



Two-wire 4-20mA Loop Power 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.
- ◆ Loop Power Voltage (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 TAW-100L-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 TAW-100L-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: | |
|-----------------------------------|----------------|
| Signal Input: | Output Signal: |
| Current(mA) | Current(mA) |
| 4~20mA | 4~20mA |
| 0~20mA | 0~20mA |
| | |
| | |

Selection Example:

Example: Signal input 4-20mA , Signal output 4-20mA Model: JSD TAW-100L-F



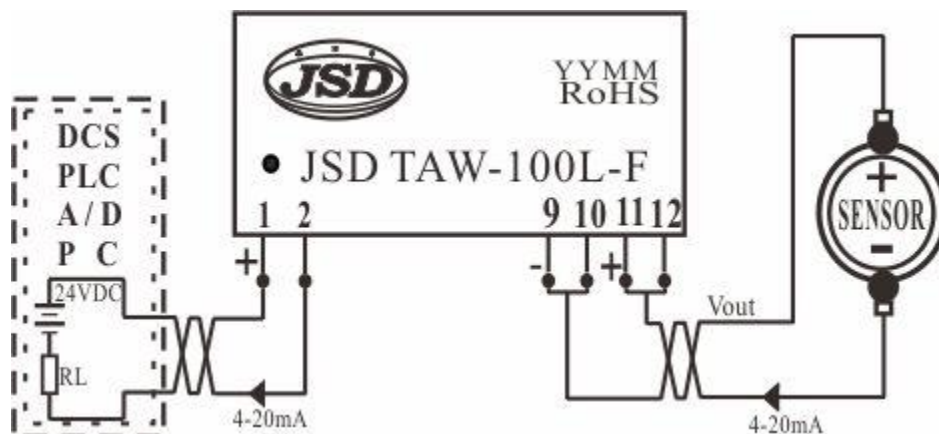
Electrical Characteristics :

| 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 | |
| | Loop Power | | 10 | 30 | 35 | VDC | |
| | Voltage Output | | | 24 | | VDC | |
| | Signal Input | current | | 4 | 20 | 30 | mA |
| | Signal Output | 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:

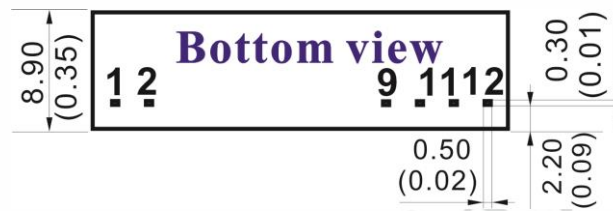
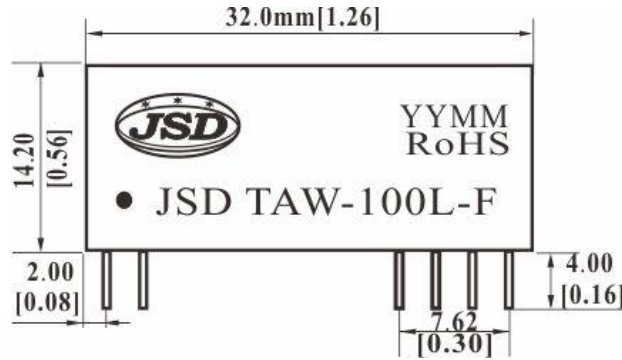
| Outputting types | Pin | Function | Pin | Function | Storage |
|------------------|-----|------------------|-----|----------------|---------------------|
| Passive 4-20mA | 1 | Loop Power input | 7 | NO PIN | Single Inline 12Pin |
| | 2 | Current Output | 8 | NO PIN | |
| | 3 | NO PIN | 9 | Current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

Application wiring diagram:

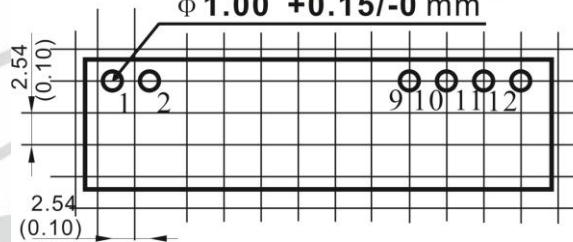




Dimensions and PCB board layout diagram:



SIP12 Pin PCB layout package size
 $\phi 1.00 +0.15/-0$ mm



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 $T_a=25$ °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.