

Two-wire 4-20mA Passive Loop Powered module

Features:

- ◆ low cost, small size, SIP12 package with UL94-V0 flame retardant standard
- ◆ Isolation voltage up to 3000VDC between input and output
- ◆ Provide work without external power supply, no external components
- ◆ 4 ~ 20mA current input, 4 ~ 20mA current output
- ◆ Industrial temperature range: -45 ~ +85 °C
- ◆ Accuracy class: 0.3, 0.4, 0.5;
- ◆ High Linearity :0.1% F.S.
- ◆ Provide power to the sensor (10 ~ 30VDC)

Applications:

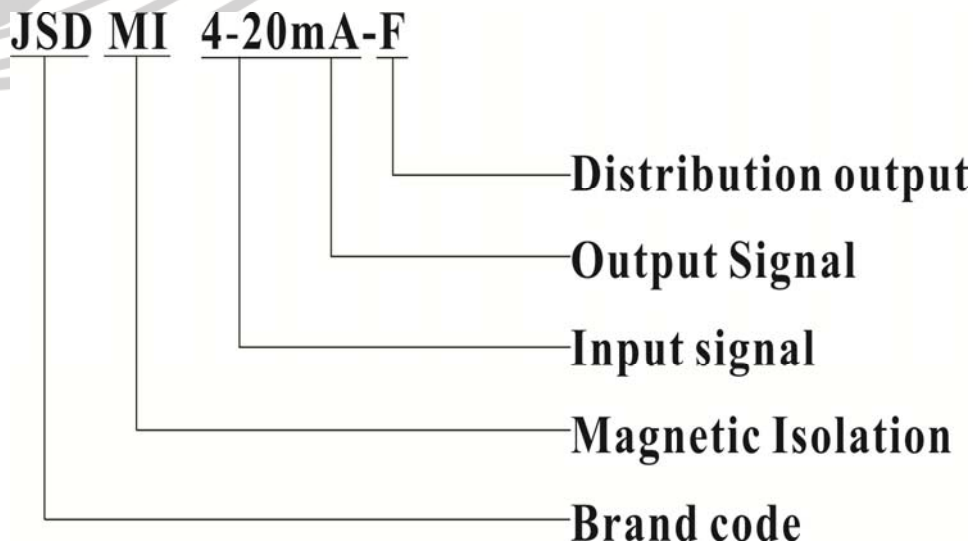
- ◆ Analog signal data isolation, collecting
- ◆ Industrial field signal isolation
- ◆ Remote lossless transmission
- ◆ Analog signal ground interference suppression
- ◆ 4 ~ 20mA isolated signal transmission
- ◆ Provide power supply to the front two -wire equipment
- ◆ Instrumentation and sensor signal transceiver
- ◆ Power monitoring, medical equipment isolation barrier

General description:

Jie Shengda Technology JSD MI 4~20mA-F series isolation amplifier IC is a two-wire loop powered galvanic isolation module, It adopts electromagnetic isolation technology, Provide power to the two-wire devices, effective solution to the current signal isolation depends on the power supply and achieve the 4 ~ 20mA standard signal isolation and transmission, Can be used with a variety of instruments analog input interface (PLC, DCS systems, etc.) match. Analog signal input with overcurrent protection, Can effectively protect the module and the post-stage circuit; addition, the module's input and output isolation voltage up to 3000VDC.

JSD MI 4~20mA-F series isolation amplifier products very easy to use, It can achieve the industrial field signal isolation and conversion without any external components, and can achieve long-term lossless signal transmission. The product simplifies the user's design, greatly improves the PCB board space utilization.

Selections and Definitions:





Product Selection Parameter List:				
JSD	MI	4~20mA	-F	Detailed description
Signs				Brand code
Isolation code				Electromagnetism isolation
current signal input				4~20mA current signal input
current signal output				4~20mA current signal output
Distribution output code				Distribution output (10~30VDC)

Selection Example:

