Two-wire 4 ~ 20mA passive isolation amplifier module

Features:

- low cost, small size, SIP package with UL94-V0 flame retardant standard
- Three-port isolation()
- 3000VDC isolation voltage between input, output and power supply
- Operation requires no external power supply, no external components
- 4 ~ 20mA input/4 ~ 20mA output
- Industrial temperature range: -45 ~ +85 ℃
- High accuracy: 0.1%, 0.2%;
- High linearity (non-linearity <0.1%)
- Wide range voltage input (7.5 ~ 32VDC)
- low impedance (voltage drop <3V)

Application:

- Analog signal data isolation、acquisition
- Industrial field signal isolation
- Long-distance lossless transmission
- Analog signal ground interference suppression
- 4 ~ 20mA isolated signal transmission
- instrumentation and sensor signal transceiver
- Transducer , large generators, equipment EMC interference suppression

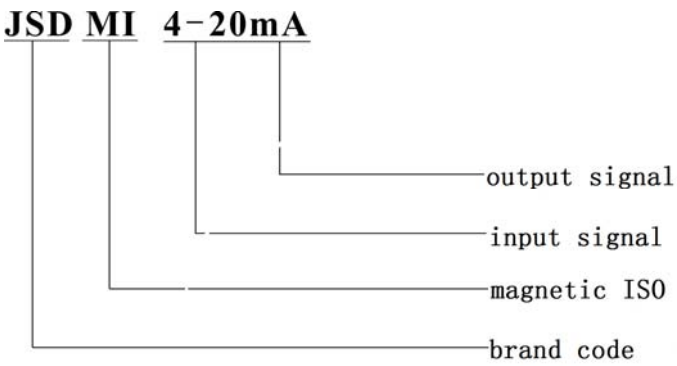
General Description:

Jie Shengda Technology JSD MI 4~20mA isolation amplifier is a current loop isolated module, the isolator module is two -wire isolated interface design, the front input 4~20mA, the backend output 4~20mA, and no working power supply to achieve 4~20mA standard signal with high accuracy and linearity isolation.to achieve signal long-distance transmission without distortion . Product isolation voltage is up to 3KVDC between input and output. **JSD MI 4~20mA** series products very easy to use ,without any external components to achieve 4 ~ 20mA current loop isolation transmitter function.

Jie Shengda Technology JSD MI 4~20mA isolation amplifier have PCB board soldering and standard DIN 35mm rail slot fixed , rail mounting can be achieved analog signal one in one out, two in two out, three in three out，four in four out，users only need wiring can be used.

Jie Shengda Technology JSD MI 4 ~ 20mA series isolation amplifier products are easy to use, without external components can be realize industrial field signal isolation and conversion function, and to achieve signal long-distance lossless transmission. The products simplify the users' design, greatly improving the PCB board space utilization.

Selections and Definitions：



Product Selection Parameter List:			
JSD	MI	4~20mA	Details Definition
code			Brand code
isolation code			Magnetic isolation
current in			**4~20mA** current in
current out			**4~20mA** current out

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Selection example:

example1: signal input: 4~20mA; signal output: 4~20mA; model NO: JSD OI 4-20mA

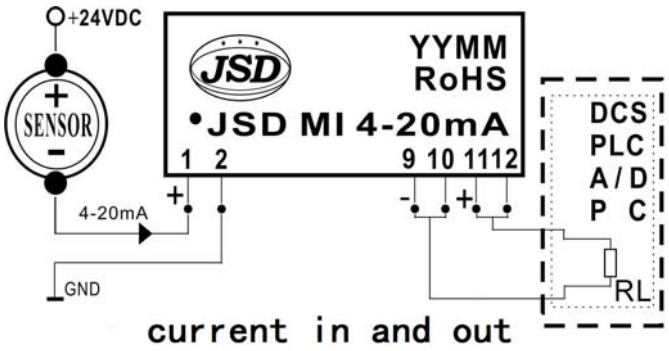
ELECTRICAL CHARACTERISTICS:

