type	-200-1300°C	3: 12V		7: 0-3.3V		
5: N type	-270-1300°C	4: 5V				
6: R type	0-1600°C					
7: S type	0-1600°C					
8: T type	-270-400°C					
9: WRe3-WRe25	0-2300°C					
X: WRe5-WRe26	0-2300°C					
U: User-defined		U:User-defined	U:User-defined	1		
Note: special can be customized						

Selection Example:

Example 1:input:K type,-200-1300°C; output: 4-20mA; power: 24VDC; model: JSD TTC-1001-411

Example 2:input:T type, -270-400°C; output: 0-3VDC; power: 24VDC; model: JSD TTC-1001-81U

Electrical	Characteristics:

Signs	Item		Test condition		type	Max	Unit
Isolation	Isolatio voltag	AC,50Hz,tested for 1 minute, humidity<70%		-	3000		V(rms)
character istics	Insulation resistance			≥100			MΩ
	Input (set	nsor type)	K, E, S, B, J, T, R, N, WRe3-WRe25 WRe5-WRe26 type	-270		+2800	°C
Input	Measure	ment accuracy	25°C±2°C, No cold junction		±0.1		% F.S
characteristics	compensation accuracy:		: (preheating time 10 minutes)		±1		°C
	Compensation range:		-20~+60		°C		
Output characteristics	Output	tvoltage		0	10		VDC
	signal	current		0	20		mA
	Response Time			≪0.5			S
	Signal output ripple		Load 250Ω	<5			mVrms
Power Supply inputPowercharacteristicssupply	Dowor	voltage		18	24	32	VDC
	Power	Power loss			0.7		W
	suppry	range		_	_	_	%
Other characteristics	working temperature			-20		+60	°C
	storage temperature			-45		+85	°C
	size		L*W*H	118.9*110*12.7		mm	



Output status:

Follow mode: Under the circumstance that the user does not specifically specify, regardless of the fault state of the input signal (except for disconnection, the disconnection output is 0V/mA), the output will follow the input signal change within the full scale range, but the maximum output will not exceed the output 110% of the upper limit of the range (such as 0-20mA output, the minimum output can be 0mA, the maximum does not exceed 22mA).

Indicator light description:

PWR: Power indicator (green). When the meter is energized, it stays on.

ALM: Input signal status indicator, red. The indicator does not light up in normal working state; The indicator flashes when the input signal fails;

When the input signal exceeds the range, the indicator will stay on.

Note :

When thermocouple is input, the compensation wire should be directly connected to the input terminal, and no wires of other materials should be connected in the middle, otherwise it will cause measurement errors

Pin function description:

Signal types	Pin	Function	Pin	Function
1	Signal Input- +	5	Signal Output +	Standard
2	Signal Input-+	6	Signal Output -	DIN35
3,7	No pin (NC)	9	Power supply In +	Rail
4,8	No pin (NC)	10	Power supply In -	mounting

Application Wiring Diagram:





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 24VDC 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 Ta=25°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.

Copyright:

Copyright © 2018 Shenzhen Jieshengda Technology Co., Ltd.

Without the prior written permission of the company, any content in this manual may not be copied, distributed, translated or transmitted in any form or method (electronic or mechanical), including photocopying, recording or storing in any information storage and retrieval system. This manual is subject to modification or update without notice.

Trademark

All other trademarks and copyrights belong to their respective owners.