

Passive Loop Supply Isolated Transmitter  
Current signal input & Current signal output



Patent Protection



RoHS



### FEATURES

- Loop-powered, Over-current Protection
- Accuracy(0.3% F.S.)
- High linearity (0.1% F.S.)
- High isolation voltage(3kVDC/60s)
- Extremely low temperature coefficient (35PPM/°C)
- Industrial grade (operating temperature range: -25°C to +71°C)
- High reliability (MTBF >500,000 hours)
- EN60950 approval

The T1100L-F Isolated Transmitter is a two-wire loop-powered isolation module. Through the post-stage feed mode, to the former two-wire device power supply, and receive from the two-wire device output 4-20mA current signal. After the module is isolated, the output 4-20mA current signal. This product uses a unique electromagnetic isolation mode and high-performance post-stage feed technology, effectively solve the current signal isolation on the power supply depends on the problem, to achieve the standard signal 4-20mA precision isolation transmission, with a variety of analog meters Input port (such as PLC, DCS system, etc.) match; input with overcurrent protection function, more effective protection module and the post-circuit; In addition, the module has excellent temperature drift characteristics (in -25°C to +71°C operating temperature range of temperature drift less than 35PPM/°C), input and output ends can withstand 3kVDC isolation voltage.

### Selection Guide

Certification	Part No.	loop Power Supply Voltage	Input Signal	Output Signal	Channels	Package
CE	T1100L-F	10-24V	4-20mA	4-20mA	1	SIP12

Notes: Customization products are available if required.

### Input Specifications

Item	Operating Conditions	Value
Signal Input	Input signal	4-20mA
	Maximum continuous over range	≤30mA (with Over-current Protection)
	Voltage Drop-out @20mA	5V (Typ.) @20mA

### Output Specifications

Item	Operating Conditions	Value
Signal Output	Output signal	4-20mA
	Load capacity	$RL \leq (V_{in} - 7)/0.02, 800 \Omega$ (Max.)
	Load Regulation	0.1%FS./100Ω

Note: \*The typical output precision under different load conditions can be seen in the product characteristic curve diagram.

### Transmission Specifications

Item	Operating Conditions	Value
Zero Offset	250Ω /0.01uF	0.3%F.S. (Typ.)
Signal Precision	250Ω /0.01uF	0.3%F.S. (Typ.)
Temperature Coefficient	Operating temperature range: -25°C to +71°C	0.0035%F.S./°C

Note: \*The typical output precision under different power supply conditions can be seen in the product characteristic curve diagram.

### General Specifications

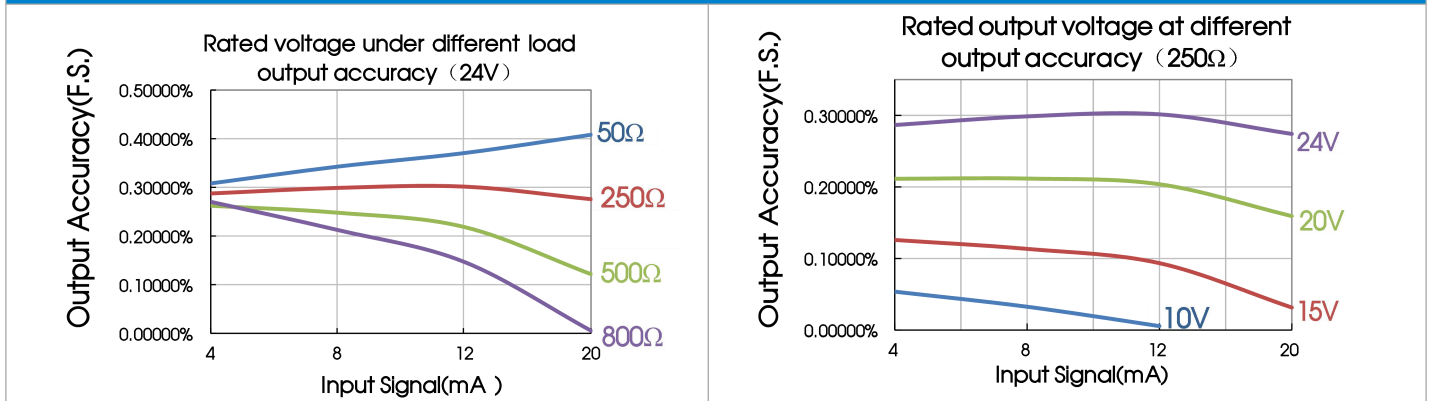
Item	Operating Conditions	Value
Electric Isolation		Two-port isolation (signal input and signal output)
Isolation Voltage	Testing for 1 minute, leakage current <1mA, humidity <70%	3kVDC

Insulation Resistance	500VDC(signal input and signal output)	100M $\Omega$
Operating Temperature		-25 $^{\circ}$ C to +71 $^{\circ}$ C
Transportation and Storage Temperature		-50 $^{\circ}$ C to +105 $^{\circ}$ C
Safety Standard		EN60950
Safety Certification		
Safety Class		CLASS III
Application Environment		The presence of dust, fierce vibration, impulsion and corrosive gas may cause damage to the product

### Physical Specifications

Casing Material	Black flame-retardant and heat-resistant plastic
Package	SIP 12
Weight	8g (Typ.)
Cooling Method	Free air convection

### Product Characteristic Curve



### Application Precautions

1. Please read the instructions carefully before use; contact our technical support if you have any problem.
2. Do not use the product in hazardous areas.
3. Unless otherwise specified, data in this data sheet should be tested under the conditions of  $T_a=25^{\circ}\text{C}$ , humidity<75% when outputting rated load;
4. Do not dismount and assemble the product without permission to avoid failure or malfunction of equipment.