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				±50		ppm/
	Non-linearity				±0.1	±0.2	%FSR
	input voltage range			7.5		32	VDC
	Signal input	current		4		20	mA
	Signal output	current		4		20	mA
	Load capacity	current	RL≤（Us-5）/0.02 Us: Loop power supply voltage		250	300	Ω
	Frequency Response		(Small-signal bandwidth)Io=20mA		2		Hz
	Signal output ripple				10	30	mVRM
Power input characteristics	Power supply	voltage		——	——	—	VDC
		Power loss		——	——	—	W
		Range		——	——	—	%
Other characteristics	Soldering Temperature		Solder from the shell 1.5mm,10s			300	℃
	Operating Temperature			-45		85	℃
	storage temperature			-55		105	℃
	Weight			7.5	8		g

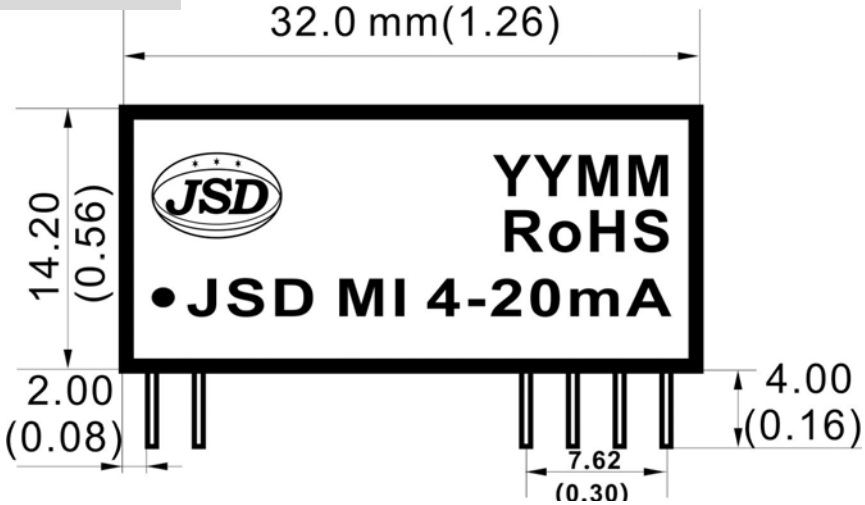
Pins function:

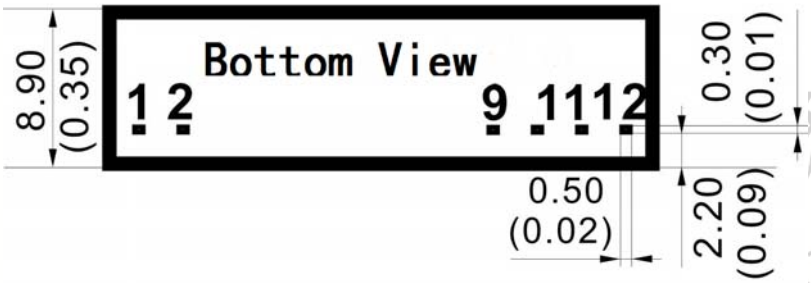
outputting types	Pin	Function	Pin	Function	Storage
Passive 4-20mA	**1**	signal input+	**7**	NO PIN	**Single Inline 12Pin**
	2	signal input-	**8**	NO PIN	
	3	NO PIN	**9**	signal output-	
	4	NO PIN	**10**	signal output-	
	5	NO PIN	**11**	signal output+	
	6	NO PIN	**12**	signal output+	

Wiring diagram Application:

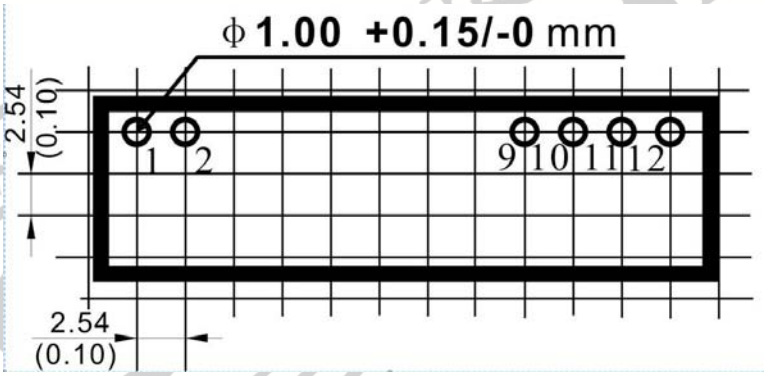


PCB layout dimensions:





PCB layout diagram:



Notes:

1、Please read the user manual carefully before using.any question please contact technical 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 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.

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