Example: Signal input 4-20mA , Signal output 4-20mA Model: JSD MI 4-20mA-F

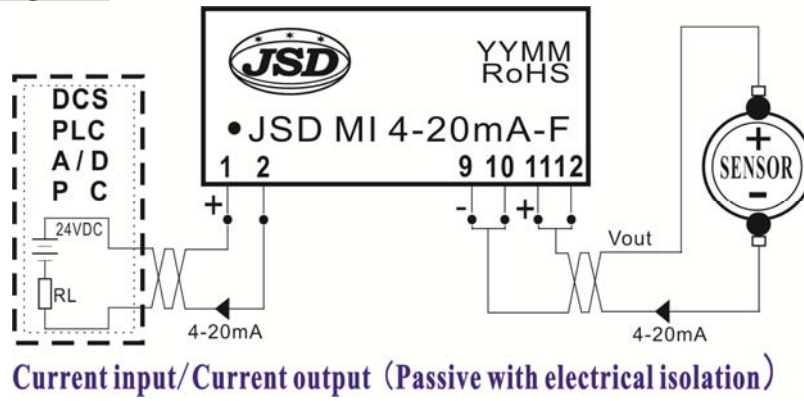
Electrical Characteristics:

Signs	Item	Test Condition	Min	Type	Max	Units	
Isolation characteristics	Isolation voltage	AC,50Hz,(Tested for 1 minute humidity<70%,leakage Current <1mA,)		3000		V(rms)	
	Insulation resistance	500VDC (input/output)		100		MΩ	
Transmission characteristics	Gain drift			±35	±50	ppm/	
	Non-linearity			±0.1	±0.2	%FSR	
	Output voltage range		10	24	30	VDC	
	Signal input	current	4	20	30	mA	
	Signal	current	4		20	mA	
	Load capacity	current	$RL \leq (U_s - 5) / 0.02$ Us: Loop power supply voltage		250		Ω
	Frequency Response		(Small-signal band width)Io=20mA		50		Hz
Power input characteristics	Power supply	Voltage	---	---	---	VDC	
		Power loss	---	---	---	W	
		Range	---	---	---	%	
Other characteristics	soldering temperature	Solder from the shell 1.5mm,10s			300	°C	
	operating temperature		-45		85	°C	
	storage temperature		-55		105	°C	
	Weight		6.5	7.5	8	g	

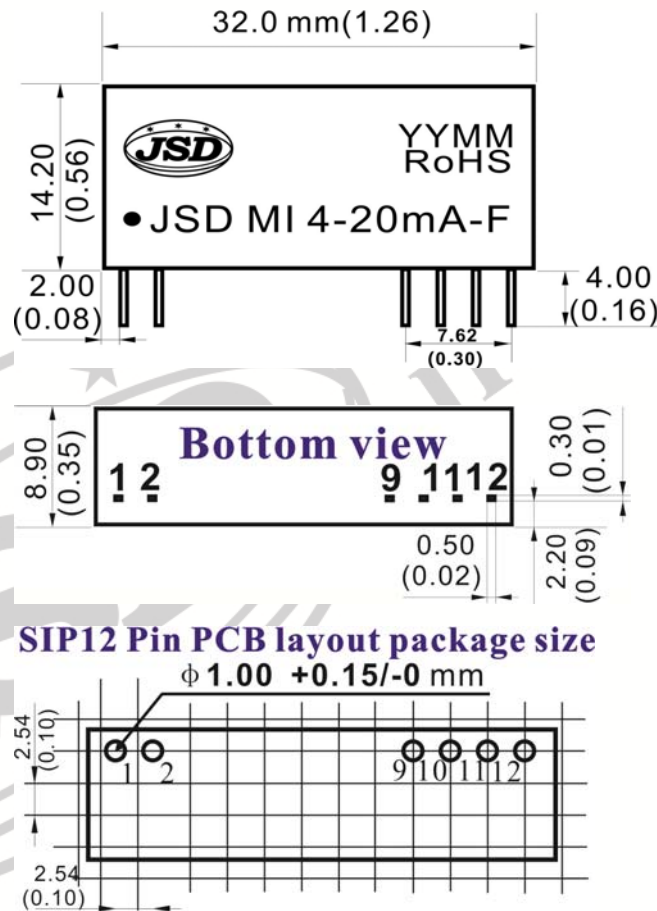
Pin Function Description:

Outputting types	Pin	Function	Pin	Function	Storage
Passive 4-20mA	1	Power supply input	7	NO PIN	Single Inline 12Pin
	2	Current input	8	NO PIN	
	3	NO PIN	9	Current input	
	4	NO PIN	10	Current input	
	5	NO PIN	11	Distribution output	
	6	NO PIN	12	Distribution output	

Application wiring diagram:



Dimensions and PCB board layout diagram:



Notes:

- 1、 Please read the user manual carefully before using. If any question please contact our technical support department.
- 2、 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. This product's layout size diagram is "mm" and "inch" as the unit, within "[]" is inch
- 3、 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,
- 4、 To avoid invalid, or any failure, users disassemble this product is forbidden
- 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.