### After-sales service

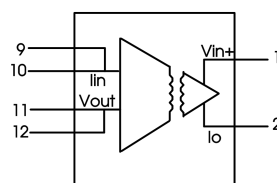
1. Ex-factory inspection and quality control have been strictly conducted for the product; if there occurs abnormal operation or possibility of failure of internal module, please contact the local representative or our technical support.
2. The warranty period for the product is 3 years as calculated from the date of delivery. If any quality problem occurs under normal use within the warranty period, the product can be repaired or changed for free.

### Applied circuit

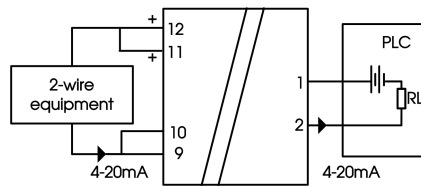
See *Application Notes for Isolated Transmitter* for details.

### Design Reference

#### 1. Schematic diagram

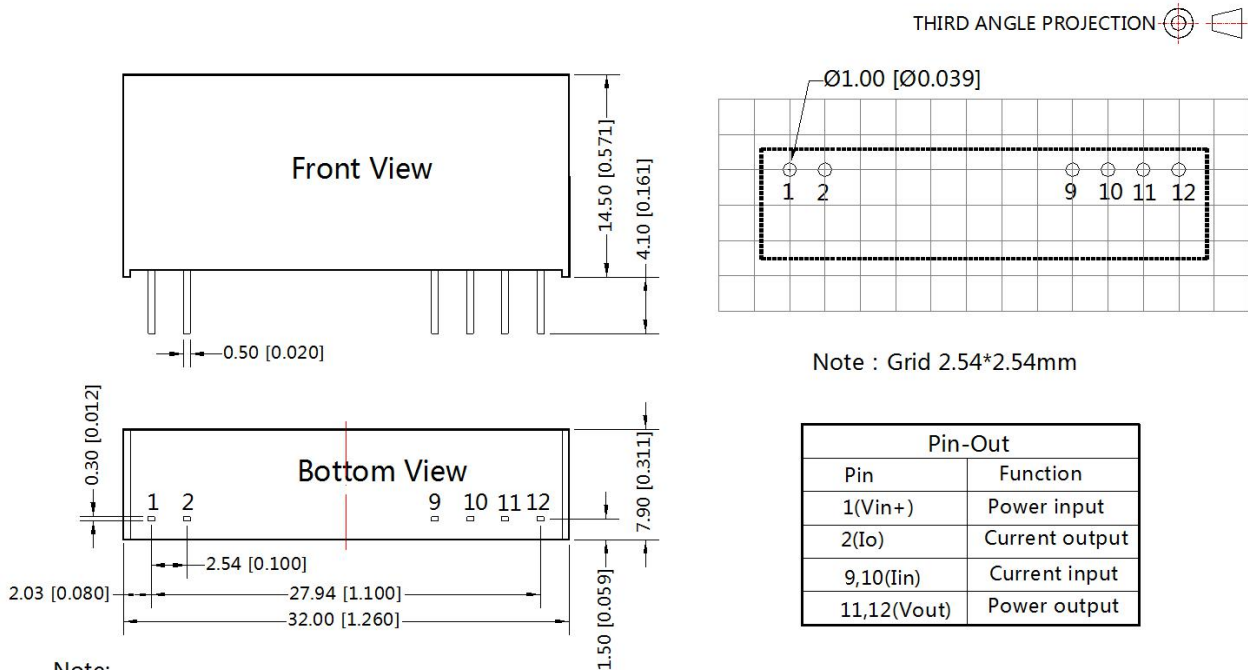


### 2. Wiring diagram for product application



3. For more information please find the application notes on [www.mornsun-power.com](http://www.mornsun-power.com)

### Dimensions and Recommended Layout



Note:  
 Unit:mm[inch]  
 Pin section tolerances:±0.10[±0.004]  
 General tolerances:±0.50[±0.020]

#### Notes:

1. Packing information please refer to Product Packing Information which can be downloaded from [www.mornsun-power.com](http://www.mornsun-power.com). Packing bag number: 58210017;
2. All index testing methods in this datasheet are based on our Company's corporate standards;
3. The performance indexes of the product models listed in this datasheet are as above, but some indexes of non-standard model products will exceed the above-mentioned requirements, and please directly contact our technician for specific information;
4. We can provide product customization service;
5. Products are related to laws and regulations: see "Features" ;
6. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.

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