



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:

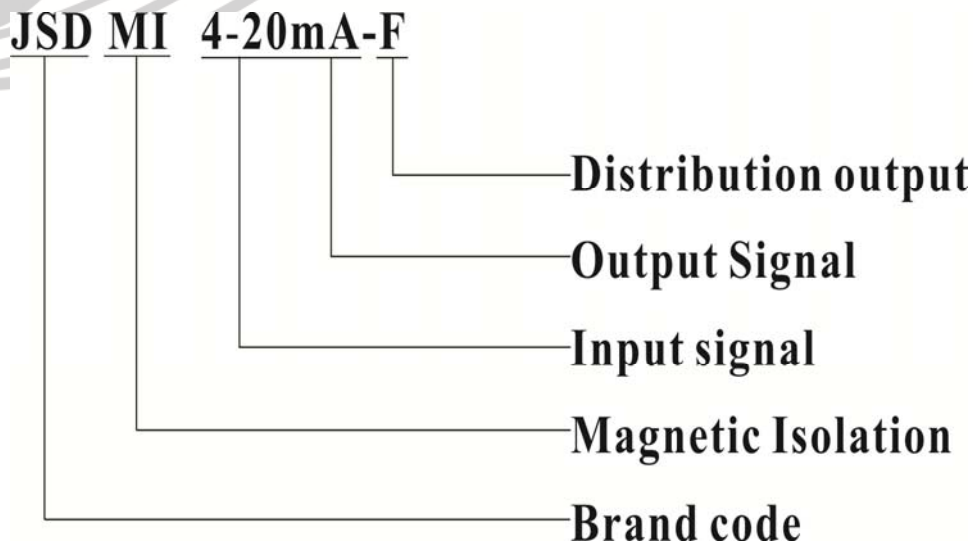
- ◆ Analog signal data isolation, collecting
- ◆ Industrial field signal isolation
- ◆ Remote lossless transmission
- ◆ Analog signal ground interference suppression
- ◆ 4 ~ 20mA isolated signal transmission
- ◆ Provide power supply to the front two -wire equipment
- ◆ Instrumentation and sensor signal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

General description:

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

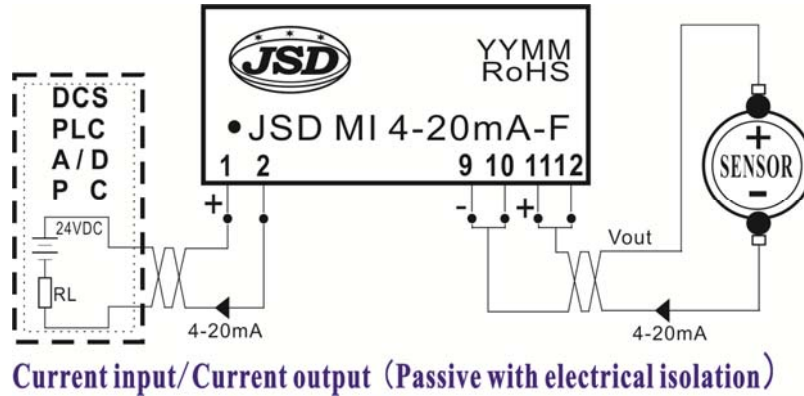
Electrical Characteristics:

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	

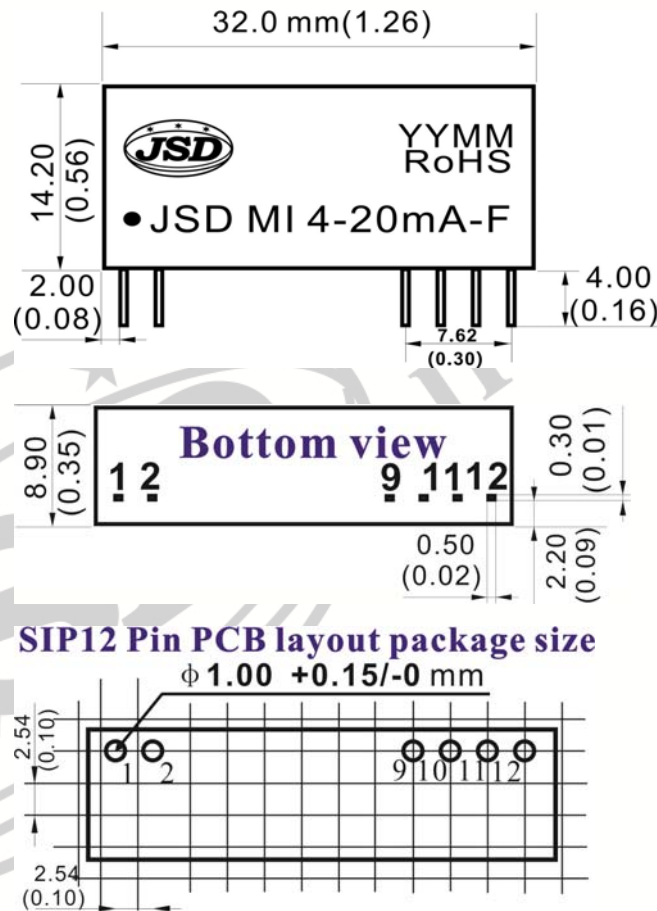
Pin Function Description:

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.
- 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 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.